

ISSUE BRIEF

THE ROAD FROM PARIS: BRAZIL'S PROGRESS TOWARD ITS CLIMATE PLEDGE

Brazil's climate pledge makes it the first major developing country to put forward an absolute emissions reduction goal: a 37 percent cut in greenhouse gas (GHG) emissions from 2005 levels by 2025. Brazil has also put forward plans for reforestation and for limiting illegal deforestation in the Amazon, as well as commitments to increase the share of non-hydropower renewables in its energy mix. However, recent political developments in the country have led to a spike in deforestation rates and threats to protected areas, which may hamper national progress in mitigation.

OVERVIEW OF NATIONAL CIRCUMSTANCES

Brazil is the largest GHG emitter in Latin America and, as of 2015, the sixth-largest in the world at 1.927 billion tons of CO₂e (gross emissions), accounting for 3.5 percent of global emissions. It has a population of 200 million and the highest Gross Domestic Product in South America. Due to rampant deforestation in its vast undeveloped tracts, Brazil's annual per capita emissions are relatively high at 9 tons, above the global average (7 tons) but below countries such as Japan, South Korea, and the United States.¹

NATIONALLY DETERMINED CONTRIBUTION

In September 2016, Brazil formally joined the Paris Agreement, which entered into force on November 4, 2016. Brazil's climate pledge—or nationally determined

contribution (NDC)—aims to reduce GHG emissions by 37 percent below 2005 levels by 2025, with an “indicative target” of 43 percent by 2030. This makes Brazil the largest developing country to set an economy-wide emissions target in its NDC. Brazil has also committed to restoring or reforesting 12 million hectares of land by 2030, and sourcing 45 percent of its energy from renewable resources by 2030.² While Brazil's nongovernmental organizations (NGOs) welcomed this announcement, they also noted that the country could be even more ambitious.³

Brazil's emissions have declined sharply from 2005 levels due to the reduction of Amazon deforestation rates from 2005 to 2012. Emissions are projected to rise from current levels, as the country still has low GDP per capita and is in the process of economic development. This process is



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THE PARIS AGREEMENT

In late 2015, the 21st session of the Conference of the Parties (COP21) to the 1992 United Nations Framework Convention on Climate Change (UNFCCC) was held in Paris. The 196 nations that are part of the UNFCCC approved the Paris Agreement, which aims to limit global temperature rise to 2 degrees Celsius, and to make best efforts to keep it to 1.5 degrees. To that end, countries submitted intended nationally determined contributions (INDCs) detailing the level to which they planned to cut emissions and their plans to reach that goal. The Paris Agreement entered into force on November 4, 2016—and the INDCs are now formally enshrined as part of the Agreement—and hereafter referred to as nationally determined contributions (NDCs).

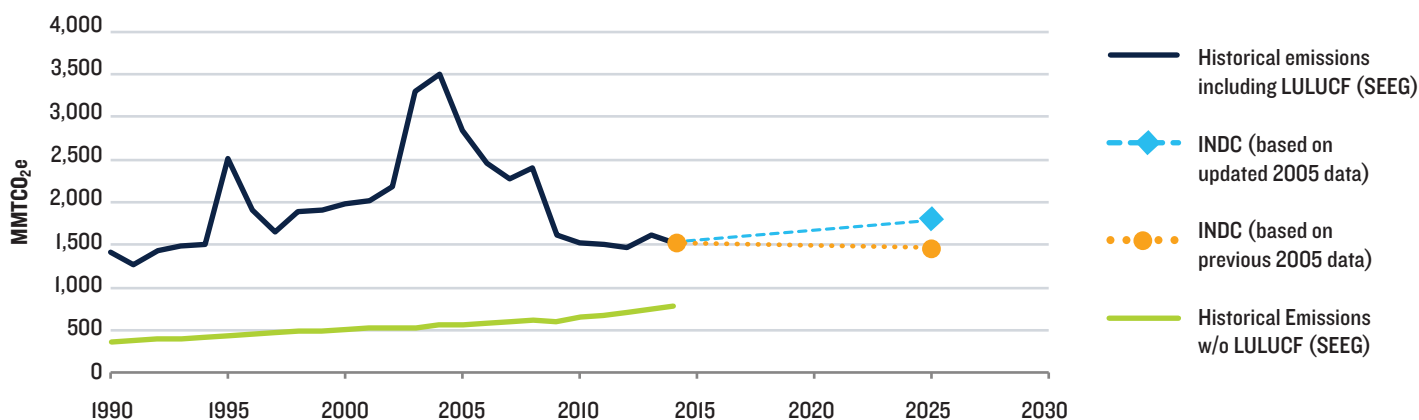
often associated with higher emissions as a country ramps up industrialization and energy use from sources such as fossil fuel. For Brazil, emissions associated with agriculture, energy, industry, and waste have in fact risen steadily since 1990 (see “Historical Emissions w/o LULUCF” in Figure 1). A significant portion of Brazil’s emissions come from land-use change and deforestation. A recent economic recession and a small improvement in renewables led to a 5 percent slump on emissions in the energy sector in 2015.⁴ However, emissions from land-use change increased by 11 percent that same year, resulting in an overall 3.5 percent growth in national emissions. In 2016, deforestation rates hit a new high, which will also impact emissions.⁵ In 2017, a drop in the speed of clear-cutting is expected, but it is unlikely to be substantial enough to compensate for the previous year’s rise.⁶ The challenge for Brazil is how to continue growing a healthy economy for citizens while reducing emissions growth in all sectors. Thanks to limits placed on deforestation, Brazil already has lower emissions than it did in 2005, but reaching the NDC emissions target will require major efforts to shift to higher renewable energy use, cap emissions from deforestation, and move toward low-carbon agriculture. Brazil’s government will review the NDC in 2020, though some experts and civil society organizations are pushing for review in 2018.⁷

MITIGATION POLICY

INCREASING RENEWABLE ENERGY

Brazil’s NDC proposes to source 45 percent of the nation’s total energy mix from renewable resources by 2030, up from 41 percent in 2015.⁸ It should be noted that between 2007 and 2009, renewables represented more than 45 percent of the energy mix, but that trend has since reversed.⁹ A series of dry years from 2011 to 2015 strained hydropower and forced the government to turn to fossil fuel-powered plants. At the same time, ethanol use in automobiles also dropped because of a crisis in the sector.¹⁰ Overall, Brazil’s energy consumption is expected to grow, but at a relatively slow pace for a developing country due to economic recession. Brazil’s 10-year Plan for Decadal Energy Expansion (PDE) 2026 was released for public consultation in July 2017. The plan forecasts that in the coming decade, up to 70.5 percent of Brazil’s energy investments will be in fossil fuels, which marks virtually no change from the previous forecast. More progress is needed to shift investments away from fossil fuels. Unfortunately, Brazil is still planning to build new coal plants and to ease environmental licensing, which would lead to more oil and gas production.

BRAZIL'S GHG EMISSIONS INCLUDING LULUCF



Source: Natural Resources Defense Council, including data from the Climate Observatory, Climate Action Tracker, SEEG, and Brazil’s INDC submission to the UNFCCC submission to the UNFCCC.

Brazil has proposed to source 23 percent of power generation from renewable resources (not including hydropower) by 2030, up from less than 10 percent in 2014.¹¹ According to estimates from the International Energy Agency, this is more than enough to put Brazil on a low-carbon trajectory that will help avoid a 2 degrees Celsius warming scenario.¹² Brazil plans to hold at least one auction for clean energy projects this year. This would mark a major step toward Brazil's renewable energy target, as wind and solar developers have not signed any long-term supply contracts since November 2015.¹³ The planned investments in fossil fuels, however, would trump any mitigation gains from the increase of renewables in electricity.

ADDRESSING FORESTS AND DEFORESTATION

Brazil's NDC also committed to restoring or reforesting 12 million hectares of land by 2030. The area in need of restoration, however, is estimated at 24 million hectares, according to current legislation. Analysts have pointed out more action is needed on deforestation and that Brazil's reforestation goals could be raised from 12 million hectares to 20 million.¹⁴ Moreover, the commitment allows for forest restoration and reforestation with exotic species such as eucalyptus as well as with native forest species. If half the 12 million hectares are restored with native species, Brazil would have only 6 million hectares of native forests restored by 2030, covering only one-quarter of the estimated forest deficit.¹⁵

The Brazilian action plan for deforestation commits to zero illegal deforestation by 2030, but only in the Amazon region. In addition, the plan doesn't suggest measures for illegal and legal deforestation. Even worse, since the target was announced, Amazon deforestation has increased for two years in a row: by 24 percent in 2015 and by 28 percent in 2016. Brazilian NGOs have noted that the current administration, which has stronger ties to the rural caucus in Congress than the previous one, has taken or is taking a series of steps to roll back environmental regulations, a move that has been deemed "unprecedented."¹⁶ Among those measures is a new law signed by President Michel Temer that grants amnesty to land grabbing done between 2004 and 2011—which the Attorney-General has said will stimulate deforestation¹⁷—and a proposed bill to slash a large national forest in the Amazon by one-third.¹⁸ Indigenous land claims settlements were virtually frozen.

To meet the deforestation target, analysts have noted that Brazil will first need to reduce Amazon deforestation by 80 percent by 2020, as determined by Brazil's 2009 National Climate Change Policy.¹⁹ Given that as of 2016, deforestation rates were twice as high as the 2020 target, meeting the domestic commitment will require extra work. These developments notwithstanding, a number of NGOs have pointed out that Brazil should commit to zero deforestation nationwide—legal or illegal—by 2030, as a large number of countries and companies have committed to doing.²⁰ If illegal deforestation in the Amazon continues until 2030,

and beyond in other regions, land use emissions will remain a serious issue for many years to come. Fortunately, Brazil's NDC does mention measures such as reducing emissions from deforestation and forest degradation (REDD+), whereby Brazil could receive financial incentives for its efforts to end deforestation.²¹

In 2015, the Climate Observatory put forward an NDC proposal showing how Brazil could achieve a target of 1 billion metric tons of CO₂e—its fair share of emissions considering a global carbon budget, GDP, and population.²² In addition, the group has recently reported that the government's new GHG methodology calculates a higher total amount of Land Use, Land Use Change and Forestry (LULUCF) emissions in the 2005 base year, raising their total from 2.1 billion to 2.8 billion metric tons. If Brazil keeps the same NDC target of a 37 percent cut from 2005 emissions levels, then the target for emissions in 2025 will be nearly 1,800 mmtCO₂e instead of 1,300 mmtCO₂e. That would be extremely unambitious. To fix this, the Climate Observatory has proposed that the government raise the emissions reduction target in the NDC to 53 percent for 2025 and 57 percent for 2030. Based on the group's analysis, the proposed policies in Brazil's NDC would allow Brazil to reach that target. In fact, there is still room and urgency to set more ambitious targets.²³

AGRICULTURE

Brazil's NDC includes the restoration of 15 million hectares of degraded pastures and integration of 5 million hectares of crop-livestock-forest. This is in addition to Brazil's low-carbon agricultural targets for 2020 (restoring 15 million hectares of degraded lands and integrating 4 million hectares of crop-livestock-forest). Restoring 30 million hectares of degraded pastures by 2030 would substantially reduce pressures on native forests. Brazil's progress toward its 2020 restoration targets has been slow, however, with less investment in low-carbon agriculture in 2015 than in 2014 and no monitoring of results. Furthermore, only 1.6 percent of federal investments in agriculture and livestock went toward low-carbon agriculture in 2016, and this was reduced even further in 2017 to 1.1 percent.

THE ROAD AHEAD

The Climate Observatory has suggested that Brazil could cut GHG emissions even further, to what represents a "fair share" of action for keeping global temperature rise to less than 2 degrees Celsius. The group has outlined that Brazil could cut emissions by 57 percent relative to 2005 levels by eliminating deforestation and significantly expanding wind and solar energy and ethanol use.²⁴ Brazil needs to diversify its energy investments—away from fossil fuels and large hydropower and toward wind and solar energy.²⁵ Now is the time for Brazil to stop stepping back on environmental regulations and to move from plans to action, especially when it comes to forestry, agriculture, and energy.

THE CLIMATE OBSERVATORY

Observatório do Clima (OC) is a Brazilian network comprising 43 civil society organizations. It was formed in 2002 to promote debate on climate policy in Brazil. Since 2013, OC has produced yearly estimates of Brazilian greenhouse gas emissions. Its estimates system, known as SEEG, cover emissions from 1970 to 2015, and is one of the world's biggest national GHG databases. The SEEG methodology has also been used in Peru and India.

NRDC

The Natural Resources Defense Council is an international nonprofit environmental organization with more than 3 million members and online activists. Since 1970, our lawyers, scientists, and other environmental specialists have worked to protect the world's natural resources, public health, and the environment. NRDC has offices in New York City, Washington, D.C., Los Angeles, San Francisco, Chicago, Montana, and Beijing. Visit us at nrdc.org.

ENDNOTES

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