

## **Paris Agreement**

### **Brazil's Nationally Determined Contribution (NDC)**

Through this communication, Brazil confirms the commitment originally presented in its intended Nationally Determined Contribution (iNDC), to reduce its greenhouse gas emissions in 2025 by 37%, compared with 2005. Additionally, Brazil commits to reduce its emissions in 2030 by 43%, compared with 2005.

Brazil's Nationally Determined Contribution is compatible with an indicative long-term objective of reaching climate neutrality in 2060. The final determination of any long-term strategy for the country, in particular the year in which climate neutrality may be achieved, will, however, depend on the proper functioning of the market mechanisms provided for in the Paris Agreement. The possibility of adopting a more ambitious long-term objective at the appropriate time is not ruled out.

As a developing country and a nation of late industrialization, Brazil's historical contribution to climate change has been low, as measured by global mean surface temperature resulting from anthropogenic greenhouse gas emissions. This responsibility is even lower when expressed in per capita terms. Despite this, the country decided to increase its targets, demonstrating through concrete actions its commitment to the collective effort to address climate change. Brazil's NDC is among the most ambitious in the world, being one of the few that includes commitments not only for 2030, but also for 2025, thus enabling a better monitoring of mitigation actions. Hence, Brazil believes it is making an important contribution to international efforts to combat climate change, both in absolute and relative terms.

**Annex**  
**Information to facilitate clarity, transparency and  
understanding of Brazil's NDC**

**1. Quantifiable information on the reference point (including, as appropriate, a base year):**

**(a) Reference year(s), base year(s), reference period(s) or other starting point(s):**

The reference year for Brazil's NDC is 2005.

**(b) Quantifiable information on the reference indicators, their values in the reference year(s), base year(s), reference period(s) or other starting point(s), and, as applicable, in the target year:**

The reference indicator will be quantified on the basis of the total net emissions of greenhouse gases (GHG) in the reference year of 2005 reported in the "National Inventory of Anthropogenic Emissions by Sources and Removals by Sinks of Greenhouse Gases not controlled by the Montreal Protocol". For reference purposes, the level of emissions of greenhouse gases for the base year is registered in the current inventory as per the "Third National Communication from Brazil to the United Nations Framework Convention on Climate Change", submitted on 20 April 2016.

**(c) For strategies, plans and actions referred to in Article 4, paragraph 6, of the Paris Agreement, or policies and measures as components of nationally determined contributions where paragraph 1(b) above is not applicable, Parties to provide other relevant information:**

Not applicable.

**(d) Target relative to the reference indicator, expressed numerically, for example in percentage or amount of reduction:**

To reduce greenhouse gas emissions by 37% below 2005 levels in 2025, and by 43% below 2005 levels in 2030.

**(e) Information on sources of data used in quantifying the reference point(s):**

National Inventory of Anthropogenic Emissions by Sources and Removals by Sinks of Greenhouse Gases not controlled by the Montreal Protocol.

**(f) Information on the circumstances under which the Party may update the values of the reference indicators:**

Information on emissions in 2005 and reference values may be updated and recalculated due to methodological improvements applicable to the inventories.

**2. Time frames and/or periods for implementation:**

**(a) Time frame and/or period for implementation, including start and end date, consistent with any further relevant decision adopted by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA):**

Net emissions from 01/01/2005 to 31/12/2005 compared with net emissions from 01/01/2025 to 31/12/2025.

Net emissions from 01/01/2005 to 31/12/2005 compared with net emissions from 01/01/2030 to 31/12/2030.

**(b) Whether it is a single-year or multi-year target, as applicable:**

Single-year targets in 2025 and 2030. As indicated in item (a), they imply comparisons between emissions in 2005 and emissions in 2025 and 2030, respectively.

**3. Scope and coverage:**

**(a) General description of the target:**

Economy-wide absolute targets, consistent with the sectors present in the National Inventory of Greenhouse Gas Emissions for 2025 and 2030, always compared with 2005. The targets will be translated into policies and measures to be detailed and implemented by the Brazilian Federal Government.

**(b) Sectors, gases, categories and pools covered by the nationally determined contribution, including, as applicable, consistent with Intergovernmental Panel on Climate Change (IPCC) guidelines:**

CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, SF<sub>6</sub>, perfluorocarbons (PFCs) and hydrofluorocarbons (HFCs).

**(c) How the Party has taken into consideration paragraph 31(c) and (d) of decision 1/CP.21:**

The same gases previously indicated in the 2015 INDC have been kept.

**(d) Mitigation co-benefits resulting from Parties' adaptation actions and/or economic diversification plans, including description of specific projects, measures and initiatives of Parties' adaptation actions and/or economic diversification plans:**

Not applicable.

**4. Planning processes:**

**(a) Information on the planning processes that the Party undertook to prepare its nationally determined contribution and, if available, on the Party's implementation plans, including, as appropriate:**

**(i) Domestic institutional arrangements, public participation and engagement with local communities and indigenous peoples, in a gender-responsive manner:**

At the governmental level, the institutional framework for the elaboration and implementation of public policies in the area of climate change is set by the Interministerial Committee on Climate Change, instituted by Decree 10.145/2019.

Articles 5, 231, and 232 of the Brazilian Constitution establish ample rights and guarantees for all Brazilian citizens, paying due attention to the special needs of women and indigenous peoples. Brazil is also a party to the ILO Convention 169 on Indigenous and Tribal Peoples.

The institutional interaction between government and civil society takes place through the Brazilian Forum on Climate change, instituted by Decree 9.082/2017,

the aim of which is to “raise awareness and mobilize society and to contribute to the discussion of actions needed to deal with global climate change, in accordance with the National Policy on Climate Change, the United Nations Framework Convention on Climate Change and its resulting international agreements, including the Paris Agreement and Brazil’s Nationally Determined Contributions”.

**(ii) Contextual matters, including, inter alia, as appropriate:**

**a. National circumstances, such as geography, climate, economy, sustainable development and poverty eradication:**

With a territory of over 8.5 million square kilometres, Brazil has equatorial, tropical, and subtropical climates with rainfall ranging from 500 mm to 2,000 mm per year, as well as six biomes, namely the Cerrado (savannah), the Amazon (equatorial rainforest), the Caatinga (semi-arid), the Atlantic Forest (tropical rainforest), the Pantanal (seasonal wetlands), and the Pampa (subtropical grasslands).

Brazil is a party to all major multilateral environmental treaties and has enacted a wide range of laws and public policies in the area of sustainable development.

The country also has a wide range of social and poverty eradication policies in place in the areas of healthcare, education, social security, and minimum income.

**b. Best practices and experience related to the preparation of the nationally determined contribution:**

The current Brazilian NDC is the result of experience gained and lessons learned from the intended Nationally Determined Contribution (iNDC) submitted to the United Nations Framework on Climate Change in 2015.

**c. Other contextual aspirations and priorities acknowledged when joining the Paris Agreement:**

Brazil has always been an active participant in the regime established under the United Nations Framework Convention on Climate Change, which opened for signature during the Rio Summit in 1992. The country demonstrated the same level of engagement in the negotiations, signing, and ratification of the Paris Agreement.

**(b) Specific information applicable to Parties, including regional economic integration organizations and their member States, that have reached an agreement to act jointly under Article 4, paragraph 2, of the Paris Agreement, including the Parties that agreed to act jointly and the terms of the agreement, in accordance with Article 4, paragraphs 16–18, of the Paris Agreement:**

Not applicable

**(c) How the Party’s preparation of its nationally determined contribution has been informed by the outcomes of the global stock take, in accordance with Article 4, paragraph 9, of the Paris Agreement:**

Not applicable

**(d) Each Party with a nationally determined contribution under Article 4 of the Paris Agreement that consists of adaptation action and/or economic diversification plans resulting in mitigation co-benefits consistent with Article 4, paragraph 7, of the Paris Agreement to submit information on:**

**(i) How the economic and social consequences of response measures have been considered in developing the nationally determined contribution:**

Not applicable

**(ii) Specific projects, measures and activities to be implemented to contribute to mitigation co-benefits, including information on adaptation plans that also yield mitigation co-benefits, which may cover, but are not limited to, key sectors, such as energy, resources, water resources, coastal resources, human settlements and urban planning, agriculture and forestry; and economic diversification actions, which may cover, but are not limited to, sectors such as manufacturing and industry, energy and mining, transport and communication, construction, tourism, real estate, agriculture and fisheries:**

Not applicable

**5. Assumptions and methodological approaches, including those for estimating and accounting for anthropogenic greenhouse gas emissions and, as appropriate, removals:**

**(a) Assumptions and methodological approaches used for accounting for anthropogenic greenhouse gas emissions and removals corresponding to the Party's nationally determined contribution, consistent with decision 1/CP.21, paragraph 31, and accounting guidance adopted by the CMA:**

Brazil will update its national inventories for the historical series based on the 2006 IPCC Guidelines or any subsequent guidelines that may come to replace them.

**(b) Assumptions and methodological approaches used for accounting for the implementation of policies and measures or strategies in the nationally determined contribution:**

Brazil will also apply specific assumptions and methodologies, when appropriate, when assessing progress made under the policies and measures related to the implementation of its NDC in its Biennial Transparency Reports (BTRs).

**(c) If applicable, information on how the Party will take into account existing methods and guidance under the Convention to account for anthropogenic emissions and removals, in accordance with Article 4, paragraph 14, of the Paris Agreement, as appropriate:**

See 5 (a) above.

**(d) IPCC methodologies and metrics used for estimating anthropogenic greenhouse gas emissions and removals:**

Emissions of gases covered by Brazil's NDC will be calculated on the basis of the 2006 IPCC Guidelines. The methodological tier to be employed will depend on the availability of data in the different sectors. There will be an effort to apply at least tier 2 methodologies for the key categories identified.

Emissions of the covered gases will be aggregated in terms of the 100-year time-horizon global warming potential (GWP-100), on the basis of the values stipulated in the IPCC Fifth Assessment Report, or 100-year time-horizon global warming potential values subsequently determined by the IPCC, as agreed by the CMA.

Consistent with Decision 18/CMA.1, Brazil will also continue to employ the global temperature potential (GTP), which is a more accurate metric for assessing the contribution of different gases to climate change.

**(e) Sector-, category- or activity-specific assumptions, methodologies and approaches consistent with IPCC guidance, as appropriate, including, as applicable:**

**(i) Approach to addressing emissions and subsequent removals from natural disturbances on managed lands:**

This approach will still be defined and subsequently informed.

**(ii) Approach used to account for emissions and removals from harvested wood products:**

Brazil will use the production approach, consistent with the 2006 IPCC Guidelines.

**(iii) Approach used to address the effects of age-class structure in forests:**

This approach will still be defined and subsequently informed.

**(f) Other assumptions and methodological approaches used for understanding the nationally determined contribution and, if applicable, estimating corresponding emissions and removals, including:**

**(i) How the reference indicators, baseline(s) and/or reference level(s), including, where applicable, sector-, category- or activity-specific reference levels, are constructed, including, for example, key parameters, assumptions, definitions, methodologies, data sources and models used:**

Brazil hasn't used any other assumptions or methodological approaches.

**(ii) For Parties with nationally determined contributions that contain non-greenhouse-gas components, information on assumptions and methodological approaches used in relation to those components, as applicable:**

Not applicable.

**(iii) For climate forcers included in nationally determined contributions not covered by IPCC guidelines, information on how the climate forcers are estimated:**

Not applicable.

**(iv) Further technical information, as necessary:**

Not applicable.

**(g) The intention to use voluntary cooperation under Article 6 of the Paris Agreement, if applicable:**

Yes, when appropriate.

Any transfer of units from mitigation results obtained in the Brazilian territory within the framework of the UNFCCC, the Kyoto Protocol or the Paris Agreement will be contingent on prior and formal consent by the Brazilian Federal Government.

**6. How the Party considers that its nationally determined contribution is fair and ambitious in the light of its national circumstances:**

**(a) How the Party considers that its nationally determined contribution is fair and ambitious in the light of its national circumstances:**

**(b) Fairness considerations, including reflecting on equity:**

Most of the current concentration of greenhouse gases in the atmosphere is a result of emissions that have taken place since the Industrial Revolution (the post-1750 period). Current generations are bearing the costs of past interference with the global climate system, resulting from human activities and consequent greenhouse gas emissions, primarily by developed countries, during the last two and a half centuries. In order to build a fair global response to climate change, it is therefore of central importance to establish a connection between cause (anthropogenic emissions) and effect (temperature increase and climate change).

The global mean surface temperature increase due to anthropogenic emissions is an objective criterion to measure climate change, serving the purpose of establishing upper limits to prevent dangerous anthropogenic interference with the global climate system. The relative contribution of any individual actor to global climate change can be determined using the global mean surface temperature as an indicator. Each individual actor's contribution to temperature increases should take into account differences in terms of starting points, population, approaches, economic structures, resource bases, the need to maintain sustainable economic growth, available technologies and other individual circumstances.

The reconstruction of the historical series of net anthropogenic emissions allows for the estimation of the relative share of the temperature increase attributable to each individual country, including in per capita terms. The relative responsibility of a given country in relation to the global mean surface temperature increase can be estimated with a high level of confidence. Hence, the marginal relative contribution to the global average surface temperature increase is a relevant measure for evaluating the level of each party's responsibility in the collective effort to "[h]olding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels", in accordance with Article 2.1 (a) of the Paris Agreement.

This understanding provides for the main moral foundation underpinning the principle of common but differentiated responsibilities, which is one of the central pillars of the international climate change regime, constituted by the UNFCCC, its Kyoto Protocol and the Paris Agreement.

Brazil's mitigation efforts are of a type, scope and scale at least equivalent to the contributions of developed countries with both greater historical and current responsibilities for climate change. In view of the above, and based on the available analytical tools, it is clear that this NDC is a far more ambitious effort than what would be required by Brazil's marginal relative responsibility for global average temperature increases.

Indeed, Brazil's NDC is one of the most ambitious in the world. In addition to the significant values established for its mitigation targets, Brazil is one of the very few countries that have taken on commitments not only for 2030, but also a target for 2025, allowing for better monitoring of the evolution of its mitigation actions.

Therefore, Brazil believes it is making an important contribution to international efforts to fight climate change, in both relative and absolute terms.

Brazil has 30% of its territory covered by protected areas, comprising both Conservation Units and Indigenous Peoples' Lands. It also has one of the world's most protective land-use legislations, which requires landowners to set aside for preservation between 20% and 80% of their respective properties' area, in addition to conserving riparian forests and other fragile ecosystems. Protected areas, together with areas mandatorily set aside for preservation in private farms, total 50% of the national territory. Put together, protected areas, mandatorily set aside areas and conserved areas amount to more than 60% of the Brazilian territory.

The Low Carbon Agriculture Plan (ABC) has already allocated over R\$ 17 billion to a wide range of mitigation measures in the agricultural and animal husbandry sector, such as recovery of degraded pastures; biological nitrogen fixation; increased accumulation of organic matter, and therefore carbon, in the soil; no-tillage system; crop-livestock-forestry integration and agroforestry systems; and forest planting.

In 2019, renewable sources accounted for 83% of power generation, 46% of automobile fuel consumption, and 41% of primary energy in Brazil, this latter value corresponding to over two and a half times the world average. Production of biofuels for transport keeps growing with the support of the Renovabio Program, which uses decarbonization market mechanisms to foster production and consumption of these renewable resources. The hydroelectric power generation infrastructure accounts for 64% of the national installed capacity, and is the best technological solution to compensate for the intermittence and seasonality of wind, solar and biomass sources, which account for 19% of the power generation installed capacity and are experiencing rapid growth.

**(c) How the Party has addressed Article 4, paragraph 3, of the Paris Agreement:**

The target of reducing emissions by 43% between 2005 and 2030 represents an increase of 6% compared to the previous target of reducing emissions by 37% between 2005 and 2025. The current target is also consistent with an indicative long-term objective of reaching climate neutrality by 2060.

**(d) How the Party has addressed Article 4, paragraph 4, of the Paris Agreement:**

Despite being a developing country, Brazil has already adopted an absolute, economy-wide target since it presented its iNDC.

**(e) How the Party has addressed Article 4, paragraph 6, of the Paris Agreement:**

Not applicable.

**7. How the nationally determined contribution contributes towards achieving the objective of the Convention as set out in its Article 2:**

**(a) How the nationally determined contribution contributes towards achieving the objective of the Convention as set out in its Article 2:**

**(b) How the nationally determined contribution contributes towards Article 2, paragraph 1(a), and Article 4, paragraph 1, of the Paris Agreement:**

By presenting one of the most ambitious NDCs in the world, Brazil understands it is significantly contributing to the "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system", consistent with Article 2 of the UNFCCC.

By the same token, Brazil believes to be contributing to the collective effort to hold "the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels", consistent with Article 2.1(a) of the Paris Agreement.

As per Article 4.1 of the Paris Agreement, Brazil presents a sizeable emission reduction target, which largely exceeds any goals related to peaking emissions. Brazil's NDC is compatible with a long-term indicative objective of achieving carbon neutrality in 2060.

The Brazilian Federal Government understands that market mechanisms must play a crucial role in the implementation of the objectives of the UNFCCC and its Paris Agreement. Through the *Floresta+* Program, the Government has set up an ambitious and innovative policy for the payment of environmental services. The program includes a component that refers to the voluntary carbon market, to foster investments in forest conservation projects. Furthermore, Brazil considers it essential that the negotiations on Article 6 of the Paris Agreement be concluded promptly and that the sustainable development mechanism (SDM) provided for under Article 6, paragraph 4 of the Agreement be operationalized as soon as possible. The SDM has the potential to greatly facilitate the implementation of the Paris objectives, both in Brazil and in other countries. On the other hand, in the event of a failure to conclude the negotiations and regulation of Article 6, the entire architecture of the Paris Agreement would be seriously jeopardized, to the detriment of the implementation of its objectives.

As of 2021, Brazil will require at least US\$ 10 billion per year to address the numerous challenges it faces, including the conservation of native vegetation in its various biomes. Further decisions regarding Brazil's indicative long-term strategy, especially the definition of the final date to be considered to this end, will take into account financial transfers to be received by the country. Although the Federal Government currently considers achieving carbon neutrality in 2060, the proper functioning of the market mechanisms under the Paris Agreement might justify considering a more ambitious long-term objective in the future, having as a time horizon, for instance, the year 2050.