



Policy Brief

NDC 3.0

A Roadmap for Brazil's leadership



UK Government

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EXECUTIVE SUMMARY

- This document outlines proposals for the Brazilian government to announce an ambitious Nationally Determined Contribution (NDC) for 2035 by the end of 2024. The goal is to inspire action and foster cooperation in alignment with the outcomes of the first Global Stocktake (GST).
- We propose that Brazil's NDC be designed to directly support the goal of limiting global warming to 1.5°C. This should include targets and commitments for reducing emissions, transitioning away from fossil fuels, and adapting to changing climate conditions, all in line with the best available science.
- Our proposal is for an NDC that demonstrates a commitment to narrowing the gap between ambition and action. It should act as a lever to attract investment and align both public and private sectors with the goal of achieving net-zero emissions before the middle of the century.

HIGH AMBITION

+

HIGH RELIABILITY

=

GREATER PUBLIC AND PRIVATE FINANCING

● To this end, Brazil's NDC should include the following points:

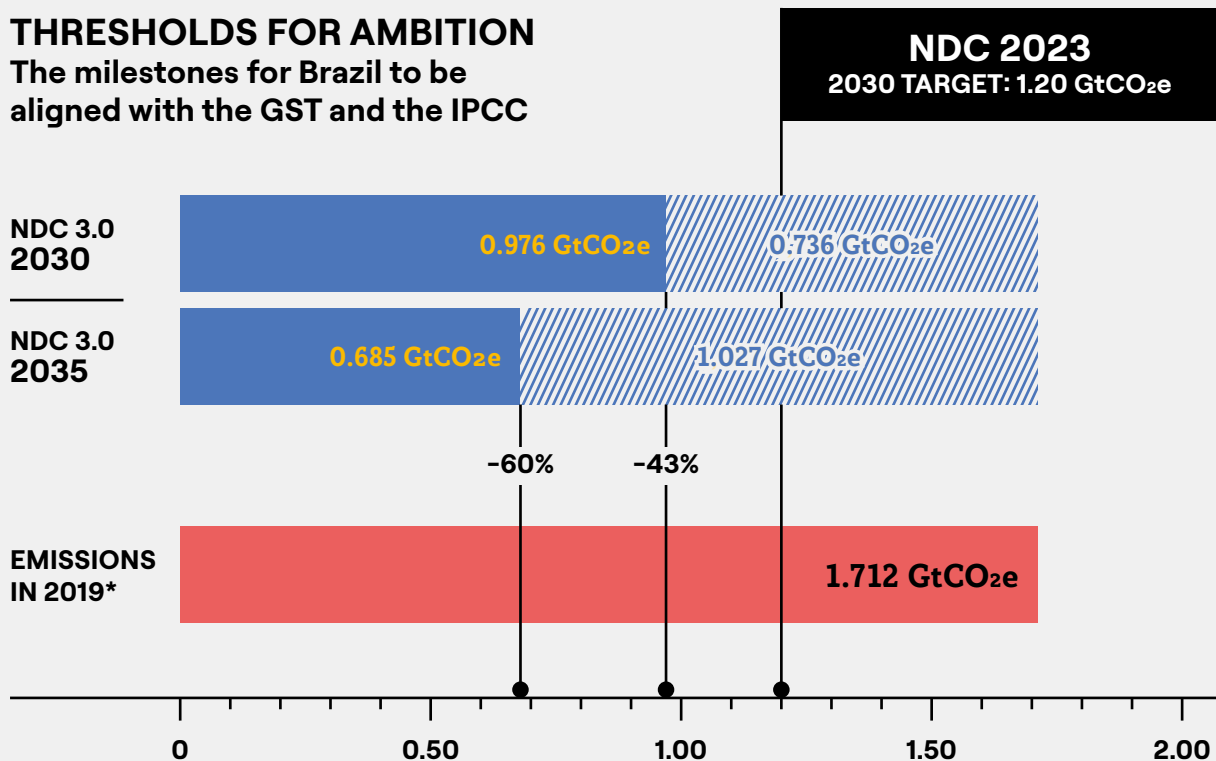
1. Absolute and economy-wide targets, in line with the outcomes of the first GST, the 6th Assessment Report of the IPCC, and the recommendations of the Troika for emission cuts relative to 2019:

a. For 2030 - a reduction of at least 43% compared to the emissions reported in Brazil in 2019: 0.736 GtCO_{2e}. This would set the emission limit for 2030 to less than 0.976 GtCO_{2e} (representing 19.17% more ambition than the limit presented in 2024).

b. For 2035 - a reduction of at least 60% of emissions compared to 2019: 1.027 GtCO_{2e}. This would set the emission limit to 0.684 GtCO_{2e}.

THRESHOLDS FOR AMBITION

The milestones for Brazil to be aligned with the GST and the IPCC



* Source: Sirene/MCTI

The proposed limits for Brazil's emissions in 2030 and 2035 are not extraordinary. Technical studies indicate that it is both economically feasible and socially desirable to aim for even deeper reductions. The annual emission reduction rates required to meet these targets are also lower than those achieved by Brazil between 2005 and 2012. This suggests that, despite the immense effort needed, Brazil has previously demonstrated its ability to achieve faster annual reductions.

Therefore, we advocate for the Brazilian government to set ambitious interim targets. Without these targets, there may be a lack of impetus for necessary societal changes, which could lead to even more drastic reductions later on and worsen the impacts of climate change.

2. Commitment to achieving net-zero emissions before 2050 and evaluating the possibility of advancing this target to 2040. This is essential to prevent overshooting and tipping points, such as those affecting the Amazon. Furthermore, Brazil should avoid investing in emission-intensive infrastructures and technologies that perpetuate dependence on fossil fuels, as soon as possible.
3. Commitment to aligning all public policies and investments with this goal and outlining a timeline for developing and submitting the country's long-term strategy (LTS).
4. Inclusion of an adaptation and loss and damage components, considering targets and efforts to reduce vulnerabilities and increase resilience, including conditioning public investments on climate risk assessments starting in 2025.
5. Provision of clear signs of transition, in the form of sectoral commitments:

Energy, Transport, and Industry

- Plan to complete the country's energy transition, including actions to ensure zero-emission electricity generation, total replacement of coal within this decade, and adaptation of the national electricity system.

- Commitment to initiate the transition from oil and gas production and consumption immediately, considering the peak of domestic fossil fuel demand within this decade, in line with the International Energy Agency (IEA) forecast on global demand.
- Double the efficiency of the entire energy matrix by 2030, meaning producing more while consuming less fuel and electricity.
- Immediately remove incentives and subsidies for fossil fuel-fired power plants.
- Regulate greenhouse gas (GHG) emissions from 2025 onwards via the Brazilian Emissions Trading System.
- Among others.

Nature and Interdependent Systems

- Achieve zero deforestation in all biomes by 2030.
- Targets from PPCDAM (Action Plan for the Prevention and Control of Deforestation in the Amazon) and PPCerrado (Action Plan for the Prevention and Control of Deforestation in the Cerrado), such as designating 3 million hectares as federal Conservation Units by 2027.
- Recover and convert up to 40 million hectares of low-productivity pastures into arable land by 2030.
- Establish strategies to reduce emissions from agriculture (methane and nitrous oxide from enteric fermentation and fertilizers, respectively).
- Ensure that, by 2030, at least 30% of degraded areas of terrestrial ecosystems, inland and coastal waters, and marine areas are under effective restoration to increase biodiversity, ecosystem functions and services, ecological integrity, and connectivity.
- Minimize the impact of climate change and ocean acidification on biodiversity and enhance its resilience through mitigation, adaptation, and disaster risk reduction actions.

- Preserve, conserve, and restore marine territorial zones and coastal ecosystems, as well as expand ocean-based mitigation and adaptation actions.
 - Among others.
6. Signal of incentive for private sector commitment: Encourage the internalization of commitments aligned with the NDC by the private sector through regulation and alignment with net-zero emission trajectories before the middle of the century.
 7. Signal of incentive for relevant subnational commitments: Promote the adoption of relevant subnational commitments to national goals, particularly achieving zero deforestation by 2030.
 8. Key implementation architecture: Establish critical steps for implementing targets promptly, including publishing the Climate Plan, creating a country-specific climate finance platform, setting up governance arrangements, and implementing monitoring, accountability, and internal course-correction mechanisms. This should involve both government and independent reports to ensure comprehensive oversight and adaptation.
- We propose that Brazil's NDC for 2035 be developed through broad and inclusive consultation with Brazilian society, with decision-making on its content conducted transparently and based on the best available science.
 - We encourage the country to announce its NDC in 2024, considering the G20 and UN General Assembly calendar.
 - We believe that with an ambitious NDC as proposed here and through climate diplomacy, Brazil will be able to stimulate greater ambition from other countries, particularly the G20.

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1. ASSUMPTIONS

This document presents proposals for Brazil's Nationally Determined Contribution (NDC) for 2035⁽¹⁾. In developing these proposals, we have used the results of the first Global Stocktake (GST) as a guide and emphasized Brazil's leadership role in Mission 1.5°C. We believe it is strategic for Brazil, as a member of the Troika (along with the United Arab Emirates and Azerbaijan), to be among the "first movers" – the first nations to submit NDCs with the potential to elevate collective ambition.

We recommend that the Brazilian government design the NDC to drive the transition of the real economy and enhance societal resilience, considering the current context, historical realities, and future potentials. Given our challenges in growth and balancing public accounts, alongside addressing social inequalities and vulnerabilities intensified by climate change, the NDC should also function as a tool for sustainable, resilient, and emission-free development.

Although the NDC is not an investment plan per se, we advocate for leveraging it to attract investments in strategic areas and sectors. To do this effectively, it is essential to provide clarity and transparency regarding the pace of desired decarbonization and the key elements of the implementation architecture needed to achieve *net-zero emissions* as quickly as possible.

We support an *economy-wide* NDC, as in previous Brazilian versions, emphasizing the need for absolute emission targets that cover all sectors

and greenhouse gases (GHGs), with a clearly defined emission limit (or carbon budget) for the Brazilian economy up to 2035. It is crucial that the NDC also includes sectoral commitments to provide clear signals for transitioning from current land use models and fossil fuel energy sources. Sectoral emission limits should be set through the Climate Plan, allowing flexibility in how the overall NDC target is achieved by 2035.

Additionally, it is essential that Brazil's NDC for 2035 incorporates elements of adaptation, participation, and transparency, as well as a clear indication of a technical-scientific assessment related to loss and damage, another sensitive issue that is part of the GST recommendations. A clear and credible NDC will enhance stakeholder confidence in its implementation and facilitate capital mobilization, thereby improving access to financing at reduced costs.

We suggest adhering to the following principles:

■ HIGH CREDIBILITY

Develop a contribution that is credible and recognized as legitimate by Brazilian society. This is crucial for garnering the necessary support for its implementation, given that these commitments extend beyond individual governmental terms.

■ HIGH INTEGRITY

Ensure the NDC reflects integrity in all its dimensions, with clear methodologies and precise data to guarantee actual emission reductions.

■ HIGH AMBITION

Set forth a progressive contribution with strong political commitments for both adaptation and the transition to a zero-carbon economy.

and institutional arrangements designed to engage stakeholders and drive the real economy towards resilience and decarbonization.

■ ROBUST IMPLEMENTATION

Present an NDC that is practical and actionable, with processes

From our review of previous NDCs and the current context, we identify the following implications of these principles:

We should maintain

- The inclusion of all greenhouse gases (GHGs) in the targets.
- Absolute emission reduction targets across the economy.
- Reinforcement of the political commitment to end deforestation by 2030, as announced at the 26th UN Climate Conference (COP26) and integrated into the 5th phase of the Action Plan for the Prevention and Control of Deforestation in the Legal Amazon (PPCDAm), published in 2023.

We should enhance

- The 2030 target should align with the Global Stocktake (GST) results, informed by the warnings from the Summary Report of the Sixth Assessment Cycle (AR6) of the Intergovernmental Panel on Climate Change (IPCC)⁽²⁾.
- The process of constructing and updating NDC targets should be transparent and include participatory and inclusive methods to enhance legitimacy and effectiveness in implementation.
- The connection between short-term NDC objectives and long-term policies aimed at achieving net-zero emissions before 2050 should be clearly defined, with consideration given to the possibility of advancing this target to 2040.

We should avoid

- Sending ambiguous signals to the international community.
- Submitting an NDC without enhancing the ambition for mitigation.
- Lack of transparency and clarity in describing commitments.
- Submitting an NDC that focuses solely on mitigation without integrating adaptation as a central theme.
- Presenting an NDC that does not evolve into or connect with a comprehensive economy-wide policy package.

2. THE PATH TO BRAZIL'S NDC 3.0

The principles and guidelines found in Articles 3 and 4 of the Paris Agreement⁽³⁾ underpin the expectations for the next generation of NDCs (also known as NDCs 3.0).

These should represent progress and the highest possible ambition, reflecting common but differentiated responsibilities and respective capabilities, in light of different national circumstances (Article 4.3).

Following the first GST, it was recognized that the Paris Agreement has driven near-universal climate action. However, despite progress, countries have yet to find a path to meet their goals for mitigation, adaptation, implementation, and financing (paragraphs 1 and 2), aligned with the aim of limiting warming to 1.5°C. Brazil's NDC 3.0 should be aligned with the main outcomes of this assessment, while recognizing and enhancing our capabilities, responsibilities, and opportunities.

FIGURE 1 • WHAT IS THE “EXPECTED” STRUCTURE OF AN NDC?

Optional elements of the ICTU

QUANTIFIABLE INFORMATION	PLANNING PROCESS	ALIGNMENT WITH THE PARIS AGREEMENT
<ul style="list-style-type: none"> • Target(s), description, and type • Target year(s) or period(s) • Reference point(s), level(s), base year(s), and respective values • Scope and coverage (sectors, categories, activities, sources and sinks, pools, and gases) • Implementation periods • Intention to use cooperative approaches involving ITMOs under Article 6 	<ul style="list-style-type: none"> • Domestic arrangements • Public participation and engagement with local communities and indigenous peoples, in a gender-sensitive manner • How the NDC is fair and ambitious • Assumptions and approaches • How the preparation of the NDC was informed by the GST • NDCs based on adaptation actions as co-benefits of adaptation 	<ul style="list-style-type: none"> • How the NDC is fair and ambitious • Considerations of fairness and equity • Progression and the highest possible ambition • Contribution to Article 2

It is up to Brazil to determine the form and content of its contributions to the Paris Agreement for the period up to 2035. At the national level, a judicial decision⁽⁵⁾ has established that the Agreement, despite being an international instrument, was ratified by the National Congress and therefore holds the weight of domestic law. According to this interpretation, what Brazil presents as its contribution in the NDC is also enforceable within the domestic context.

Thus, the NDC is seen as an important instrument of both foreign and domestic policy, signaling investment in the transition to a carbon-zero economy and resilience for economic and political actors. To fulfill this role, it is crucial that Brazil presents the minimum data suggested by the UNFCCC (see above) and complements it with information that facilitates the implementation of commitments by both state and non-state actors.

3. PROPOSALS FOR 1.5°C ALIGNMENT

We are on a trajectory of 2.7°C warming by the end of the century, and every

0.1°C increase has severe impacts across the planet. Recent measurements⁽⁶⁾ show that the world has been more than 1.5°C above pre-industrial levels for 12 consecutive months, which means decades of dangerously high temperatures if we do not act urgently. Normalizing prolonged temperature increases raises adaptation challenges. For vulnerable communities, the risks are existential.

We understand that keeping the 1.5°C goal alive requires bold and immediate actions. In a recently published document⁽⁷⁾ by the Troika, representatives from the three countries indicated that "building global resilience requires transforming the current global development model, encompassing different pathways and approaches." "They state that this transformation "must respond to the latest science and be guided by equity, ensuring that climate ambition also drives social inclusion and economic prosperity, and a just and equitable transition for all, within the context of sustainable development and efforts to eradicate poverty."

The IPCC asserts that there is no room for existing or new fossil fuel exploration in a 1.5°C scenario.

Recommendations

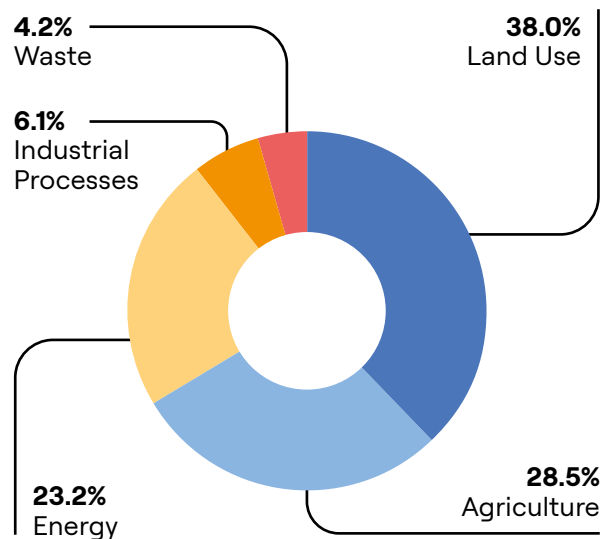
Brazil should signal in its NDC that aligning it with the 1.5°C goal is essential to avoid the most devastating impacts of climate change on our territory and the rest of the world.

To this end, Brazil's NDC should confirm the global warming limit scenario it aligns with and clarify (in an annex or separate document, if necessary) the technical parameters supporting the compatibility of the presented targets with the 1.5°C scenario. This applies not only to mitigation targets. It is crucial to adapt financial flows, infrastructure, and communities to this reality. Therefore, we recommend including commitments for the other two objectives of the Paris Agreement: making financial and investment circuits compatible with safe global warming scenarios (see Proposal 3 in chapter 4.2 - Adaptation) and the Global Goal on Adaptation (GGA). In practical terms, Brazil's NDC should set more ambitious targets for 2030 and 2035, commit to a transition timeline away from fossil fuels within this decade, halt new fossil fuel expansions, intensify efforts in renewable energy, and protect and restore ecosystems.

3.1 Mitigation

Brazil, the sixth-largest emitter⁽⁸⁾ of GHGs globally (when considering the European Union), has a very peculiar emissions profile compared to other major emitters. Therefore, its mitigation commitments must take national circumstances into account. It is expected that, with the achievement of mitigation targets and the commitment to eliminate deforestation across all biomes, this profile will become less unique starting in 2030. At that point, emissions from agriculture and energy will stand out, bringing Brazil's emissions profile closer to that of other countries. For this reason, we believe it is important for the country to strengthen its commitment to eliminating deforestation, as well as to advance in reducing emissions from other sectors.

FIGURE 2 • BRAZIL'S EMISSIONS
Distribution of net emissions – which totaled 1.712 billion tons of CO₂ equivalent – in 2022



Source: Sirene (2020) 6th Edition

WHAT THE GST SAYS

Countries should deliver targets aligned with the collective ambition of reducing greenhouse gas (GHG) emissions by 43% by 2030 and by 60% by 2035, and achieving net-zero emissions by 2050. These percentages are based on 2019 emissions levels. The Troika has already endorsed the

promise of a 60% reduction in emissions by 2035 compared to 2019. The reduction for 2030 should be 43% compared to 2019, which is not reflected in the current updated NDC target of 1.20 GtCO₂e (2023 updated NDC), according to the National Emissions Registry System (SIRENE), which indicates 1.71 GtCO₂e in 2019.

PROPOSAL 1 Increase the ambition of the 2030 mitigation target and outline relevant sectoral commitments

PROS

- 1** Be the Mission 1.5°C leader: Brazil needs to signal politically that it is making its maximum contribution (in line with what is required by Article 4.2 of the Paris Agreement) and align with the Troika's Roadmap⁽⁹⁾.

- 2** The minimum threshold indicated by the GST, the IPCC, and the Troika corresponds to a 43% reduction by 2030 compared to 2019. This does not represent an extraordinary ambition for Brazil—national technical studies show that it is economically feasible and socially desirable to deepen it even further.

- 3** The opportunities and mitigation options for Brazil this decade are numerous. Brazil can cut between 63% and 82% of its emissions from 2005 (between 410 and 950 million tCO₂e)⁽¹⁰⁾. This significant reduction, compatible with the 1.5°C temperature increase limit scenario, would not impose sacrifices on the economy. In fact, it would help mitigate social inequalities and accelerate the adoption of low-cost modern technologies.

- 4** If Brazil adopts a 43% reduction compared to 2019, the pace of decarbonization to achieve the 2030 target will be slower⁽¹¹⁾ than the rate practiced by Brazil between 2005 and 2012. This means that, although the required effort is immense, Brazil has already demonstrated the ability to achieve faster annual reductions in the past.

- 5** By reducing emissions ahead of other countries, that is, by leading the way, the country will also reap the benefits of decarbonization sooner⁽¹²⁾.

- 6** There is currently no demand for the transfer of mitigation results to other countries (via ITMOs), which means it does not make sense to maintain a lower ambition based on the expectation of short-term monetization of results through this mechanism⁽¹³⁾.

- 7 Failing to set a sufficiently ambitious interim target would fail to inspire the necessary changes, would require even more drastic reductions in subsequent years, and would exacerbate the damage caused by climate change.

CONS

- 1 Brazil has a historical deficit in implementing commitments⁽¹⁴⁾. Meeting more ambitious targets requires greater implementation effort. Otherwise, it could undermine our credibility.

- 2 Brazil would have less room to increase ambition successively.

- 3 Mitigation results beyond the stipulated target could, if there is demand, be transferred to other countries (via ITMOs), allowing Brazil to capture resources and stimulate results in other parts of the world.

ASSESSMENT

We conclude that, given the urgency of accelerating mitigation actions in the short term and the various studies demonstrating the opportunities the country has to achieve results beyond what it has already committed to for this decade, Brazil must take on the responsibility of implementing a stronger and more ambitious mitigation action plan than the current one.

RECOMMENDED ACTION

Submit a new economy-wide and absolute mitigation target for 2030 for all greenhouse gases (GHGs), with a minimum benchmark of:

- *A reduction of at least 43% compared to the emissions verified in Brazil in 2019: 0.736 GtCO₂e. This would set the emissions limit for 2030 at less than 0.976 GtCO₂e, representing an additional reduction of at least 19.17% compared to the current limit.*

Signal that Brazil has relevant sectoral commitments and will use a broad range of instruments to achieve its target, such as:

- *Achieving zero deforestation in all of its biomes.*
- *Implementing the Brazilian Emissions Trading System (SBCE).*

PROPOSAL 2 Economy-wide mitigation target for 2035, with relevant sectoral commitments beyond deforestation

PROS

- 1** The minimum level indicated by the GST, IPCC, and Troika is a 60% reduction by 2035 compared to 2019. This does not represent an extraordinary ambition for Brazil—national technical studies show that it is economically feasible and socially desirable to deepen it further.

- 2** If a 60% reduction relative to 2019 is adopted, the pace of decarbonization needed to reach the 2035 target will be slower⁽¹⁵⁾ than the rate observed by Brazil between 2005 and 2012.

- 3** Avoiding 100% of deforestation is not sufficient to meet the targets set in the current NDC until 2030⁽¹⁶⁾. Additional actions are necessary, such as reducing emissions from enteric fermentation or the burning of fossil fuels within the national territory, which can be achieved without high investment while still reinforcing competitive advantages because:
 - *Brazil has relatively low-cost solutions in all sectors⁽¹⁷⁾. If there is no effort towards modernization and we continue to rely on technologies at risk of transition (obsolescence), we may face technological lag, with potential losses in the country's competitiveness in important economic segments⁽¹⁸⁾*
 - *A broad approach can reinforce our competitive and comparative advantages, such as nature-based solutions and extensive access to renewable energy in the electrical matrix, to achieve a transition to a low-carbon economy ahead of other major economies⁽¹⁹⁾*

- 4** Sectoral targets depend on national circumstances, including macroeconomic conditions, and therefore it is more advantageous for them to be adjusted internally rather than internationally, to avoid negatively impacting the achievement of the *economy-wide* target.

- 5** We recommend that the Brazilian government set clear and ambitious interim goals. Without these, it will be hard to motivate the changes needed in our society. This could lead to even tougher targets in the future and make climate change impacts worse.

CONS

- 1 As one of the world's top 20 economies, Brazil could commit to quantified sectoral targets (with emission limits or associated carbon budgets) to specify its *economy-wide* goal⁽²⁰⁾.
 - 2 On the other hand, sectoral commitments, even if not quantified, may impose more expensive mitigation solutions on the country, which might be inconvenient when there are opportunities to use primarily lower-cost measures across sectors, such as controlling deforestation.
-

ASSESSMENT

We conclude that it is essential for Brazil to present an economy-wide target, given its flexibility in terms of costs and benefits, while also specifying sectoral commitments for 2035, in line with the best available mitigation opportunities and with the aim of strengthening implementation.

RECOMMENDED ACTION

Present an economy-wide and absolute mitigation target for 2035 for all greenhouse gases (GHGs), with a minimum benchmark of:

- *Reducing emissions by at least 60% compared to 2019: 1.027 GtCO_{2e}. This means that the emissions limit for 2035 would be, at most, 0.684 GtCO_{2e}.*

Incorporate sectoral commitments to signal the transition to society and markets (as detailed in section 4.3).

PROPOSAL 3 Define a clear and transparent commitment to achieve net-zero emissions before the middle of the century

PROS

- 1** The current wording of Brazil's NDC includes the term "climate neutrality"⁽²¹⁾, which causes confusion and does not clearly signal to markets and public actors.

- 2** Brazil will demonstrate credibility by detailing existing policies for achieving net-zero emissions and how they contribute to implementing the NDCs.

- 3** It will prevent investment in emission-intensive infrastructure and technologies that perpetuate dependence on fossil fuels beyond 2050.

CONS

None

RECOMMENDED ACTION

Discontinue the use of the term "climate neutrality" and set a target for achieving net-zero emissions, signaling to both public and private sectors the need to align their policies with this goal. We suggest the following phrase:

- *"Brazil commits to achieving net-zero emissions before 2050 and will align all its policies and investments with this goal"*

PROPOSAL 4 Consider the anticipation of the net zero emissions target to 2040, to avoid overshooting and tipping points such as those in the Amazon

PROS

- 1** Signals the need for other countries to also bring forward their targets and align their commitments with the 1.5°C limit.

- 2** Aligns with robust scientific studies that warn of natural ecosystem collapse due to delayed climate action⁽²²⁾.

- 3** Aligns with Article 2 of the Convention and the goal of avoiding the worst climate change scenarios as outlined in the Paris Agreement.

CONS

- 1** The challenge of achieving zero emissions for all gases, especially methane, might hinder the early implementation of zero net emissions or require compensation through removals.

ASSESSMENT

The Brazilian government has not yet released specific studies to assess the potential adoption of zero net emissions targets before 2050. There needs to be a discussion on whether Brazil is prepared to advance this effort, even though it is currently a recommendation for developed countries.

RECOMMENDED ACTION

Indicate the possibility of advancing the zero net emissions target, validating it with the design of an integrated model of reductions across all sectors. We suggest the following statement:

- *“Brazil commits to evaluating the advancement of the target to achieve zero net emissions by 2040”*

PROPOSAL 5 Articulate clearly how short-term targets align with long-term strategies

PROS

- 1** Seventeen G20 countries have presented a Long-Term Strategy (LTS)⁽²³⁾ to the United Nations Framework Convention on Climate Change (UNFCCC), and Brazil is not one of them. For the NDC to become an investment plan, it is essential to connect long-term visions with short-term and medium-term climate actions and investments, in line with Article 4, paragraph 19, of the Paris Agreement.

- 2** In the absence of a Brazilian LTS, it is necessary to explain how the NDC's interim targets (2025, 2030, and 2035) will contribute to the trajectory of achieving net-zero emissions before mid-century.

- 3** Long-term planning can facilitate adaptation actions relevant to long-term climate scenarios.

- 4** By addressing the consistency of short-term and long-term targets, providing technical justification, and indicating measures compatible with the 1.5°C limit, the NDC contributes to achieving the Convention's goal, as established in Article 2⁽²⁴⁾.

CONS

None

RECOMMENDED ACTION

Indicate a timeline for developing and submitting the country's Long-Term Strategy (LTS). Include technical justification on the consistency of interim targets (2030 and 2035) with the long-term target, in line with the 1.5°C scenario.

3.2 Adaptation

Due to its continental size, demographic characteristics, and mega-diversity of biomes, Brazil faces significant challenges in adapting to climate change. Regional and local socioeconomic inequalities also bring diverse adaptation needs.

An ambitious NDC for adaptation should include components for financing, means of implementation, and loss and damage, positioning Brazil as a leader in climate resilience efforts.

WHAT THE GST SAYS

It emphasizes the importance of the Global Goal on Adaptation (GGA), a collective commitment linked to Ar-

ticle 7.1 of the Paris Agreement, established with the goal of “enhancing the world's adaptive capacity, strengthening resilience, and reducing vulnerability to climate change.” It notes that there are gaps in implementation, support, and collective assessment of the adequacy and effectiveness of adaptation efforts. The GST reminds us that climate impacts include both extreme events and slow-onset events, and that monitoring and evaluating results are essential for tracking progress and improving the quality and awareness of adaptation actions. Parties that have not yet done so are expected to implement their national adaptation plans, policies, and planning processes by 2025 and to progress in their implementation by 2030.

PROPOSAL 1 Include adaptation and loss and damage components in the NDC, separate from the mitigation targets

PROS

- 1 Brazil would be aligned with the GST assessment that parties that have not yet done so (such as Brazil) should implement their national adaptation plans, policies, and processes by 2025 and make progress in their implementation by 2030.
- 2 It is imperative given the country's vulnerability to climate change and is a central pillar of the Paris Agreement: all parties to the Agreement have agreed on the global goal to enhance adaptive capacity, strengthen resilience, and reduce vulnerability to climate change.
- 3 Brazil would follow the example of countries such as South Africa, which quantified their adaptation financing needs and included additional sections in their NDCs submitted to the UNFCCC.

CONS

- 1 A counterpoint would be to include commitments in the NDC that depend on strong federal coordination.

ASSESSMENT

We conclude that it is necessary to properly include adaptation and loss and damage in the NDC, without misleadingly suggesting that Brazil is proposing an NDC based on adaptation measures with mitigation benefits, as in previous versions of the NDC. Including a strong adaptation component in the NDC also represents a window of opportunity for political-diplomatic influence.

RECOMMENDED ACTION

- **Adaptation:** *It is recommended that Brazil include a specific section on adaptation in its NDC, separate from the mitigation targets.*
- **Loss and Damage:** *Since Brazil has not yet initiated a precise and comprehensive diagnosis of climate risks that go beyond the limits of adaptation, such as tipping points, it is recommended that the country initially signal a political commitment to advance on this issue domestically and show solidarity with international efforts.*

PROPOSAL 2 Define clear adaptation goals and commitments for 2035

PROS

- 1 Signals the highest possible ambition regarding all objectives of the Paris Agreement: the NDC addresses not only Paris' mitigation objective but also the Global Goal on Adaptation (GGA) and the alignment of financial investment flows. Merely mentioning adaptation instruments does not meet these objectives.

- 2 Although a new adaptation strategy is being developed, with implementation means, clear goals should already be included in the NDC, maintaining the social dimension as a priority, considering that resilience in infrastructure and food production are equally important.

CONS

- 1 It is challenging for the country, at this moment, to set clear and feasible goals that contribute to the GGA.

- 2 It may be relevant to set broad objectives or aspirational targets instead of quantifiable goals, given that Brazil is in the process of developing its strategy on the topic.

ASSESSMENT

We conclude that Brazil needs to commit to relevant adaptation and resilience goals at the national level, demonstrating that it will contribute to the GGA. (See PROPOSAL3, which includes a concrete action)

RECOMMENDED ACTION

Commit to contributing to the GGA, considering an antiracist⁽²⁵⁾ perspective and prioritizing its three key elements:

- *Access to clean water.*
- *Resilient food systems.*
- *Resilience of infrastructure and human settlements*

PROPOSAL 3 Establish commitment to adaptation and climate risk assessment in all plans, policies, and investments involving public resources in the country

PROS

- 1** Align financial and investment flows with safe global warming scenarios, in accordance with the objectives of the Paris Agreement.

- 2** What Brazil includes in the NDC has domestic legal force. Therefore, such a commitment will ensure the integration of measures and considerations on adaptation and resilience, increasing resources and actions, in line with the Global Goal on Adaptation (GGA).

- 3** Aligning public investment flows with resilient and adaptive infrastructure has the potential to transform the Brazilian economy, strengthening our ability to address climate risks.

CONS

None

RECOMMENDED ACTION

Establish in the NDC the commitment to condition 100% of public investments, starting from 2025, to climate risk assessments and to implement concrete adaptation and resilience measures

PROPOSAL 4 Adaptation targets should promote intra- and intergenerational equity by addressing racial and gender inequalities

PROS

- 1** Aligns with the preamble of the Paris Agreement, which calls on countries to take action in their climate measures to promote "gender equality, women's empowerment, and intergenerational equity." Article 7.5 encourages countries to adopt a "gender-sensitive, participatory, and fully transparent approach" to adaptation actions.
-
- 2** Acts in line with the Inter-American Convention against Racism, Racial Discrimination, and Related Forms of Intolerance⁽²⁶⁾.

CONS

None

RECOMMENDED ACTION

Brazil should publicly commit to implementing a climate adaptation strategy that is anti-racist and gender-sensitive

3.3 Transition signals

An NDC that inspires confidence needs to outline the paths it will take to achieve the committed targets. Based

on the analysis of the GST results and aligned with the proposed mitigation and adaptation measures above, we suggest that Brazil commit to the following clear commitments.

ENERGY

In the GST energy package, there are several recommendations that include transitioning away from fossil fuels with actions to be taken within this decade and aiming for net-zero emissions in energy systems by 2050; accelerating zero or low-emission technologies; the need to significantly reduce emissions of other greenhouse gases beyond CO₂; accelerating efforts to phase out unabated coal power; among others.

RECOMMENDATIONS

Energy transition	<p>1. Will make efforts to complete its energy transition as soon as possible, reinforcing its electricity system with climate adaptation measures⁽²⁷⁾.</p> <p>2. Will adopt a fair energy transition plan aiming for net-zero emissions in national energy systems before 2050, including:</p> <ul style="list-style-type: none"> ● <i>Ensuring electricity generation with net-zero emissions</i> ● <i>Deadlines and targets for the gradual and complete phase-out of fossil fuel production and consumption</i> ● <i>Reaching the peak of domestic fossil fuel demand this decade, in line with the International Energy Agency (IEA) forecast on global demand⁽²⁸⁾</i>
Energy efficiency	<p>3. Will double the efficiency of the entire energy matrix by 2030, meaning producing more while consuming less fuels and electricity.</p>
Coal	<p>4. Will fully phase out coal this decade, considering aspects of a just transition.</p>
Oil and Gas	<p>5. Will immediately begin the transition of oil and gas (both use and production), in a fair manner, aiming for net-zero emissions in national energy systems before 2050</p>

6. Will not grant new concessions for oil and gas exploration from 2025 onwards, and existing exploration will be adjusted according to national demand.

Industrial Decarbonization

7. Regulate emissions starting in 2025 via the Brazilian Emissions Trading System.
8. Accelerate technologies with zero or low emissions, including, among others, biofuels and very low-carbon hydrogen.

Transport

9. Accelerate the reduction of emissions in the transport sector through various measures, including optimizing logistics, prioritizing clean public transportation, and developing infrastructure.

Inefficient Subsidies and Incentives

10. Remove subsidies for fossil fuel power plants by 2030 in a fair and inclusive manner⁽²⁹⁾
11. Phase out inefficient subsidies for fossil fuels that do not address energy poverty and just transition as quickly as possible

Methane

12. Reduce methane emissions by 50% by 2030 compared to 2005 levels, in both energy systems and agricultural production

NATURE

The Global Stocktake (GST) emphasizes the need for intensified efforts to halt and reverse deforestation and forest degradation by 2030, as well as the degradation of other terrestrial and marine ecosystems that act as carbon sinks and reservoirs of greenhouse gases. This effort should also focus on conserving biodiversity while ensuring social and environmental safeguards, in accordance with the Kunming-Montreal Global Biodiversity Framework

RECOMMENDATIONS

Differentiated Responsibility

1. Given that Brazil's primary responsibility (both historical and current) involves emissions from deforestation and degradation, it is essential that Brazil's contribution addresses this challenge and demonstrates accountability towards nature, forests, and Indigenous peoples.

Deforestation and Degradation

2. It is important that specific land use targets be considered, so that it is possible to assess the national effort to end deforestation and increase forest cover, as well as ensure their consistency with the “payable” REDD+ results reported to the Convention through biennial reports.
 3. Commit to zero deforestation by 2030 in all biomes
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Conservation and Sustainable Use

4. Signal PPCDAm (Action Plan for the Prevention and Control of Deforestation in the Amazon) and PPCerrado (Action Plan for the Prevention and Control of Deforestation in the Cerrado) targets, such as designating 3 million hectares as federal Conservation Units by 2027
 - 5.5. In line with the Kunming-Montreal Global Biodiversity Framework, ensure that by 2030 at least 30% of degraded terrestrial, inland water, coastal, and marine ecosystems are under effective restoration to enhance biodiversity, ecosystem functions and services, ecological integrity, and connectivity.
 6. Minimize the impact of climate change and ocean acidification on biodiversity and increase its resilience through mitigation, adaptation, and disaster risk reduction measures.
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Agricultural and Food Systems

7. Recover and convert up to 40 million hectares of low-productivity pastures into arable land by 2030.
 8. Adopt strategies to reduce emissions from agriculture, primarily those generated by livestock and the application of fertilizers, always in line with the best available science.
 9. Reduce methane emissions by 50% by 2030, compared to 2005 levels, in both energy systems and agricultural production.
 10. Condition public investments (including rural credit) on the mitigation and adaptation objectives of the NDC.
-

Ocean

11. Explicitly commit to preserving, conserving, and restoring marine territorial zones⁽³⁰⁾ and coastal ecosystems, as well as expanding ocean-based mitigation and adaptation actions.

4. PARTICIPATION, DECISION, AND IMPLEMENTATION

WHAT THE GST SAYS

It reaffirms that sustainable, enduring, and equitable solutions to the climate crisis must be based on meaningful and effective social dialogue, as well as the participation of all stakeholders, including Indigenous

Peoples, local communities and governments, women, youth, and children. It also notes that the global transition to low-emission and climate-resilient development presents both opportunities and challenges for sustainable development and poverty eradication. Therefore, in light of this challenge, the implementation of integrated and multisectoral solutions is necessary.

PROPOSAL 1 Participation of society and subnational governments in implementing the NDC and the pathway to net zero emissions

PROS

- 1 The NDC has the potential to shape expectations among the private sector and public decision-makers (governors, mayors, legislators, and others), potentially leading to the internalization of commitments by these actors.

- 2 Approximately 63% of Brazilian emissions are covered by net-zero emissions targets⁽³¹⁾, with over 350 commitments adopted by Brazilian public and private institutions to achieve net-zero emissions, with target dates ranging from 2030 to 2050. However, there is a lack of interim targets, such as for 2030 and 2035, as well as clarity on how these actors can contribute to the implementation of the national contribution.

CONTRAS

- 1 As an external policy document, implementation details may not be seen as necessary.

ASSESSMENT

We consider it necessary for the process of building and communicating Brazil's future NDCs to take into account the practical effects on the economy and internal politics.

In the case of an ambiguous or weak NDC, local governments and private actors lack the incentive to pursue short-term targets due to the uncertainties involved. An indication that this hypothesis applies to Brazil is that since 2018, no subnational actor has updated or adopted new emission reduction targets for the 2020–2030 period.

On the other hand, Brazil has the highest number of net-zero emissions targets adopted by non-state actors, attributed to the expectations created by the Race to Zero campaign that these actors will benefit from the "technological race" for long-term decarbonization. The process is as important as the outcome because it aligns expectations and, when successful, creates mechanisms for partnership and collaboration to implement commitments. Given that Brazil will propose a clear and ambitious NDC in this cycle, a distinct effect on the internalization of commitments by these actors is expected.

RECOMMENDED ACTION

Commit to implementing NDC targets through agreements among the federal government, states, municipalities, consortia, and other arrangements, as well as regulating economic agents. Encourage the adoption of relevant subnational commitments to national targets, particularly to achieve zero deforestation by 2030. Expand commitments aligned with the NDC by the private sector, through regulations for net-zero emissions before mid-century, noting that progress has been made in regulating climate risks by financial institutions through the National Monetary Council (CMN). Outline major aspects of the NDC implementation architecture, such as the Climate Plan and a country platform as a climate finance strategy, attracting financial resources and stimulating cooperative implementation by economic agents.

PROPOSAL 2 Conduct broad and inclusive consultation in defining the NDC

PROS

- 1 Greater legitimacy, trust, and credibility of the proposal.

CONS

- 1 Requires more time for dissemination and processing of contributions at a time when Brazil is pressured to present its new NDC in the "first wave" of countries.

ASSESSMENT

We conclude that it is essential to establish a process of dialogue and consultations between the government and society, along with transparency regarding leadership and governance in the NDC development process. Considering that the official deadline for presenting the NDC in this cycle is the end of February 2025, but Brazil's role as a Troika member pressures it to present commitments in the "first wave," there is a challenge regarding the timing and duration of the consultation. It would be beneficial for Brazil to announce intentions as soon as possible (e.g., considering the UN General Assembly schedule in September 2024), but without sacrificing the quality of the consultation with society until March 2025.

RECOMMENDED ACTION

Regarding public consultations, it is essential that the principles and criteria are clear, well-defined, and transparent in the document, allowing civil society to evaluate and monitor the process of developing the NDC. It is important to have clarity on the reasons for accepting or rejecting civil society suggestions, as well as transparency about the formation and appointment of the committee responsible for evaluating the contributions received.

PROPOSAL 3 Make transparent decisions based on the best available science

PROS

- 1** Brazil has the opportunity to use the best available science to underpin its decisions and explanations regarding the targets, commitments, and other information presented in the NDC.

- 2** Brazil has an excellent technical and scientific team, thus possessing the capability to offer high-quality national contributions.

- 3** The ICTU guide for NDCs requires communicating best practices and experiences in the document's development when submitting to the UNFCCC. Therefore, it is important to clarify the preparation and decision-making process around the NDC as an opportunity for building technical and scientific consensus.

CONS

None

RECOMMENDED ACTION

Planning and decision-making should include technical and scientific dialogue processes: rather than deciding on one or another mitigation target, it is important to establish a discussion forum where studies and models are debated, considering different assumptions and hypotheses, which will serve as the basis for future NDC updates. It is recommended that this dialogue be described, in general terms, in the Planning section of the NDC.

PROPOSAL 4 Strengthen Implementation Governance: Inform and strengthen institutional capacities and structures, including coordination

PROS

- 1** It is a requirement to communicate best practices, learnings, and experiences from the document's development when submitting the NDC to the UNFCCC. Therefore, and for the reasons outlined regarding social legitimacy and technical credibility, it is important to inform the process of preparing, deciding, and implementing the NDC over time.
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- 2** To meet targets, a credible structure for NDC implementation participation is needed. Therefore, building trust and legitimacy in the drafting and future action processes is essential.

CONS

None

RECOMMENDED ACTION

Indicate that Brazil intends to advance to a national (not just federal) and participatory (not just consultative) governance structure, with clear mechanisms for intra-, inter-, and extra-governmental coordination. Reinforce the commitment to implementing national targets, involving states, municipalities, consortia, and other arrangements, as well as regulating economic agents.

5. TRANSPARENCY

WHAT THE GST SAYS

The initial results of the Global Stocktake indicate that we are off track to meet the Paris Agreement goals, re-

quiring urgent action to slow down the increasing climate impacts. Accountability and transparency of NDCs are crucial to ensure that targets are met and commitments are effectively implemented.

PROPOSAL 1 Demonstrate Clarity and Integrity

PROS

- 1 The NDC, although determined at the national level, should not be intermittent; delayed or lacking necessary information to ensure clarity, transparency, and understanding; nor should it disregard the results of the Global Stocktake.
- 2 An unequivocal signal is needed due to the history of Brazilian NDCs, which have already shown setbacks.
- 3 Brazil should be a leader in transparent and high-integrity NDCs.

CONS

None

RECOMMENDED ACTION

Present the mitigation targets based on criteria that ensure transparency, accuracy, completeness, comparability, and consistency, ensuring there will be no double counting, as per Article 4.13 of the Paris Agreement.

PROPOSAL 2 Demonstrate a Strong Mechanism for Monitoring, Accountability, and Course Correction in the NDC, Linked with National Policies

PROS

- 1** In addition to good targets, the NDC should include accountability mechanisms.

- 2** The clearer the monitoring system, the greater the trust of stakeholders in future implementation and capital mobilization, facilitating access to financing at reduced costs.

- 3** Brazil has the opportunity to expand the NDC into strategies to identify and address obstacles, such as financing uncertainty and regulatory inconsistencies.

- 4** There is a need to monitor progress against NDC targets and promote adjustments in implementation. So far, there has been no systematic and continuous monitoring by the Brazilian government regarding adopted climate targets. If Brazil does this, it will increase its chances of mobilizing capital and developing markets.

- 5** When participating in market mechanisms under Article 6, rigorous control is needed to ensure no double counting.

CONS

- 1** Accountability is domestic and, in theory, does not need to be presented internationally.

- 2** Currently, Brazil already provides international accountability via the Biennial Transparency Report (BTR) on NDC implementation, subject to independent review by technical experts and peers. BTRs will also feed into the global stocktake process.

ASSESSMENT

We conclude that it is important to demonstrate a strong accountability mechanism because the clearer the course of NDC implementation, the more Brazil will benefit from resources and ensure the reliability of its proposals. Accountability via BTR is insufficient as it lacks a course correction mechanism during NDC implementation, being a posterior review rather than a synchronous one.

The country needs to link the targets and commitments in the NDC, implemented through various national climate policy instruments, to a systematic and transparent monitoring process.

RECOMMENDED ACTION

Within the Climate Plan, we suggest defining mechanisms for monitoring, accountability, and course correction for economy-wide targets and sectoral commitments, with reports from both the government and independent sources.

The provision of these mechanisms should be outlined in the NDC so that Brazil can affirm its commitment to high integrity and legitimize itself as a leader on the issue.

6. NOTES AND REFERENCES

- (1) Decisão na COP 26 em Glasgow, na Escócia, estimula os países a apresentar, a partir de 2025, NDCs a cada cinco anos, com metas para a década subsequente. Isso significa que as NDCs que os países apresentarem agora devem ter metas para 2035. Em 2030, apresentarão compromissos com mirando 2040, e assim por diante.
- (2) PAINEL INTERGOVERNAMENTAL SOBRE MUDANÇAS CLIMÁTICAS (IPCC). *Climate Change 2023: Synthesis Report*. Contribuição dos grupos de trabalho (Working Groups I, II and III) ao Sexto Relatório de Avaliação. Genebra: Intergovernmental Panel on Climate Change, 2023. Disponível em: <https://www.ipcc.ch/report/ar6/syr/>
- (3) CONFERÊNCIA DAS PARTES DA CONVENÇÃO-QUADRO DAS NAÇÕES UNIDAS SOBRE MUDANÇAS CLIMÁTICAS (UNFCCC). Acordo de Paris. 2015. Disponível em: https://unfccc.int/sites/default/files/resource/parisagreement_publication.pdf
- (4) Há um conjunto de informações mínimas a serem incluídas nos documentos sobre NDCs submetidos pelas Partes, delineadas para facilitar o entendimento claro e transparente sobre seus compromissos. Dois anexos de decisão constituem esse conjunto de informações, conhecido como ICTU. Os governos podem acrescentar outras informações, conforme desejarem.
- (5) Acórdão da Arguição de Descumprimento de Preceito Fundamental (APDF) nº 708/2022. Disponível em: <https://portal.stf.jus.br/processos/downloadPeca.asp?id=15353796271&ext=.pdf>
- (6) COPERNICUS, European Union's Earth Observation Programme. June 2024 marks 12th month of global temperature reaching 1.5°C above pre-industrial. Copernicus Climate Change Service, 2024. Available at: <https://climate.copernicus.eu/copernicus-june-2024-marks-12th-month-global-temperature-reaching-15degc-above-pre-industrial>
- (7) UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE (UNFCCC). Troika second letter to parties and observers. Julho 2024. Disponível em: https://unfccc.int/sites/default/files/resource/troika_second_letter_to_parties_and_observers_july_2024.pdf
- (8) CRIPPA, M. et al. GHG emissions of all world countries. Luxembourg: Publications Office of the European Union, 2023. DOI: 10.2760/953332. Availabl at: https://edgar.jrc.ec.europa.eu/report_2023#main_findings
- (9) UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE (UNFCCC). Presidencies Troika Letter to Parties. 2024. Available at: <https://www.cop28.com/en/Presidencies-Troika-Letter-To-Parties>
- (10) According to studies and modeling developed by the Clima & Desenvolvimento initiative. Available at: <https://clima2030.org/wp-content/uploads/2022/08/Clima-e-Desenvolvimento-Visoes-para-o-Brasil-2030-Documento-de-Cenario-e-Politiclas-Climaticas-15-out-2021.pdf>. Other studies, such as the Mitigation Options from the Ministry of Science, Technology, and Innovation (MCTI) and the Deep Decarbonization Pathways in Brazil report by the Carbon Disclosure Project (CDP) and the Federal University of Rio de Janeiro (UFRJ), have identified sectoral measures and opportunities compatible with 2°C and 1.5°C scenarios.

(11) The annual rate of reduction of GHG emissions in Brazil between 2005 and 2012 was approximately 8.9% per year, according to data from SIRENE/MCTI. The future annual rate considering the 43% reduction target between 2019 and 2030 would be about 4.98% per year.

(12) INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (IPCC). Summary for Policymakers. In: Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the IPCC. Cambridge University Press, Cambridge, UK and New York, NY, USA, 2022. DOI: 10.1017/9781009157926.001. Available at: https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC_AR6_WGIII_FullReport.pdf (In Chapter 4, p. 35, studies are mentioned that suggest mitigation can increase the speed of economic growth and lead to better economic outcomes, especially in sectors such as electricity)

(13) CLIMA & DESENVOLVIMENTO 2030. Proposal Notebook 1: Emission Pricing, 2022. Available at: <https://clima2030.org/wp-content/uploads/2022/11/Precificacao-de-Carbono.pdf>

(14) BRAZIL. Federal Senate. Evaluation of the National Climate Change Policy, 2019. Available at: <https://legis.senado.leg.br/sdleg-getter/documento/download/c002f430-7ece-4ccb-aad3-9247f62713ab>

(15) The annual rate of greenhouse gas emission reduction in Brazil between 2005 and 2012 was approximately 8.9% per year, according to data from SIRENE/MCTI. The future annual rate, considering a 43% reduction goal between 2019 and 2035, would be about 5.57% per year.

(16) According to simulations conducted using the National Simulator of Sectoral Policies and Emissions SINAPSE from the MCTI (<https://www.gov.br/mcti/pt-br/acompanhe-o-mcti/sirene/dados-e-ferramentas/sinapse>), considering the effect of 100% deforestation avoidance across all biomes in relation to the current NDC targets.

(17) As evidenced by the project "Options for Mitigating Greenhouse Gas Emissions in Key Sectors of Brazil" from the MCTI (https://antigo.mctic.gov.br/mctic/opencms/ciencia/SEPED/clima/opcoes_mitigacao/Opcoes_de_Mitigacao_de_Emissoes_de_Gases_de_Efeito_Estufa_GEE_em_SetoresChave_do_Brasil.html) and independent modeling efforts such as the Climate and Development Initiative and the Decarboost project, among others.

(18) INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (IPCC). Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the IPCC. Cambridge University Press, Cambridge, UK and New York, NY, USA, 2022. DOI: 10.1017/9781009325844. Available at: https://report.ipcc.ch/ar6/wg2/IPCC_AR6_WGII_FullReport.pdf (ver capítulo 15, p.38)

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(20) Vide Discussão de Experts conduzida por WRI, 2024. Disponível em: <https://www.wri.org/events/2024/6/next-generation-ndcs-setting-sectoral-targets-maximize-impact>

(21) BRAZIL. First Nationally Determined Contribution (NDC): Adjustment. 2023. Available at: <https://unfccc.int/sites/default/files/NDC/2023-11/Brazil%20First%20NDC%202023%20adjustment.pdf>

(22) FLORES, B. M.; MONTOYA, E.; SAKSCHEWSKI, B. et al. Critical transitions in the Amazon forest system. *Nature*, v. 626, p. 555–564, 2024. DOI: 10.1038/s41586-023-06970-0. Available at: <https://doi.org/10.1038/s41586-023-06970-0>

(23) NEWCLIMATE INSTITUTE; COUNCIL ON ENERGY, ENVIRONMENT AND WATER. Assessment of the G20 members' long-term strategies: commonalities, gaps and areas for cooperation. 2023. Cologne and Berlin: NewClimate Institute. Available at: https://newclimate.org/sites/default/files/2023-09/assessment_of_the_g20_members_long-term_strategies_web.pdf

(24) Article 2 of the United Nations Framework Convention on Climate Change, 1992: "To achieve (...) the stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened, and to enable economic development to proceed in a sustainable manner". Available at: <https://unfccc.int/resource/docs/convkp/conveng.pdf>

(25) According to the Network for Antiracist Adaptation, it is understood as addressing racial, gender, generational, social, regional, and territorial inequalities that climate change tends to exacerbate.

(26) Promulgated by Brazil via Decree 10.932/2022. Available at: https://www.planalto.gov.br/ccivil_03/_Ato2019-2022/2022/Decreto/D10932.htm

(27) CLIMA & DESENVOLVIMENTO, 2030. Caderno de Propostas 2: Transição energética, 2022. Disponível em: <https://clima2030.org/wp-content/uploads/2022/11/Transicao-Energetica.pdf>

(28) INTERNATIONAL ENERGY AGENCY (IEA). World Energy Outlook 2023. Paris: IEA, 2023. Available at: <https://www.iea.org/reports/world-energy-outlook-2023>

(29) Idem

(30) "Marine territorial zones" are understood as the areas beyond the coast under Brazilian jurisdiction, which include the territorial sea, the contiguous zone, the exclusive economic zone, and the continental shelf.

(31) Estimate from the Race to Zero campaign, 2024. Available at: <https://climatechampions.unfccc.int/>

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