Political Economy of Net Zero: Brazil

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Given Brazil’s emissions profile and economic realities, particularly in the Amazon region, climate and deforestation policies need to be consistent with national development, income generation and the needs of under-represented groups (indigenous and other traditional populations). The current political support for carbon markets is an opportunity for Brazil to show leadership on a net-zero economy. The development of new sectoral plans to mitigate climate change, as required under Presidential Decree 11.075/2022\(^1\), could also provide an opening for the adoption of clearer targets and policy changes.

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\(^1\) Enacted in May 19, 2022, establishes procedures for elaborating Sectoral Plans for climate change mitigation and creates the National System for GHG Reduction.
Challenges to overcome in the transition towards a net zero economy in Brazil tend to be of a structural nature, i.e. weak governance and lack of state capacity to effectively implement more complex programs and policies. To achieve optimal results persistency is key: climate change and forest conservation policies need to be better framed for domestic audiences and stay in place for longer time horizons compared to short-term electoral cycles. It is also important to identify, measure and communicate to producers and government the positive economic impacts of low carbon agricultural practices.

Waste management and carbon markets appear as transversal issues that can assist several sectors in their transition towards net zero. Waste management, as well as transport and energy policies, can also deliver greenhouse gas emissions reductions without being explicitly framed as climate policies.

**Call to Action**

The transition towards a net zero economy in Brazil offers an opportunity, even a necessity, to engage actors at the local level and find economically powerful groups (such as industry associations or representatives) willing to defend climate-compatible public policies. For that, a broader perspective is required, particularly focused on processes that lead to structural changes, for instance in the incentives faced by local communities, agricultural producers, logistics’ companies and other stakeholders, instead of short-term implementation of narrowly focused measures. In particular, given the country’s emissions profile, climate and deforestation policies need to be: i) better framed and ii) consistent with national development, income generation and jobs creation.

### Key interventions for systemic transformation to net zero in Brazil

- Land use, land use change and forestry (LULUCF)
- Agriculture and livestock
- Transport
- Carbon markets
- Waste management
- Industry
Land use, land use change and forestry (LULUCF)

Land use change accounted for 46% of Brazil's greenhouse gas emissions in 2020. Deforestation rates in the Amazon Forest have increased by 22% between 2020 and 2021 and 75% between 2018 and 2021. Over 98% of all deforestation in the Amazon region occurs illegally. LULUCF governance has suffered from a series of policy changes recently, such as the discontinuation of the Action Plans for the Prevention and Control of Deforestation in the Legal Amazon (PPCDAm) and Forest Fires in Cerrado (PPCerrado) in 2019.

Challenge
Land property rights in the Amazon region are weak and uncertain. In addition, local governments are weak and dependent on budget transfers from the federal government. Questions of jurisdiction between the Ministries of the Environment and Agriculture regarding deforestation policies exacerbate the uncertainty.

Opportunity
A change in the framing of the issue, from “blame and shame” to a positive approach as well as an identification of the opportunities is needed to reduce general opposition to deforestation policies. A key opportunity for long-lasting change lies in engaging local economic elites, such as mining, lumber and livestock producers, ensuring their ownership of LULUCF policies from the inception.

There is an opportunity for international donors to support bilateral agreements between private actors to finance the conservation of native vegetation within agricultural producers' properties. Fundraising is also needed to promote public notices from commodity traders and other players for forest restoration projects as well as help to further develop the market for Environmental Reserve Quotas (cota de reserva ambiental (CRA)), an instrument in the Forest Code that allows for rural property owners to offset their share of legally required forest reserves by purchasing titles equivalent to the surplus area in other farms, within the same biome. The CRA market can efficiently allocate resources to simultaneously tackle conservation, climate, development, and social justice issues.

Agriculture and livestock
The agricultural sector was responsible for 27% of Brazil's total emissions in 2020, of which 75% were associated with cattle-raising activities. The “plan for adaptation and low carbon emission in agriculture” (or ABC+) is the policy to reduce greenhouse gases from the sector, although it mostly targets small producers.

Challenge
It is difficult to tackle the emissions of a largely fragmented sector, which involves different producers’ sizes and regional contexts, for instance with varying degrees of mechanization and technification. Thus far, agriculture is not included in Brazil's zero methane plan, likely due to opposition from within the industry. Niche markets for sustainable products do not provide sufficient economic incentives, especially for small producers, to refrain from converting native vegetation into farm areas.

Opportunity
Funding can support the development of clear and agreed procedures for measuring and quantifying greenhouse gas emissions and removals associated with different practices and technologies. They can also sustain communication forums for the engagement of small producers on the productivity gains from low carbon practices. In addition, they can promote labeling schemes for carbon neutral meat and soy, and co-finance payment for ecosystem services instruments.

Development of clearer procedures for measuring GHG emissions and removals would help to justify significant increases in the volume of resources within the ABC+ credit lines allocated annually by the Treasury. It is important to engage and support specifically small producers to join the growing trend of net-zero emissions and zero deforestation commitments among large producers. Connecting the sector with the discussions surrounding carbon markets (see below) would be beneficial to create clearer incentives for decarbonization.
Transport

Road transport is dominant in Brazil, representing over 65% of cargo shipments. The country is a global leader in the use of biofuels and has had a National Biofuel Policy in place since 2017. The sector’s greenhouse gas emissions can be cut by increasing the deployment of biofuels, such as biomethane, electrifying the fleet and shifting cargo to other means of transportation such as rail and waterways.

Challenge
The country needs major investment in transport infrastructure as current investments are insufficient to even cover the depreciation of existing assets. In addition, inadequate and unreliable electricity supply may hinder the uptake of electric vehicles. From a social perspective, truck drivers represent a potential opposition to policies and initiatives to shift cargo away from roads.

Opportunity
The development of biomethane is promising and private actors, such as vehicle manufacturers, are investing in this area. Brazil has an extensive experience with biofuels, which could be expanded through further development of existing or new fuels, such as biomethane, while simultaneously tackling waste management, as described below.

Funding can support pilot biomethane and electrification schemes that can in turn accelerate private investment in technology and infrastructure for a low-carbon transport sector. Funding can also support the development of a market for biomethane certificates, similar to renewable energy certificates, and assist in the Just Transition, helping to create alternative employment paths for truck drivers impacted by the shift in road transport.

Carbon markets

Carbon markets could play a key role in driving down Brazil’s CO₂ emissions. Brazil does not currently have a mandatory carbon market but there is appetite from private actors to make use of carbon markets as a tool to increase ambition. The government is developing policies for voluntary (Presidential Decree 11,075/22) and mandatory (Draft Bill 2,148/2015) carbon markets. Demand for carbon credits, however, remains low.

Challenge
Delivering strong enough legislation to ensure carbon markets are effective is difficult. This includes collaboration between government and private sector to develop an electronic registry to monitor carbon emissions, (mandatory) allowances, and (voluntary) carbon credits, as well as to develop digital infrastructure that holds valid and secure data. A critical issue to the success of carbon markets in Brazil will be ensuring integrity from private actors in voluntary carbon markets.

Opportunity
Supporting the improvement of data sources and the collection of information would help develop the digital infrastructure necessary for the functioning of carbon markets. Facilitating cooperation between government and private actors would be useful to develop effective administrative systems.

Vast natural resource’s make an agreement of rules for embedding nature-based solutions in international carbon market in Brazil’s interest. Brazil needs repositioning on an international level with regards to Article 6 of the Paris Agreement, which allows for emissions to be trade internationally, by engaging with international partners and ensuring that the country’s practices are recognized by the global community. Filling knowledge and infrastructure gaps and fostering transparency and integrity among private actors in self-regulated, voluntary carbon markets would benefit this instrument too. Funding can facilitate cooperation with global experts on carbon markets, provide education and training for a wide range of actors in Brazil to better understand and build the capabilities to operate within carbon markets, as well as support knowledge and technology partnerships for data collection and the development of the required digital infrastructure.
Waste management

About 40% of solid urban waste ends up in open-air dumps and landfills while only 3% is recycled. There is a clear opportunity to improve waste management and reduce greenhouse gas emissions in this area.

Challenge
The current legal framework does not incentivize consumer goods industries to improve their products’ recycling. There are logistical challenges to the adequate disposal of waste, including the lack of infrastructure. Municipal governments often lack the resources and capacity to take action and, from a social perspective, there are concerns about the impact of increased mechanisation on the waste pickers economy.

Opportunity
Technology transfer between Brazil and international partners for automated sorting represents an opportunity to drive up recycling. Improving waste management is beneficial for other sectors too, such as transportation and industry. Biogas, in particular, could supply 35% of Brazil’s electricity needs and replace 70% of its diesel consumption.

Funding can assist in the development and implementation of new sectoral agreements for reverse logistics within Brazil’s National Solid Waste Policy (Law 12,305/2010). It can also facilitate research, partnerships and knowledge transfer on technological solutions to support waste management, including automated sorting and energy recovery.

Industry

Greenhouse gas emissions in Brazil’s industrial sector are concentrated in the production of iron and steel (38%) and cement (22%). Climate change mitigation in these areas is associated with the substitution of high carbon inputs and fuels. The sector also features heavily in discussions about mandatory carbon markets.

Challenge
Brazilian industries tend to import established technologies, rather than innovate and create new ones. The sector is very fragmented and industry associations tend to oppose measures that may lead to higher costs to some of its affiliates.

Opportunity
The two industrial segments that account for most of climate pollution have already mapped short-term opportunities to reduce emissions, which could be further extended with a domestic cap-and-trade system. Technology transfer such as green and blue hydrogen, as well as carbon capture and storage could be a promising route for international cooperation projects.

Funding is needed to support pilot projects for the use of green and blue hydrogen as an energy source, as well as carbon capture and storage (CCS) technologies, which are currently more advanced in Europe and North America.
This briefing is based on the findings of the research carried out in the first semester of 2022. The research included literature review and interviews with specialists and stakeholders. 13 interviews were conducted in total. They lasted from 36 minutes (the shortest) to 67 minutes (the longest). The findings are discussed in the paper: “Net Zero Political Economy - Briefs: Brazil case study, June 2022”.

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This report presents opportunities for international climate mitigation philanthropy to accelerate the net-zero transition in Brazil. The priority topics identified are based on analysis undertaken by the authors, augmented with their own expert opinion of the national context. While we aim to cover key sectors and draw on the latest national insights, the report should not be considered an exhaustive list of opportunities. Rather, the report provides an initial overview of potentially impactful interventions. The briefing is the work of the authors and does not necessarily represent the views of Climate Strategies or ClimateWorks Foundation.

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