So far, Brazil on course in cutting CO2 output

Rio de Janeiro, Brazil

Could it be that Brazil is comfortably on track to meet its voluntary 2020 target for reducing greenhouse-gas emissions? Though a new study indicates that this is the case, some experts say the signs of progress could soon prove illusory.

Debate on the subject is being fueled by a study issued this month by Brazil's Ministry of Science, Technology and Innovation (MCTI). The ministry found that in 2010, Brazil's greenhouse-gas emissions were lower than those of 2005 by 0.78 gigatons of CO2 equivalent, or 38.7%. Under its 2009 National Climate Change Policy Law, Brazil pledged to limit greenhouse emissions by 2020 to a range of 36.1% (1.168 gigatons) to 38.9% (1.259 gigatons) below the 3.236-gigaton business-as-usual level projected for that year. Having trimmed emissions by 0.78 gigatons, Brazil by 2010 already had achieved 62% to 67% of its 2020 goal, one of the first such targets set by a large developing nation.

But environmentalists and some scientists point out that the main reason for the reduction was a dramatic, 76.1% decline in emissions from deforestation, which meant less woodland was burned to accommodate farming and ranching. Indeed, the emissions-reduction targets in the 2009 climate law were based largely on forecasts that the greenhouse-gas output caused by land clearing would be 80% lower than projected 2020 levels in the Amazon and 40% lower than projected for 2020 in the Cerrado, Brazil's vast savanna.

Beware commodity prices

These critics argue that deforestation reductions are likely to be fleeting because they stem in large part from declines in commodity prices, which reduce the incentive for farmers and ranchers to open up new acreage. With stronger commodity prices, they say, deforestation—and carbon emissions caused by land-clearing fires—could accelerate again, driving up deforestation-related carbon emissions.

Those skeptical that emissions will continue declining also point out that in the four weightiest categories other than deforestation, the recent study showed greenhouse-gas output to be on the rise. The study found carbon emissions increased 21.4% in the energy area (which includes transport); 16.4% in waste handling and treatment; 5.3% in industrial processes; and 5.2% in farming and ranching. All told emissions from these four sources combined increased 48.3%. This partially offset the 76.1% decrease in emissions associated with deforestation, leaving a net 38.7% decline in greenhouse emissions from all five of these heaviest polluting sectors in 2010 versus 2005.

On June 5, World Environment Day, the National Space Research Institute (INPE) announced Amazon land clearing declined by nearly 29% in the 12 months ending July 31, 2012. The institute said the region lost 4,571 square kilometers (1,765 square miles) of forest in the period, 28.7% less than in the previous 12 months. This was the lowest annual rate of Amazon deforestation since INPE began monitoring land clearing in the region in 1988.

Such results prompt government officials to be optimistic that Brazil will meet its carbon targets. Officials also cite the drafting of so-called sectorial plans aimed at bringing down emissions in all categories. On World Environment Day, Environment Minister Izabella Teixeira announced that such plans have been completed for the agricultural, industrial, energy, mining and transport sectors.

"We believe Brazil, by continuing to reduce Amazon deforestation, will meet its commitment," says Márcio Rojas, an MCTI technical analyst who took part in the study. "We also believe sectorial carbon mitigation plans, drafted by Brazilian ministries with private sector input, will also help us reach that target."

New data cited

Many scientists and environmentalists are far less optimistic. They say Brazil's deforestation rate already shows signs of increasing. The Institute of Man and the Amazon Environment (Imazon), a scientific-research nonprofit that uses low-resolution INPE satellite images to monitor Amazon deforestation, issued a study in May that said that deforestation in the Brazilian Amazon from August of 2012 through April of 2013 totaled 1,570 square kilometers (521.6 square miles), or 88% more than the amount cleared during the same period a year earlier.

Though INPE scientists argue low-resolution satellite images aren't as accurate as the high-resolution ones it uses to calculate deforestation, Paulo Barreto, a senior researcher at Imazon, contends that "low-resolution satellite images are accurate enough to clearly show tendencies, and provide results that are usually not that different from INPE's definitive ones."

Raul do Valle of the nonprofit Socio-Environmental Institute (ISA) sees signs of faster deforestation, too. Says do Valle: "Imazon and ISA data show Amazon deforestation is on the rise, likely due to market pressures such as rising prices for soy and timber, and because of Amazon dam and road projects, and amnesty in the revised Forest Code. These factors should thwart the government's attempt to control deforestation, and compromise its ability to meet emissions reductions targets by 2020."

–Michael Kepp

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Documents & Resources

Summary of MCTI study, in Portuguese: www.mct.gov.br/upd_blob/0226/226582.pdf