



Climate Governance

Assessment of the government's ability and readiness to transform Brazil into a zero emissions society

CAT Climate Governance Series

BRAZIL

February 2022

CAT Climate governance series

Under the Paris Agreement, governments have committed to limiting temperature increase to well below 2°C above pre-industrial levels and pursuing efforts to limit it to 1.5°C. Achieving this objective will require halving global emissions by 2030, and reaching net zero CO₂ emissions by 2050 and all gases around 2070, with negative emissions thereafter.

Governments in all countries play a critical role in enabling this transformation, which involves action from all aspects of society and the economy.

The Climate Action Tracker (CAT) tracks the progress of countries towards achieving the climate targets they have set for themselves under the Paris Agreement and what the combined effect of these commitments and policies mean for global temperature levels at the end of this century.

In this series, the CAT expands on its country analysis to evaluate the ability and readiness of national governments to enable the required economy-wide transformation towards a zero emissions society.

Our assessment focuses on national governments and analyses four aspects of governance covering key enabling factors for effective climate action:

- the political commitment of the government to decarbonisation,
- the institutional framework it has put in place to achieve its emission reduction targets,
- the processes it has established to develop, implement and review mitigation policies, and
- its ability and willingness to engage with relevant stakeholders on policy development.

The Climate Governance Series seeks to offer a standardised and replicable approach to assessing a government's ability and readiness to achieve the required transformation, highlighting positive developments and areas for improvement.

Since 2019, we have been expanding the scope of our coverage. All country profiles are available on **our website**.

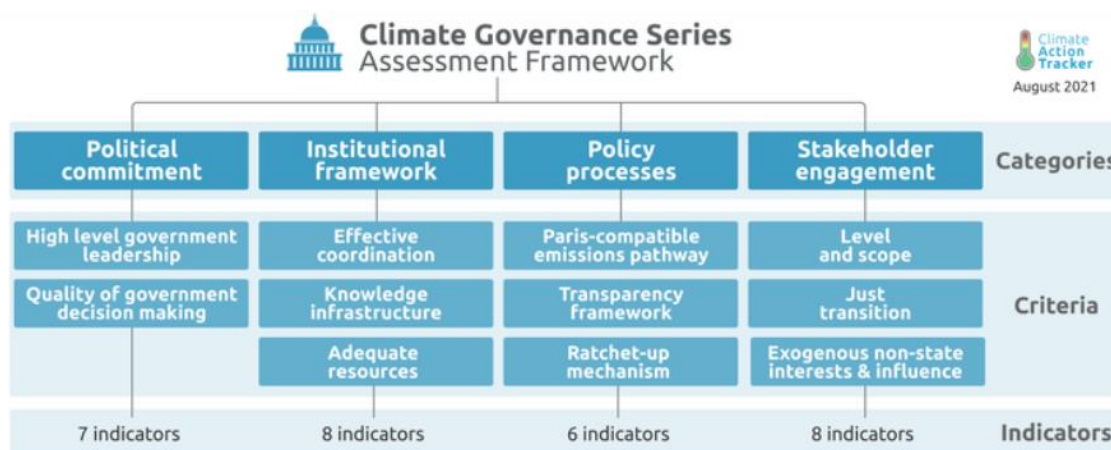


<http://climateactiontracker.org/publications/climate-governance>

Legend

Understanding our indicators

This report series seeks to produce a standardised and replicable approach to assessing a country's readiness to transition to a zero emissions society. To achieve this, we have assessed a number of possible indicators under four broad categories and eleven criteria. **Criteria** are marked in bold text throughout this document.



Notwithstanding the desire for standardisation, our framework is a living document and we occasionally revise the number or make-up of our indicators. For complete details, see our **methodology page**. This assessment of Brazil is based on our **2021 methodology**.

Understanding our rating system

Our rating system highlights positive developments within countries, identifies areas of improvement, and establishes a basis on which to compare climate governance across countries.

Each individual indicator has been assessed and given a score. The categories and criteria linked to those indicators are then given a rating based on those scores.

Very Poor	<p>≤ 20% of possible score This rating indicates that the government is deficient and improvement is necessary.</p>
Poor	<p>20 – 40% of possible score This rating indicates that the government is showing a limited level of readiness but improvement is still necessary.</p>
Neutral	<p>40 – 60% of possible score This rating indicates that the government is showing some level of readiness, but improvement is still necessary.</p>
Acceptable	<p>60 – 80% of possible score This rating indicates that the government is showing a good level of readiness, although improvement is still possible.</p>
Advanced	<p>≥ 80% of possible score This rating indicates that the government is performing well, although improvement is still possible and beneficial.</p>

Executive summary

Environment and climate action are not priorities for President Bolsonaro and his administration; on the contrary, his government has undermined or even completely reversed many previous achievements such as policies, institutional structures and laws. A record deforestation rate is only one of many negative consequences of these measures.

Despite the president's recent announcements that appear to go in the right direction, such as the goal of "climate neutrality" by 2050 or the end of illegal deforestation by 2030, the credibility of these goals remains in question, as they are not backed by concrete short-term and ambitious measures. The federal elections scheduled for October 2022 could bring about a change in policy, as many opposition parties consider climate and environmental protection important.

In Brazil, there are structures for coordinating across the federal government and with sub-national governments, but they are not always effective, partially because the current government has weakened functioning processes. This has also led to relatively low levels of mainstreaming of climate-related policies across ministries, and coherence between sectoral policies and national strategies. Despite the federal government's dismissive attitude towards climate change mitigation measures, various states and cities have increased their commitment to climate action in recent years.

Brazil has years of experience in raising funds for climate action, both internationally and nationally, and has even established its own climate fund. However, both the number of funding sources and the overall budget for environmental and climate issues have been greatly reduced in recent years.

Brazil was one of the first countries in the world to pass a law that defines and regulates national measures and targets for climate action back in 2009, although its effectiveness has been limited, partly because of the unambitious emissions reductions target. A "climate neutrality" target for mid-century has been announced, but is not anchored in national legislation, and short-term sectoral measures planned do not indicate that they are geared towards this goal.

While there is a comprehensive and functioning transparency framework in place, the effectiveness of the review mechanisms related to the implementation of transition-related policy is minimal. Analysis of the evolution of Brazil's NDCs also indicates that there is no effective ratchet-up mechanism.

Overall, national efforts to create and disseminate public knowledge about climate change and the transition to a zero-emissions society can be greatly improved, especially under the government which has reduced or weakened existing services or channels. When it comes to engaging non-state actors in transition-related activities, it is crucial to take into account the need for a Just Transition. However, neither of these elements is a priority for the current government.

There is no lack of scientifically sound analyses about measures and pathways towards a zero emissions society in Brazil. But this does not change the fact that the country seems to be divided on climate change issues. When it comes to the influence of interest groups on politics, however, the picture is clear: the government usually suppresses the influence of environmental groups, and the influence of agribusiness or the fossil fuel industry is considerable.

Category	Criteria	Recommendations
Political commitment	High-level government leadership	<ul style="list-style-type: none"> Strengthen high-level political commitment for climate action in general, and the transition to a zero emissions society, in particular. Back up recent announcements (such as stopping illegal deforestation by 2030) with short-term, ambitious and credible measures.
	Quality of government decision making	
Institutional framework	Effective coordination	<ul style="list-style-type: none"> Reinforce the position and influence of the Inter-ministerial Committee on Climate Change Green Growth to strengthen horizontal coordination. Enable states and cities to continue implementing ambitious climate policies. Substantially increase the budget for the Ministry of Environment and IBAMA. Use resources from the National Climate Fund to implement ambitious mitigation and adaptation measures.
	Knowledge infrastructure	
	Adequate resources	
Policy processes	Paris-compatible emissions pathway	<ul style="list-style-type: none"> Underpin long-term emissions reductions target with meaningful short- and medium-term action. Regularly review progress on climate targets and effectiveness of policies. Submit a more ambitious NDC target, that represents a genuine progression from the first target and sets the country on a pathway to 1.5°C.
	Transparency framework	
	Ratchet-up mechanism	
Stakeholder engagement	Level and scope	<ul style="list-style-type: none"> Establish effective stakeholder participation processes, which should specifically include indigenous and marginalised groups. Consider the need for a Just Transition in all policies related to climate mitigation and adaptation. Decrease the influence of non-state actors at risk from the transition, particularly the agribusiness sector.
	Just transition	
	Exogenous non-state interests and influence	

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1 Introduction

1.1 Domestic context

Brazil is a multi-party democracy where elections are held regularly. President Bolsonaro was elected in 2018 and is currently serving his first term. The next presidential elections will be held in October 2022. Current expectations for the elections point to a two-way race between Bolsonaro's ruling party (Social Liberal Party) and the Workers Party, led by former President Luiz Inácio Lula da Silva. The 1988 Constitution, drafted after a period of military dictatorship, decentralised power at the federal level and granted state and municipal governments administrative autonomy and responsibilities for policy implementation. As a consequence, the 26 states have comparatively greater fiscal, administrative and political power (Valente De Macedo & Jacobi, 2019).

Brazil is the largest and most populous country in Latin America, with around 211 million inhabitants, a third of the region's population. Brazil is considered an upper middle income country and is Latin America's largest economy with a GDP of around USD 1.84 tn in 2019 and a GDP per capita of around USD 8,700 (World Bank, 2021a). It is the world's ninth largest economy, and its GDP represents a third of the region. However, Brazil's GDP has been on a downward trend since it reached an all-time high at USD 2.6 trillion in 2011. Brazil's economic recession in 2014 to 2016 has accentuated the decline in GDP (World Bank, 2021b).

Brazil has become one of the countries most affected by COVID-19 in the world, both in terms of the number of reported cases and the number of deaths (Covidstatistics, 2021). Bolsonaro has employed a denialist strategy and actively blocked cautionary measures, such as lockdowns, in an attempt to create "herd immunity" (Bustamante et al., 2021). In 2020, Brazil's GDP contracted by 4.1% (World Bank, 2021b). This drop is lower than in other countries of the region, mainly due to the aforementioned restrained lockdown strategy and a large stimulus package amounting close to 12% of its GDP (IMF, 2021). Brazil's fiscal and financial stimulus to date, however, has not focused on a green economic recovery (Climate Action Tracker, 2020; Vivid Economics, 2021).

Even though Brazil's healthcare system is one of the strongest in Latin America, its uneven regional capacity, in combination with Bolsonaro's denialist strategy, has led to a surge in COVID-19 cases, hitting the poorer regions in the North and Northeast of Brazil the hardest (World Bank, 2020a). As of January 2022, there have been more than 23 million confirmed cases of COVID-19 with over 620,000 deaths (OWID, 2022).

The consequences of the 2014 economic recession and the COVID-19 pandemic have exacerbated social inequality in the country, with more Brazilians living in poverty today than in the previous decade (Economia, 2021; Reuters, 2021; World Bank, 2020b). Around 50% of Brazilians live below or on the verge of the poverty line¹ and the poorest 20% of households earn only 3.1% of the country's total income (OECD, 2021). High levels of corruption divert funds from much-needed investment in social protection and public infrastructure, and contribute to the the destruction of the Amazon through land grabbing by powerful agribusiness (Mohallem, 2021; Transparency International, 2020b).

Influential lobbying from non-state actors and corruption are significant problems in Brazil. In 2014, the Federal Police opened an investigation into high-profile corruption cases of Brazil's political elite. As part of its *Operation Carwash*, hundreds of politicians were accused of being involved in money-laundering and bribes connected to the state-owned oil company Petrobras (Mohallem, 2021).

President Bolsonaro and his newly emerging Social Liberal Party (PSL) successfully ran on a platform of anti-corruption, free markets and law and order (Hunter & Power, 2019). However, he is now at the centre of various scandals. In 2020, the Organized Crime and Corruption Reporting Project (OCCRP) named Bolsonaro "Person of the year in organized crime and corruption" (OCCRP, 2020). Bolsonaro has also used his power to threaten the independence of anti-corruption institutions (Transparency International, 2019).

¹ Less than USD 5.5 per day per person (World Bank, 2020a).

Corruption in the Ministry of Environment (MMA) is also a recent concern. For example, it is alleged that when Ricardo Salles was Minister, he was involved in the illegal trade of timber to the United States and Europe (Paraguassu et al., 2021). Salles resigned from office in June 2021 (CNN, 2021). Consequently, Brazil also consistently scores poorly on the Corruption Perception Index (Transparency International, 2020a).

Brazil is home to one of the largest forest sinks in the world, the Amazon rainforest, and made notable progress against illegal deforestation in the late 2000s. In 2012, deforestation rates were down by 84% compared to the peak year of 2004 (Silva Junior et al., 2021). Since then, however, the deforestation rate has risen again: in the period from August 2020 to July 2021 deforestation has increased by 22% compared to the same period of the previous year and is the highest since 15 years (AP News, 2021).

Almost 223,000 wildfire outbreaks were identified in Brazil in 2020, the highest figure reported in a single decade (Statista, 2021). At the current deforestation rate, the Amazon is on the verge of turning from a net carbon sink into a source (Harris et al., 2021). The continued roll-back of forest protection policies and the expansion of pasture for beef production, croplands for soy and palm oil, and increasingly conversion of primary forest to tree plantations for paper and pulp have been the key drivers of this (OWID, 2021; SEEG, 2020). Three-quarters of tropical deforestation in Brazil is driven by cattle ranching (OWID, 2021). Most of the country's GHG emissions are the result of activities in the agriculture (28%), land-use change and the forestry sector (46%), which together accounted for three-quarters of Brazil's total GHG emissions in 2020 (SEEG, 2020).

In the energy sector, a clear cause for concern is Brazil's energy infrastructure planning, which unnecessarily continues to incorporate fossil fuels, including coal and gas. On a more positive note, market trends for renewable power generation are heading in the right direction, with a steady increase in wind and solar capacity (IRENA, 2021). Due to a very high share of hydropower, Brazil has one of the highest shares of renewable energy globally (82% of the generation mix), leading to relatively low levels of emissions from the power sector (IEA, 2021; Timperley, 2018). This is also reflected in the latest Renewable Energy Country Attractiveness Index, in which Brazil moved up from 15th to 11th place of the world's most attractive markets for renewable energy (EY Global, 2020). However, the high dependence on hydropower also entails risks, as the development of the Belo Monte dam in Pará has shown. The mega dam (with a fully operational capacity of 11,233 MW) has done significant socio environmental harm to the Xingu River and the indigenous people living beside it while by far not being able to produce the electricity totals promised by its builders (highest value it produced in 2019 was 6,882 MW). Reasons for the latter being reduced Xingu flows due to regional deforestation and climate change-induced drought, further cutting power generation (Mongabay, 2020).

As this example shows, Brazil is vulnerable to the effects of climate change. Temperature changes and sea level rise may alter the Amazon's ecosystem, impact the range of species and increase the frequency and intensity of droughts (USAID, 2018). These cumulative effects are likely to affect peoples' livelihoods, particularly in the poorer parts of the country (Bento de Souza Ferreira Filho et al., 2014). Accordingly, two-thirds of the population indicate that the effects of climate change are felt where they live (Pew Research Center, 2020b).

1.2 Climate governance snapshot

Climate governance in Brazil is poor and a stark contrast to Brazil's past when it was a leader on environmental and climate policy.

Brazil was the first signatory of the 1992 United Nations Framework Convention on Climate Change (UNFCCC), which took place in Rio de Janeiro, and a forerunner in global climate politics in the following two decades (Franchini et al., 2020).

A 2007 Decree established the governance structure that developed the **National Plan on Climate Change**. The Climate Plan provided a comprehensive framework to combat climate change. In the same year, the Federal Government established the Inter-ministerial Committee on Climate Change (CIM). Its overall goal was to support coordination of policy actions between line ministries (*Decree No 6.263*, 2007). Its mandate was later expanded to also coordinate climate change-related activities and to support the implementation of Brazil's NDC (*Decree No 9.073*, 2017). Since then, the country has introduced a large number of climate-related laws.

In 2009, the Federal Government announced the **National Policy on Climate Change**, a voluntary mitigation commitment to reduce emissions by 36-39% by 2020 below 2010 levels, in preparation for the Conference of the Parties (COP) in Copenhagen that same year. Further relevant laws and plans that have been introduced in the past include the 2012 **Brazilian Forestry Code**, which established rules on the protection of vegetation and forests, and the 2018 **Environmental Criminal and Administrative Offences Act**, which defined sanctions derived from activities harmful to the environment.

In 2016, the government released the **National Adaptation Plan**, which guides initiatives for the management and reduction of long-term climate risks. On the **sectoral level**, there are a number of **plans** that set out mitigation and adaptation measures. These include, for example, the Ten-Year National Energy Expansion Plan, the Low Carbon Agriculture Plan or the Plan on Transport and Urban Mobility for Climate Change Mitigation. The table below provides a full list of relevant sectoral plans.

In the last decade, and especially in recent years, Brazil's role in climate policy has changed significantly. Since 2012, the Rousseff and Temer administrations have weakened environmental policies. With Jair Bolsonaro's election in 2018, whose election promises included withdrawing Brazil from the Paris Agreement, the situation has worsened (Franchini et al., 2020; Keating, 2018).

While Brazil is still a party to the Paris Agreement, its environmental regulations have been weakened and deforestation rates in the Amazon increased considerably (Silva Junior et al., 2021). The Bolsonaro administration has also substantially weakened the power and budget of the Ministry of Environment (Silva Junior et al., 2021). In 2021, he approved a total budget cut of 24% compared to 2020 (Spring, 2021).

The former environment minister Ricardo Salles called for environmental deregulation while the public was distracted by the COVID-19 (Vale et al., 2021). Between January 2019 and September 2020, the government passed 57 **legislative acts that effectively weakened environmental regulations**, almost half of them in the seven months since the onset of the COVID-19 pandemic (i.e. March to September 2020) (Vale et al., 2021).

In December 2020, the Brazilian government submitted an **updated Nationally Determined Contribution (NDC)** to the UNFCCC. Like the previous 2016 NDC, the updated NDC set the target of a 37% GHG reduction by 2025 and a 43% GHG reduction by 2030, below a 2005 baseline level (Government of Brazil, 2020a). While the targets remained unchanged on paper, the emissions in 2005 increased as a result of an emissions inventory revision. This effectively weakened the targets presented under the updated NDC.

According to CAT analysis, the change in baseline emissions raises target emissions in 2025 and 2030 by over 400 MtCO_{2e}, well above current policy projections (Climate Action Tracker, 2021b). During COP26 in November 2021, Brazil announced a new target of reducing GHG emissions by 50% in 2030 below 2005 levels. This new target has, however, yet to be officially submitted to the UNFCCC (as of February 4, 2022) and its ambition is uncertain due to a lack of clarity on the reference levels used. Several sources concur in the assessment that if the 50% is applied to the most recent emissions inventory in Brazil (included in the Fourth National Communication for 2020), which is expected to be

the case, the COP26 announcement only has the potential to return to an amount almost, but not fully, equivalent to the original 2016 target (Observatorio do Clima, 2021b; Política por inteiro, 2021).

As part of its updated NDC submission in December 2020, Brazil set an indicative goal of reaching net zero by 2060, conditional on receiving financial support (Climate Action Tracker, 2021a). At the US Climate Ambition Summit in April 2021, Bolsonaro announced Brazil's aim to achieve "climate neutrality" by 2050 (*Carta MRE*, 2021). At COP26 in Glasgow, Brazil made a formal pledge to eliminate illegal deforestation by 2030 (Government of the UK, 2021; RTE, 2021). Even if these recent announcements appear to be heading emissions in the right direction, their credibility remains a central question as they are not backed up with concrete short-term and ambitious measures.

While the Brazilian Federal Government has weakened environmental and climate policies in recent years, various municipalities and states have stepped up and announced more ambitious climate targets. Nine Brazilian states and one city are members of the *Under 2 Coalition*, representing over 79 million people and 65% of Brazil's GDP (The Climate Group, 2021). In 2017, 14 of 27 states, including Rio de Janeiro, São Paulo and Minas Gerais, had set their own climate plans (Agencia Minas, 2021; Barbi & Ferreira, 2017; Infraestrutura e Meio Ambiente, 2020; The Climate Group, 2021).

The following table provides an overview of key institutions, plans and strategies, targets and regulations in Brazil. Based on (Instituto Talanoa, 2020).



Key Institutions

Ministry of Environment (MMA)

The MMA, created in 1992, is a federal ministry with the authority to formulate and implement national environmental policies.

Institute of Environment and Renewable Natural Resources (IBAMA)

The IBAMA is the administrative arm of the MMA. It enforces compliance with the federal environmental legislation.

Inter-ministerial Committee on Climate Change and Green Growth (CIMV)

The CIMV establishes guidelines and coordinates the implementation of the country's public actions and policies related to climate change.

Inter-ministerial Commission on Climate Change (CIMGC)

This CIMGC is composed of nine ministries and headed by the Ministry of Science and Technology and is responsible for coordinating discussions on climate change and integrating the government's policies in these ministries.

Brazilian Research Network on Global Climate Change (Rede CLIMA)

The Rede CLIMA is Brazilian organization tasked to provide technical and scientific advice related to climate change.

Executive Group on Climate Change (GEx)

The GEx is coordinated by the MMA and a sub-division of CIMV. The Group is responsible for the elaboration, implementation and monitoring of the National Climate Change Programme.

Brazilian Forum on Climate Change (FBMC)

This Forum aims to raise awareness, mobilise society and contribute to the discussion on actions needed to address climate change.

National Fund on Climate Change (Fundo Clima, FC)

The FC was established in 2009 with the aim of ensuring resources to finance initiatives that focus mitigation of climate change as well as adaptation to climate change and its effects.

Amazon Fund

The Amazon Fund is a mechanism focused on reducing emissions from deforestation and forest degradation, and the role of conservation, sustainable management of forests, and enhancement of forest carbon stocks (REDD+).



Key Plans & Strategies

National Climate Change Plan

The National Plan on Climate Change, launched in December 2008, has the objective of identifying, planning and coordinating actions and measures for GHG mitigation and to implement actions for adaptation to climate change. The document involves actions in a diverse range of sectors, including (i) energy, (ii) forests, other biomes and agriculture, (iii) other sectors: industries, waste, transport and health. The Plan is currently being reviewed.

Relevant sectoral plans

- Action Plan to Prevent and Control Deforestation in the Amazon (PPCDAm) and in the Cerrado (PPCerrado).
- Ten-Year National Energy Expansion Plan (PDE)
- Low Carbon Agriculture Plan (ABC Plan and ABC+ Plan)
- Plan for Climate Change Mitigation for the Consolidation of a Low-Carbon Economy in the Manufacturing Industry
- Low Carbon Mining Plan (PMBC)
- Sectoral Plan for Reducing Emissions in the Steel Industry
- Plan on Transport and Urban Mobility for Climate Change Mitigation (PSTM)
- Health Mitigation and Adaptation Plan



Targets

Nationally Determined Contribution (NDC) 2020

In 2020, Brazil submitted an updated NDC aiming at a reduction of GHG emissions of 37% by 2025 and 43% by 2030 below 2005 levels. This updated target actually results in higher 2030 emissions than the previous NDCs, which set the same targets, but assumed lower reference emissions levels in 2005. The 2016 NDC was enshrined in law by Federal Decree Nr. 9.073/2017.

At COP26 Brazil announced a new target, to reduce emissions by 50% in 2030 below 2005 levels. As of 15 January 2022, the target had not been submitted to the UNFCCC but its ambition is uncertain due to lack of clarity on the reference levels used. If Brazil uses the same inventory as in its 2020 submission, the COP26 announcement will still result in absolute emissions above the original NDC target.



Key Laws & Regulations

Federal Law Nr. 6.938/1981: National Environmental Policy Act (PNMA)

This law establishes Brazil's National Environmental Policy, its purposes and mechanisms, sets up the National Environmental System (SISNAMA) and establishes the Environmental Defence Registry. The National Environmental Policy aims at preserving, improving and recovering environmental quality in the country.

Federal Law Nr. 12.187/2009: National Policy on Climate Change (PNMC)

This law institutes the National Policy on Climate Change with the view of providing an institutional structure and resources dedicated to the protection of the environment from the risks of climate change. The Policy also includes within the main guidelines all United Nations' provisions on Climate Change as well as those of Kyoto Protocol. The Senate approved Bill No 6539/2019 in November 2021 amending Law 12.187/2009, to include the updated commitments made by Brazil under the Paris Agreement.

Federal Law Nr. 9.605/1998: Environmental Criminal and Administrative Offences

This law defines criminal and administrative sanctions derived from conducts and activities harmful to the environment.

Federal Law Nr. 12.651/2012: Brazilian Forestry Code

This law establishes general rules on the protection of vegetation, Permanent Preservation Areas and Legal Reserve areas, forestry exploitation, supply of forestry raw materials, control of the origin of forest products and the control and prevention of forest fires, and provides economic and financial instruments to achieve its goals.

2 National assessment

2.1 Political commitment

Political commitment

High level government leadership

Quality of government decision making

Environment and climate action are not priorities for President Bolsonaro and his administration; on the contrary, his government has undermined or even completely reversed many previous achievements such as policies, institutional structures and laws. A record deforestation rate is only one of many negative consequences of these measures.

Despite the president's recent announcements that appear to go in the right direction, such as the goal of "climate neutrality" by 2050 or the end of illegal deforestation by 2030, the credibility of these goals remains in question, as they are not backed by concrete short-term and ambitious measures. The federal elections scheduled for October 2022 could bring about a change in policy, as many opposition parties consider climate and environmental protection important.

High-level government leadership can be a driving force for stimulating economy-wide transformational changes and increasing climate mitigation ambition through top-down strategy setting and sending effective policy signals.

In Brazil, however, leadership for climate action from the current federal government, and especially President Jair Bolsonaro, is non-existent. On the contrary, the Bolsonaro administration is openly hostile to the transition to a zero emissions society and to climate change action in general.

In his election campaign, Bolsonaro promised to withdraw Brazil's offer to host the UNFCCC Conference of Parties (COP) 25 in 2019, which he did after winning the election (The Guardian, 2018). He had also threatened that Brazil would leave the Paris Agreement if he was elected, but later rescinded that threat (Reuters, 2018).

This hostile attitude towards climate change is shared by most of Bolsonaro's cabinet members. The Minister of Foreign Affairs, for instance, once claimed that climate change was a "plot by cultural Marxists" (The Guardian, 2020b).

Actions and measures taken by the current government speak for themselves: Bolsonaro's administration has submitted an updated NDC (in 2020) that effectively weakens the already insufficient climate targets for 2025 and 2030, has sharply cut budgets for climate action and has passed legislation that weakens the institutional and legal framework to halt deforestation and combat environmental violations (Climate Action Tracker, 2021a). This administration has also passed legislation that hinders civil society participation in policymaking and oversight of policy implementation (Associated Press, 2019; Observatório do Clima, 2019; The New York Times, 2019).

These actions have provoked opposition both at the national and international level: the Brazilian Economic Council for Sustainable Development (CEBDS), which claims to represent companies responsible for nearly half of the country's economy, has urged the government to curb illegal deforestation and tone down its stance on carbon markets, calling on the government to compromise by allowing corresponding adjustments to be made so carbon reductions are not double-counted (Climate Home News, 2021; World Today News, 2021).

In 2019, Brazil's former Ministers of Environment published a joint declaration criticising Bolsonaro and his administration, arguing they were dismantling Brazil's environmental protections (El Pais, 2019; Reuters, 2019c). In July 2020, 17 former Ministers of Finance and Central Bank presidents published a letter calling for substantial changes in Brazil's environmental policies. They argued that

Brazil must transition to a carbon-neutral economy, and that economic policies must internalise climate considerations (Convergencia pelo Brasil, 2020).

The Bolsonaro administration has not only dismantled environmental policies, but also abolished the Brazilian agency responsible for climate change, the Secretariat for Climate Change and Forests (Organics News Brasil, 2019). Bolsonaro's former Environment Minister Salles labelled the secretariat staff attending COP24 as part of the Brazilian delegation as international tourists financed by government (Organics News Brasil, 2019). In February 2020, the Ministry of Environment's (MMA) director in charge of climate change issues and his deputy were dismissed, and their posts remain vacant (Reuters, 2020a).

At the US Climate Ambition Summit in April 2021, Bolsonaro pledged to reach "climate neutrality" by 2050, moving the target forward by ten years compared to the target set in its 2020 NDC submission. (*Carta MRE*, 2021). However, there is no detailed information available on this target and it remains unclear how it will be achieved (Climate Action Tracker, 2021a). Other measures, such as the MMA budget cuts which Bolsonaro approved a day after telling the Summit he would increase spending to fight deforestation, give the impression of a government that is not particularly serious about the goal (BBC News, 2021).

At COP26 in Glasgow Brazil made a formal pledge to eliminate illegal deforestation by 2030 (Government of the UK, 2021; RTE, 2021). While this can, in principle, be seen as a step in the right direction, the question remains as to whether the Bolsonaro administration can be trusted to embed this target in national policies and ensure its achievement, as it has gained little credibility on these matters in the past.

Shortly after COP26, Brazil's National Institute for Space Research released a report showing the Amazon lost 13,235 square kilometres of rainforest in the 12-months from August 2020 to July 2021. This is a 22% increase over the previous 12-month period and the worst development in 15 years (AP News, 2021). This meant emissions from land use, land use change and forestry (LULUCF) increased by almost 24% between 2019 and 2020 (Observatorio do Clima, 2021a; SEEG, 2020). This development and the fact the report was already available to government representatives before COP26, but its publication delayed until after COP26 at the behest of the president, justify a certain scepticism about these promises (AP News, 2021).

The **quality of government decision making** at the highest levels is a key factor in implementing ambitious climate policies, as national governments provide resources and direction for lower levels of government and can stimulate horizontal dynamics through mainstreaming, lesson-drawing, and cooperation (Jänicke et al., 2015).

The actions of the Brazilian government have prevented continuity in the implementation of climate and other environmental policies and there have been significant rollbacks under Bolsonaro's administration. In fact, Ricardo Salles, then Environment Minister, is reported to have proposed that the government should push through further deregulation of environmental policy while people were distracted by the coronavirus pandemic (The Guardian, 2020a). Between January 2019 and September 2020, the government passed 57 laws that effectively weakened environmental regulations, almost half of them in the first seven months of the pandemic (Vale et al., 2021).

The Bolsonaro administration is widely regarded within the country as untrustworthy and there are numerous allegations of government officials being involved in corruption. While President Bolsonaro promised in his election campaign to fight corruption, he is now at the centre of various corruption scandals. In 2020, the Organized Crime and Corruption Reporting Project (OCCRP), a consortium of investigative journalists, named Bolsonaro "Person of the year in organized crime and corruption" (OCCRP, 2020). Suspected cases of corruption are by no means confined to the president himself. The former Minister of Environment Salles, for instance, was investigated for allegedly obstructing a police investigation into illegal logging (Paraguassu et al., 2021). Bolsonaro demonstratively backed Salles, even after the minister was targeted by the federal police. In June 2021, Salles ultimately resigned from office (CNN, 2021).

There are several examples of how the low credibility and trustworthiness of individuals is also reflected in the implementation of projects. For example, the Brazilian Institute for Socio-Economic Studies (INESC) found that funds from a large (USD 96m) GCF funded REDD+ project did not benefit

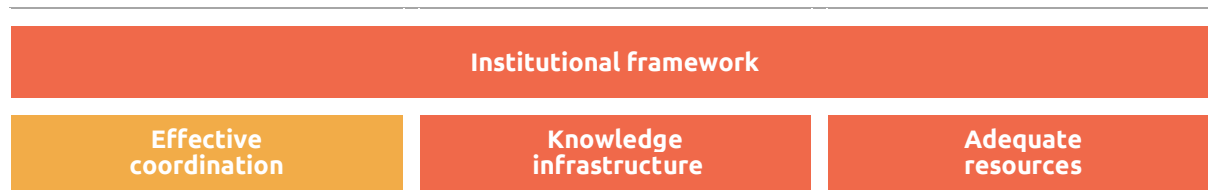
the original beneficiaries (indigenous people), but were channelled to private landowners in the Amazon, contrary to the agreed proposal (INESC, 2020).

While the current administration is openly hostile to the transition to a zero emissions economy, other political parties in Brazil do prioritise the fight against climate change. If there is a change in government as a result of the October 2022 general election, it is possible there could be reversal in climate policy making and more ambitious policies in the future.

In June 2020, four opposition political parties filed two climate lawsuits before Brazil's Federal Supreme Court. The first case called on the government to mobilise resources from the Amazon Fund. The second case calls on the Ministry of Environment to re-establish a National Fund on Climate Change. The Climate Fund was established by federal law in 2009 to finance climate change mitigation and adaptation projects. It was replenished in a number of ways, most notably with royalties from oil exploration. During the early months of the Bolsonaro administration, the government agency responsible for the Climate Fund was dissolved, and its steering committee was disbanded, leaving the fund inactive (LSE Grantham Research Institute on Climate Change and the Environment, 2020). In November 2020, an even larger coalition of political parties and NGOs filed another lawsuit before the Supreme Court. This lawsuit concerned governmental acts and omissions in its execution of the Action Plan for Prevention and Control of Deforestation in the Legal Amazon (LSE Grantham Research Institute on Climate Change and the Environment, 2020).

The next general election will take place in October 2022 and is expected to be a two-way race between Bolsonaro's ruling party (Social Liberal Party) and the Workers Party, led by former President Luiz Inácio Lula da Silva. Lula, whose criminal convictions were annulled by the Supreme Court in 2021, leaving him free to mount a challenge to Bolsonaro, is currently leading in the polls by a wide margin (AFP, n.d.; New Internationalist, 2021; The Guardian, 2021b). Under Lula's leadership, Brazil was considered an international leader in climate and environmental issues (The Guardian, 2021c). For example, deforestation was reduced by 80% during his term in office (New Internationalist, 2021). Bolsonaro and his cabinet have reversed many of these progressive measures in recent years.

2.2 Institutional framework



In Brazil, there are structures for coordinating across the federal government and with sub-national governments, but they are not always effective, partially because the current government has weakened functioning processes. This has also led to relatively low levels of mainstreaming of climate-related policies across ministries, and coherence between sectoral policies and national strategies. Despite the federal government's dismissive attitude towards climate change mitigation measures, various states and cities have increased their commitment to climate action in recent years.

Brazil has years of experience in raising funds for climate action, both internationally and nationally, and has even established its own climate fund. However, both the number of funding sources and the overall budget for environmental and climate issues have been greatly reduced in recent years.

Effective coordination across ministries and agencies as well as with sub-national governments affects the ability of actors to align overarching climate policy targets efficiently and consistently.

The Brazilian governance structure is complex, with government institutions at the federal, state and municipal levels responsible for environmental management. In 1981, the Brazilian government adopted the National Environmental Policy (PNMA) which has been the main instrument to structure institutions at the three levels of government (ECOLEX, 2013; Issberner & Lena, 2017).

The PNMA established the National Environment System (SISNAMA) composed of agencies and institutions at the federal, state and municipal levels (ECOLEX, 2013). SISNAMA's objective is to facilitate coordination between the different institutions and levels of government (Issberner & Lena, 2017). Although SISNAMA was established four decades ago, there is evidence that the work is still not effectively structured. For example, the role of the municipal institutions is not clearly defined and there is overlap between the work of the federal and state institutions (Issberner & Lena, 2017).

With the Brazilian Federal Government having weakened environmental and climate policies in recent years, various municipalities and states have stepped up and announced more ambitious climate targets. Nine Brazilian states and one city are members of the *Under 2 Coalition*, representing over 79 million people and 65% of Brazil's GDP (The Climate Group, 2021). In 2017, 14 of 27 states had adopted their own climate plan (Barbi & Ferreira, 2017). While transnational municipal networks can be considered important drivers of the municipal climate agenda in Brazil, there is limited evidence, however, that this has led to reduced GHG emissions (Valente De Macedo & Jacobi, 2019).

In 2007, the Federal Government established the Inter-ministerial Committee on Climate Change (CIM). Its overall goal is to coordinate policy actions between line ministries (*Decree No 6.263, 2007*). Its mandate was later expanded to also coordinate climate change-related activities and to support the implementation of Brazil's NDC (*Decree No 9.073, 2017*). Initially, the CIM, composed of seventeen public agencies, was led by the Office of the President (LSE Grantham Research Institute on Climate Change and the Environment, 2007).

In 2018, the Bolsonaro administration reduced the CIM's size to eight ministries and appointed the President's chief of staff as the new coordinator (*Decree 10.846, 2021*). The reduction of its sphere of influence represents a de facto weakening of the institution and has had an impact on the fulfilment of its mandate. Since 2021, CIM has been in charge of providing technical support to the newly created National Program for Green Growth. In this context, the name of the institution changed to Inter-ministerial Committee on Climate Change and Green Growth (CIMV) (*Decree 10.846, 2021*). The governance structure remains largely unchanged: in addition to the Head of the Civil House of the Presidency (who is chairing the CIMV), the Committee also includes the Head of the Presidency's Secretariat and representatives of nine ministries.

Although some line ministries have published sectoral emissions reductions plans in the past, mostly before Bolsonaro took office, climate action is currently only marginally taken into account across

ministries and their planned policies. Examples of sectoral plans to reduce emissions include the 2019 Low-Carbon Agriculture Plan, the 2018 Sectoral Plan for Reducing Emissions in the Steel Industry and the 2013 Plan on Transport and Urban Mobility for Climate Change Mitigation.

There is, however, only minimal coherence between sector policy implementation and national mitigation strategies, as most of these policies and instruments are not yet part of the national development planning nor included in the country's Fourth National Communication (Climate Action Tracker, 2021a).

With few exceptions, sectoral plans do not explicitly refer to national mitigation targets nor the sectoral contribution to them. In some cases, mitigation measures are included in the sectoral plans but are either insufficient to achieve the sectoral objectives, or lack information to assess it.

Brazil's Ten-Year National Energy Expansion Plan 2020-2030 (PDE) states that it is fully aligned with the National Policy on Climate Change (PNMC) and with international commitments assumed by Brazil in the Paris Agreement (Ministry of Mines and Energy, 2020). According to the plan, emissions from the energy sector are expected to increase from 412 MtCO₂e in 2019 to 484 MtCO₂e by 2030 (Ministry of Mines and Energy, 2020). According to the latest update to the plan (2021-2031), which is under public consultation until February 2022, emissions in the energy sector are expected to increase to 529 MtCO₂e by 2031 (Ministry of Mines and Energy, 2021). Even if the indicative NDC target of 45% renewables in the energy mix by 2030 is achieved, according to the recent plans, the trend does not reflect the need for decarbonisation in the power sector, which can be considered one of the easiest-to-abate sectors in Brazil (Climate Action Tracker, 2021a; Ministry of Mines and Energy, 2021).

The 2021 ABC+ plan, which is a continuation of the Low-Carbon Agriculture (ABC) Plan, mentions the need for mitigation and claims its strategies contribute to the national climate targets, but provides no reduction targets, or information on pathways. This makes it difficult to assess whether it is aligned with Brazil's goal to reach net zero emissions by mid-century (Ministry of Agriculture; Livestock; and Food Supply, 2021).

Another important criterion is the existence and utilisation of a **knowledge infrastructure capable of supporting strategic planning and policy development**, as this aids in the elaboration and application of decarbonisation analyses in climate policy development.

Although there are various universities, research institutes and NGOs in Brazil capable of providing climate change and transition-related advice, the government provides very limited support for their development. In fact, the significant cuts in the environmental budget implemented by the Bolsonaro administration have had a major impact on the funding and provision of analytical work and corresponding advice (The Guardian, 2021a).

Knowledge exchange with international partners is less affected by this. The Ministry of Science, Technology and Innovations, for instance, has developed long-term emissions reductions strategies for the productive sectors with the support of British climate experts who shared experiences in implementing long-term strategies to reduce GHG emissions with their Brazilian counterparts in a joint workshop (Government of Brazil, 2021b).

While there are still a number of national institutions generating relevant analyses on the transition to a zero emissions society, albeit with ever-diminishing financial support from the government, there is no sign that these analyses are being considered by the federal government.

On the contrary, President Bolsonaro and his cabinet ministers constantly play down evidence of the urgent need to decarbonise and even deny that global temperatures are increasing (The Atlantic, 2021). The government has systematically weakened environmental regulations and measures since taking office in 2019, despite scientists warning this would lead to an increase in GHG emissions (Vale et al., 2021).

Capital and resource constraints are significant barriers to effective climate governance and have been an impediment for developing countries in the past (Bhave et al., 2016). **Adequate resources and capacity** need to be made available to implementers, and efficiently used by them, in climate policy processes. Raising and channelling sufficient funds for climate action can therefore be seen as an essential task of a government.

Historically, Brazil has a significant track record of raising climate finance from international climate funds and bilateral or multilateral support initiatives and leverages significant investments for low-carbon development via BNDES, through green credit lines as well as green bonds. The country also finances its climate projects through its National Fund on Climate Change and the Amazon Fund.

However, in recent years climate finance channels have decreased (Kahlen et al., 2021). The Amazon Fund, for example, is de facto inactive, as Norway and Germany, the principal donors to the fund, have frozen their contributions in response to the Bolsonaro government weakening environmental policies, and since 2019, no additional funding, with the exception of one project, has been approved from the National Fund on Climate Change (Government of Brazil, 2021a; Reuters, 2020b). In response to the latter, four parties sued the government over this inaction in June 2020 arguing that it was in violation of constitutional and international law (GNHRE, 2020).

Since 2019, the CIM has been tasked to “establish guidelines and elaborate proposals for economic and financial mechanisms” to enable the implementation of climate change related strategies and policies (*Decree No 10.145*, 2019). However, the CIM made little progress in implementing those guidelines and existing coordination processes between line ministries, the national development bank (BNDES) and other climate finance relevant stakeholders seem to have greatly decreased in recent years (Kahlen et al., 2021).

Given the existing institutional structures and the track record of the past years, it can be noted that some readiness for raising, and channelling climate finance exists or can be ramped up in a timely manner, even if some institutional capacity for finance readiness has been lost under Bolsonaro.

Expenditures for climate change-related activities have been sharply cut in recent years as several examples show. Funding for activities under Brazil’s National Climate Change Plan, for instance, has been reduced by more than 40% between 2019 and 2020 (Reuters, 2020b). According to the Institute for Socioeconomic Studies (INESC), a non-profit organisation that has been analysing Brazil’s public budgets for more than 30 years, government funding for the Brazilian Institute of Environment and Renewable Natural Resources (IBAMA) has also been reduced significantly. While the total budget amounted to BRL 17.4m in the first half of 2019, the amount was reduced to BRL 5.3m in the same period of the following year (Reuters, 2020b). In 2019, the then Minister of Environment, Ricardo Salles, announced he had blocked 95% of the MMA’s budget allocated to climate action (O Globo, 2019).

While Brazil reports on the international public climate finance it received in its Biennial Update Reports (BUR) to the UNFCCC, there is no mechanism to transparently monitor domestic climate finance and climate finance from international non-governmental donors (Kahlen et al., 2021).

In general, Brazil is comparatively well positioned in terms of the acquisition and use of resources due to its many years of experience, even if the amounts have declined in recent years. Since the basic structures are in place, it would be possible, for example in the event of a change of government or position on climate change, to increase the corresponding budgets again.

In addition to monetary cuts, the Bolsonaro administration has also influenced the institutional set-up of the climate and environment governance architecture. A notable example is the afore-mentioned abolition of the Secretariat for Climate Change and Forests, that held a shared responsibility for the country’s National Fund on Climate Change (GNHRE, 2020; Organics News Brasil, 2019).

Given these budget cuts and institutional rearrangements, there is very limited opportunity for institutional learning and building up relevant capacities in the field of climate mitigation and a transition towards a zero emissions economy. The problem is exacerbated by staff cuts. For example, Ministry of Environment staff have been dismissed while their positions remain unfilled, as happened in February 2020 with the Ministry’s Director in charge of climate change and his deputy (Reuters, 2020a).

2.3 Process for policy development, implementation and review



Brazil was one of the first countries in the world to pass a law that defines and regulates national measures and targets for climate action back in 2009, although its effectiveness has been limited, partly because of the unambitious emissions reductions target. A “climate neutrality” target for mid-century has been announced, but is not anchored in national legislation, and short-term sectoral measures planned do not indicate that they are geared towards this goal.

While there is a comprehensive and functioning transparency framework in place, the effectiveness of the review mechanisms related to the implementation of transition-related policy is minimal. Analysis of the evolution of Brazil’s NDCs also indicates that there is no effective ratchet-up mechanism.

A **defined Paris-compatible decarbonisation pathway** is an important component for aiding the long-term planning for, and alignment with, the Paris Agreement’s overall objectives.

As early as 2009, Brazil adopted Law 12.187/2009, through which the National Policy on Climate Change (PNMC) was established (Nachmany et al., 2015; NewClimate Institute, 2016). The PNMC incorporates related previous government instruments such as the National Plan on Climate Change and the National Fund on Climate Change (Nachmany et al., 2015). At the time, Law 12.187/2009, which includes a concrete emissions reductions target for 2020, was considered a milestone in climate policy worldwide (Wedy, 2016). However, an analysis of litigation cases illustrates that the law has restricted enforcement power, among others, due to its limited influence on aspects, such as governance, technical and financial capacities (Wedy, 2016).

The emission reduction targets for 2025 and 2030 that Brazil set in its 2020 NDC update appear to be merely a confirmation of existing targets, albeit with a shift in the 2030 target from ‘indicative’ to ‘committed’. However, an update in the base year emissions in Brazil’s greenhouse gas inventory has led to a substantial weakening of both targets (Climate Action Tracker, 2021a). While the foundations for climate legislation were laid relatively early, there has been no revision of this legislation for quite some time, which would be necessary to achieve the transformation in the long term.

At the US Leaders’ Summit for Climate in April 2021, Bolsonaro announced that Brazil would achieve “climate neutrality” by 2050, a goal his government reaffirmed at COP26 (*Carta MRE*, 2021). However, this long-term goal is not reflected in recent government actions or short-term policies and certainly not enshrined in law. The fact the government has passed a significant number of laws in recent years that effectively weakened environmental regulations is the opposite of what should happen to work towards “climate neutrality” around mid-century and raises doubts about the seriousness of these announcements (Vale et al., 2021).

Resolution No. 8 of 18 August 2020, for instance, lowered the GHG emission reduction targets for the sale of fuels (*Order of the President of the Republic - Resolution No. 8*, 2020). Another example is the Ordinance No. 2 of 25 June 2020, which stipulates that not all areas of permanent preservation need to be restored, even when illegally cleared (*Order of the President of the Republic - Resolution No. 2*, 2020; Vale et al., 2021).

These actions also include the significant budget cuts already mentioned, including, for instance, for the Brazilian Institute of Environment and Renewable Natural Resources (IBAMA) and projects under the Brazilian National Plan on Climate Change (Reuters, 2020b). Current energy and infrastructure policies continue to assign a key role to fossil fuels for Brazil’s further development also out of line with a Paris-compatible decarbonisation pathway (Climate Action Tracker, 2021a).

The insufficient detail on this long-term goal, the government’s overall stance on climate change, and the government’s past and present actions, all cast doubt on the credibility of the announcement.

An **enhanced transparency framework mechanism** is necessary in order to track progress towards achieving emission reduction targets in line with the Paris Agreement, as well as providing checks and balances for the government's climate commitments.

Brazil has a comprehensive transparency framework in place (SIRENE) and recently launched a policy and measures tracker (Ministry of Science Technology and Innovation, n.d.; Ministry of Science Technology and Innovations and Communications, 2021). However, the extent to which this is consistently applied by other ministries for their policies is not clear.

While the Brazilian government undertook efforts to establish a review mechanism in the past, it is not being applied for mitigation-related activities and measures.

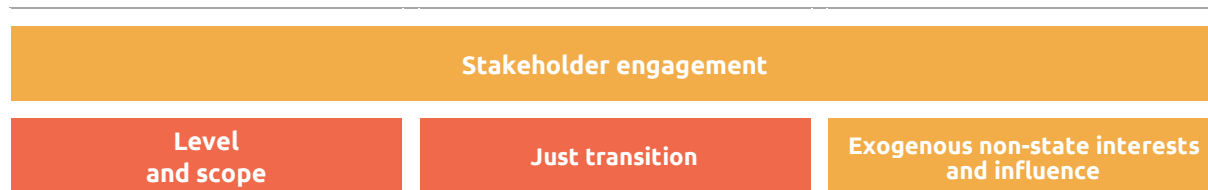
In 2013, the Centre for Management and Strategic Studies (CGEE) initiated a project on behalf of the Ministry of Environment to evaluate the National Plan on Climate Change and design a system for monitoring greenhouse gases in the measures included in the sectoral plans for mitigation and adaptation. The project included a proposal to develop the Modular System for Monitoring Actions of Greenhouse Gas Emissions Reductions (SMMARE), for which guidelines were established in 2014.

SMMARE was originally developed to monitor actions and reductions in GHG emissions achieved through sectoral mitigation plans under Brazil's climate policy. Since 2014, there has been no progress in developing a modular computer system which is also not fully supported by line ministries (Government of Brazil, 2020b). According to the Fourth National Communication, the Brazilian government is waiting for the conclusion of the New Enhanced Transparency Framework under the Paris Agreement in order to, if appropriate, resume implementation of a transparency arrangement (Government of Brazil, 2020b).

Finally, the analysis of the evolution of Brazil's NDCs suggests that there is no effective **ratchet up mechanism**. Brazil's targets to reduce emissions by 37% and 43% from 2005 levels by 2025 and 2030 respectively are unchanged on paper, but an increase in the base year emissions used as a reference means Brazil can continue to increase emissions and still meet its targets (Climate Action Tracker, 2021b). Since the 2020 NDC does not re-calculate its pledge to adjust to this shifted baseline, it allows for roughly 400 MtCO_{2e} more than in 2015 (Observatorio do Clima, 2020). Further, the 2020 NDC no longer includes the 2015 "unofficial commitment" to curb deforestation (WRI, 2021).

In November 2021, Brazil announced a new target of reducing GHG emissions by 50% in 2030 below 2005 levels. This new target has yet to be officially submitted to the UNFCCC (as of February 4, 2022), but its ambition is uncertain due to a lack of clarity on the reference used. Several sources concur in the assessment that if the 50% is applied based on the calculation of the most recent emissions inventory in Brazil (included in the Fourth National Communication for 2020), which is expected to be the case, the COP26 announcement will remain above the ambition level of the original 2015 target (Observatorio do Clima, 2021b; Politica por inteiro, 2021).

2.4 Stakeholder engagement



Overall, national efforts to create and disseminate public knowledge about climate change and the transition to a zero-emissions society can be greatly improved, especially under the government which has reduced or weakened existing services or channels. When it comes to engaging non-state actors in transition-related activities, it is crucial to take into account the need for a Just Transition. However, neither of these elements is a priority for the current government.

There is no lack of scientifically sound analyses about measures and pathways towards a zero emissions society in Brazil. But this does not change the fact that the country seems to be divided on climate change issues. When it comes to the influence of interest groups on politics, however, the picture is clear: the government usually suppresses the influence of environmental groups, and the influence of agribusiness or the fossil fuel industry is considerable.

The government's **level and scope of engagement** with stakeholders reflects how well it is aware of external knowledge and the expectations of its constituents, which, in turn, affects the ability for sound government decision-making. The dissemination of public education and ensuring public knowledge on climate change and the transition to a zero emissions society can be considered a key element of fostering the level of public engagement.

The Brazilian Constitution (1988) establishes that environmental education at all levels of education is a citizen's right and a duty of the state, and in 2012 the National Curriculum Guidelines for Environmental Education was established reflecting this (Constitute, 2021). However, there is evidence that comprehensive education for all age groups is inadequate, partly due to a lack of knowledge on the part of teachers (Saheb et al., 2017).

As early as 2000, the Brazilian Forum on Climate Change was established with the aim of bringing civil society and government together at the national level and raising public awareness on issues related to climate change. Until May 2019, the work of the Brazilian Forum on Climate Change was guided by ten thematic chambers, which focused on topics such as forests, biodiversity and agriculture, energy, finance, and long-term vision. Measures implemented by the Bolsonaro administration, such as changing the head of the institution or cutting the budget to combat climate change, have led to the Forum's activities being paralysed since the beginning of 2019 (Lucon, 2019). It is still unclear what the status of the Forum is at the moment.

Another relevant platform that has been launched by the Ministry of Environment in 2018 is the EducaClima knowledge portal. This online portal contains information on Brazil's GHG emissions and a range of climate change mitigation and adaptation measures (Government of Brazil, 2020b). The website aims to answer elementary questions about climate change, the greenhouse gas effect or the link between deforestation and climate change. The website also contains information on actions citizens could take to combat climate change, commitments the government has made and results achieved as well as relevant legislation in place (non-exhaustive list) (Ministry of Environment, n.d.).

Overall, national efforts to generate and disseminate public knowledge on climate change and the transition to a zero emissions society can be considerably improved, especially under the current government, where existing services or channels have tended to be reduced or weakened.

Typically, efforts to educate the public on climate change are aimed at gaining broad public support for action. However, the Bolsonaro administration does not meaningfully engage in ambitious mitigation action and has thus little incentive to inform the population about the climate change related issues. In fact, the government passed legislation that hinders civil society participation in policy making and oversight of policy implementation (Associated Press, 2019).

One example is Bolsonaro's move to restrict the number of members in Brazil's National Council of the Environment (Conama). Civil society is now practically excluded from the council, which originally had almost 100 members, including representatives of independent environmental and business groups. The Bolsonaro administration also transferred the National Council of the Legal Amazon (CNAL) which had been presided over MMA since 1995, to the Vice-President's Office through Decree No. 10,239/20. CNAL now has no participation from civil society nor that of governors from the Amazon region, who previously all had seats. CNAL has become a strategic component in the Bolsonaro administration's active efforts to concentrate regulatory powers that belonged to MMA, Conama and others (Goulart Menezes & Jr., 2021).

It is important that the transition towards net zero emissions is planned and implemented as a **Just Transition**, triggering wider benefits for the whole population and ensuring that nobody is left behind.

While the debate on a Just Transition should be particularly relevant for an emerging economy like Brazil, there has been limited attention paid to this topic at a national level. The 2016 National Adaptation Plan to Climate Change recognises the need for a Just Transition, but provides no strategies to achieve this (Climate Transparency, 2018). The Bolsonaro administration has not given any attention to the topic. Recent policy documents, including Brazil's 2020 NDC, make no reference to just transition (Government of Brazil, 2020a).

The **management of non-state actor interests** is another important consideration, as it depicts whether governments have succeeded in addressing resistance created by vested interests as well as communicating the fairness of their policies to the public. An assessment of the ability to manage non-state actor interests reveals how much public support or opposition policies receive.

An important aspect for this topic is the general attitude of the population towards climate change, as they can support or even demand corresponding measures. According to a study published by the Pew Research Centre, 74% of Brazilians say that the effects of climate change are felt where they live, with two-thirds of them saying that climate change is having a big impact.

Around half of the population considers climate change to be a serious problem and believe that the national government is doing too little. The other half of the population thinks the government is doing enough, and a small proportion (4%) think the government is doing too much (Pew Research Center, 2020b). Those who are not satisfied with environmental policies have also made this known in a series of nationwide protests (Reuters, 2019b).

These figures indicate that the population is divided on this issue. However, one aspect that suggests that the divide is not insurmountable is that over 60% of Brazilians who describe themselves as politically right-wing indicate that environmental protection should be a priority, even if it means slower economic growth (Pew Research Center, 2020a).

Our research has shown that multiple scientifically robust analyses do exist in Brazil, analyses that can be considered sufficient in terms of quality and quantity to inform both government and the broader public about measures and pathways towards a zero emissions society. A recent example is the initiative entitled "Climate and Development: Visions for Brazil 2030", which is led by the Talanoa Institute and the Centro Clima (COPPE) from the Federal University of Rio de Janeiro (UFRJ) and involved high-level consultations with more than 300 Brazilian actors, including experts and leaders. As part of the initiative, ambitious proposals for reducing GHG emissions by 2030, considering opportunities for decarbonisation and qualification of national development were developed and presented at COP26 in Glasgow (iCS, 2021; Política por inteiro, 2021).

Brazil is also part of the Deep Decarbonisation Pathways (DDP) in Latin America initiative. The DDP seeks to demonstrate how countries can transform their economies by 2050. Analyses in this project are carried out by national research teams. The work on Brazil is carried out by COPPE/UFRJ (DDPLAC Consortium, 2020). Relevant work published as part of this project outlines deep decarbonisation

strategies for Brazil and their policy implications, following government plans (i.e. the Governmental Plan Scenario) but includes additional mitigation policies and actions across the various economic sectors (DDPLAC Consortium, 2020).

In 2018, the Brazil Forum for Climate Change submitted a proposal to former President Temer on how Brazil could reach net zero carbon by 2060 (FBMC, 2018). The National Energy Efficiency Institute (INEE) published a report on decarbonising Brazil's power sector by 2050 (iCS INEE, 2017). Under the COMMIT project (Climate Policy Assessment and Mitigation Modelling to Integrate National and Global Transition Pathways), various research institutions from a range of countries, including Brazil, model national low-carbon emission pathways to improve analysis of country contributions to the global ambition of the Paris Agreement (COMMIT, 2019).

While the availability of sound analysis is essential, it is equally important to assess the influence that different non-state stakeholders have on policymaking at the current time. Our analysis has shown that in Brazil, non-state actors that are at risk from the transition regularly influence policy decisions. One sector where this has been particularly the case is the agribusiness sector.

Soon after being elected President, Bolsonaro transferred the creation and limitation of forest reserves from Brazil's indigenous rights agency (FUNAI) to the Agriculture Ministry, a controversial decision that was seen as a victory for the powerful agribusiness sector (BBC News, 2019).

Bolsonaro also decided to move the Brazilian Forestry Service, which promotes the sustainable use of forests and has traditionally been linked to the Environment Ministry, to be under the control of the Agriculture Ministry (Reuters, 2019a). These measures, which mainly benefit Brazil's powerful agribusiness sector but also the oil and gas industry, led to the de facto opening up of protected areas for commercial activities, including commercial mining, oil and gas exploration, cattle ranching and agribusiness, new hydroelectric dam projects, and tourism — projects that have been legally blocked under the country's 1988 Constitution (EcoWatch, 2020).

Under Bolsonaro's administration, the *bancada ruralista* – a cross-party political caucus of federal deputies and senators who promote the interests of agribusinesses in congress – has substantially gained influence and power (EcoWatch, 2020). This group actively supports the agribusiness sector in Brazil while undermining environmental protections and indigenous rights and offering amnesties to land grabbers and illegal deforesters (earthright, 2018).

All these reforms create incentives for large national and international investors to engage in the Brazilian agriculture sector. At the same time, they make it extremely difficult for small-scale farmers and indigenous communities to develop their agriculture business and to influence policy making (Niederle et al., 2017).

Conversely, this means that actors who would support and/or profit from a transition to a zero emissions society have no significant influence on policymaking. While the Bolsonaro administration actively supports farmers and loggers in the Amazon, it obstructs the work of environmental activists (BBC News, 2020).

Since the groups that would benefit from a transition can hardly exert influence on national policy making, they are trying to do so legally through international channels. In January 2021, indigenous leaders filed a request with the International Criminal Court (ICC) in The Hague for a preliminary investigation into Bolsonaro's actions in the Amazon. They accuse Bolsonaro of crimes against humanity, specifically targeting indigenous communities, in the context of environmental crimes (LifeGate, 2021).

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The Climate Action Tracker (CAT) is an independent scientific analysis produced by two research organisations tracking climate action since 2009. We track progress towards the globally agreed aim of holding warming well below 2°C, and pursuing efforts to limit warming to 1.5°C.

climateactiontracker.org

The Consortium



NewClimate Institute is a non-profit institute established in 2014. NewClimate Institute supports research and implementation of action against climate change around the globe, covering the topics international climate negotiations, tracking climate action, climate and development, climate finance and carbon market mechanisms. NewClimate Institute aims at connecting up-to-date research with the real world decision making processes.

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Climate Analytics is a non-profit climate science and policy institute based in Berlin, Germany with offices in New York, USA, Lomé, Togo, Perth, Australia, Kathmandu, Nepal and Port of Spain, Trinidad and Tobago, which brings together interdisciplinary expertise in the scientific and policy aspects of climate change. Climate Analytics aims to synthesise and advance scientific knowledge in the area of climate, and by linking scientific and policy analysis provide state-of-the-art solutions to global and national climate change policy challenges.

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