

TROPICAL FORESTS AND CLIMATE

Brazil's Success in Reducing Deforestation

While national efforts to reduce global warming emissions in the United States have flagged, one tropical developing nation, Brazil, has made dramatic strides—without receiving much attention for its success. Detailed analyses of publicly available satellite photos show that Brazil has reduced deforestation in the Amazon enough over the past five years to lower heat-trapping emissions more than any other country on Earth.¹ This success demonstrates the enormous potential of reducing emissions from deforestation and forest degradation as well as conserving and re-growing tropical forests (the international effort known as REDD+).²

REDD+ was proposed by developing countries in 2005 as an international strategy by which tropical countries would reduce deforestation (which is responsible for about 15 percent of all global warming pollution) and be compensated by wealthy nations for any resulting economic losses. Two of the strongest initial supporters of the concept were Norway, which pledged \$2.5 billion for the effort, and Brazil, which announced a national plan to reduce its deforestation rate 80 percent by 2020 (compared with its average rate over the decade 1996–2005) and later made this commitment part of its national law.³

Between 2005 and 2010, Brazil nearly met its goal—a full decade ahead of schedule. Data from 2009–2010 showed that Brazil's area of deforestation, which averaged 19,508 square kilometers (km^2) per year during the baseline decade of 1996–2005, had dropped 67 percent, to just 6,451 km^2 . UCS analysis of this change, using a formula for converting deforested area to CO_2 emissions based on the work of the research institute IMAZON,⁴ estimated a reduction in Brazil's global warming pollution of nearly 1 billion tons.

Norway has committed \$1 billion to compensate Brazil for its emissions reductions; the first payment of \$110 million was made in 2009. And unlike the case with “offset” funding (whereby corporations in industrialized nations pay for emissions reductions in tropical countries and, in exchange, are permitted to emit more heat-trapping gases in their own countries), there will be no corresponding

increase in Norway's emissions as a result of its commitment to Brazil.

Thus, the cooperation of these two countries has already achieved a reduction in global warming pollution comparable to the reductions that both the United States and the European Union have only *pledged* to achieve by 2020.⁵ This means it is no longer necessary to talk about REDD+ as a proposal or a set of future actions—we can now see how REDD+ works, and that it can be remarkably successful.

What is even more impressive is that Brazil has achieved this success while simultaneously increasing agricultural production (see the figure on the next page) and significantly reducing

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hunger and poverty. During the last decade the country has enjoyed a high rate of GDP growth and exported large amounts of beef and soy despite the world recession. Moreover, through social programs such as Fome Zero (Zero Hunger) and Bolsa Família (Family Allowances), Brazil has lifted more than 10 million of its citizens out of poverty and substantially lowered rates of hunger and malnutrition.⁶

How It Was Done

Brazil's dramatic reduction in deforestation is the result of several different efforts. First, at both state and federal levels, the country greatly expanded its network of indigenous reserves and protected areas (including sustainable-use reserves), which now encompass more than half of Brazil's Amazon forest.⁷ Just as important, these reserves have been effectively protected. Indigenous peoples now control 20 percent of the Brazilian Amazon, and their collective land tenure rights have been reinforced by official titles and the support of the state in stopping illegal encroachment by non-indigenous ranchers, farmers, and miners. Strong enforcement of logging laws, including seizures of illegal



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timber, closing of illegal sawmills, and jailing of the perpetrators (including government officials who had been taking bribes to look the other way), has shown that the government's commitment to stopping deforestation is real.

Brazil's citizens played a critical role in pushing their government to go further and in exerting pressure for change on the businesses that are the main agents of deforestation.⁸ The Zero Deforestation campaign, for example, which was launched in 2008 by a broad coalition of environmental, indigenous, rubber-tapper, human rights, and other non-governmental organizations (NGOs), played an important role in pushing the federal government to act. In 2006 and 2009, Brazilian NGOs also conducted widely

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publicized exposés of the role the soybean and beef industries have played in deforesting the Amazon;⁹ the resulting publicity led to commitments from those industries not to sell products raised on deforested land.

More recently, the presidential campaign of former Environment Minister Marina Silva, who received 20 percent of the vote as the Green Party candidate, showed the breadth of support for stopping Amazon deforestation rapidly.¹⁰ Research institutes such as IPAM and IMAZON have been important in monitoring progress and showing how ranchers, farmers, and loggers

can increase their productivity in ways that make deforestation unnecessary.¹¹

Brazil's reductions in deforestation are impressive, but further progress is by no means guaranteed. Indeed, the last two years have seen a backlash from the Brazilian Congress's "ruralista" bloc, which is attempting to weaken the Forest Code. Furthermore, increases in world soy and beef prices along with proposals to develop new roads and dams in the Amazon would create new pressure for deforestation, requiring increased efforts just to protect the progress made so far.

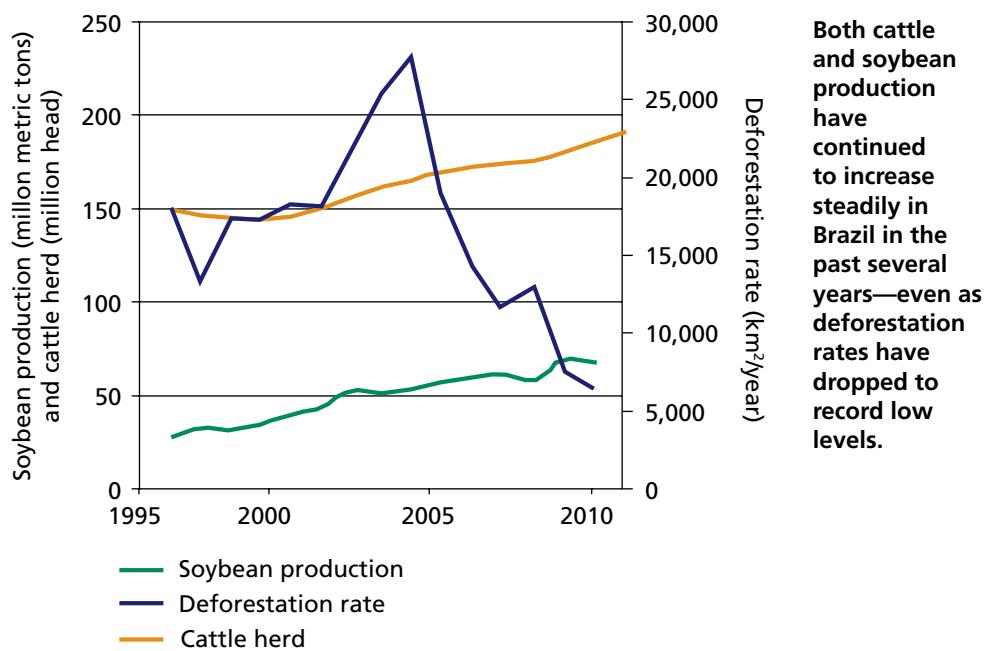
Sharing the Credit

Brazilian political leaders including Marina Silva, former President Luis Inacio Lula da Silva, and the governors of several Amazon states deserve credit for this accomplishment, as do the Brazilian NGOs that created the political

dynamics that encouraged governments and businesses to act. Now, with the national plan to end deforestation clearly ahead of schedule, the Zero Deforestation campaign is pushing for a new goal of zero deforestation by 2015.

Norway, too, played a vital role in creating an economic incentive for Brazil's actions (even though Brazil absorbed a majority of the costs). Norway's funding of REDD+ for the first five-year period reflects a financial investment that goes far beyond that made by any other country, amounting to about \$100 per year from each Norwegian citizen.¹² Both Brazil and Norway—the former tropical and developing, the latter boreal and developed—have provided examples to the rest of the world that are worth emulating. They have shown how we can act to deal with global warming if we have the political will to do it.

Deforestation and Cattle and Soybean Production in Brazil



Sources: USDA Foreign Agriculture Service, PDS Online (<http://www.fas.usda.gov/psdonline/psdHome.aspx>); Brazilian National Space Research Institute (INPE) (<http://www.obt.inpe.br/prodes/index.html>).



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Endnotes

- 1 INPE. 2010. Amazon deforestation has decreased 14% INPE estimates 6,451 km² for 2009/2010 periods. December 1. Online at http://www.inpe.br/ingles/news/news_dest154.php.
- 2 See, for example: publications of the UN-REDD program (<http://www.un-redd.org>) and Union of Concerned Scientists reports (<http://www.ucsusa.org/REDD>).
- 3 Government of Brazil. 2009. Law #12.187 of 29 December 2009. *Diario Oficial da União*, #248-A, Secciao 1, 109–110. Brasilia.
- 4 IMAZON. 2010. *Transparencia florestal*. July. Online at <http://www.imazon.org.br/novo2008/publicacoesлер.php?idpub=3726>.
- 5 Brazil's estimated reduction from the baseline is 870 million tons of CO₂ annually. The United States has promised a 17 percent reduction from its 2005 level, which amounts to 1,200 million tons. The European Union has promised a 20 percent reduction from its 1990 level, which amounts to about 850 million tons.
- 6 Rocha, C. 2009. Developments in national policies for food and nutrition security in Brazil. *Development Policy Review* 27:51–66. And: Chappell, M.J., and L.A. LaValle. 2011. Food security and biodiversity: Can we have both? An agroecological analysis. *Agriculture and Human Values*, in press. DOI: 10.1007/s10460-009-9251-4.
- 7 Soares-Filho, B., et al. 2010. Role of Brazilian Amazon protected areas in climate change mitigation. *Proceedings of the National Academy of Sciences* 107:10821–10826. And: Ricketts, T.H., et al. 2010. Indigenous lands, protected areas, and slowing climate change. *PLoS Biology* 8:e1000331.
- 8 Boucher, D.H. 2010. Deforestation today: It's just business. UCS tropical forests and climate briefing #7. Online at http://www.ucsusa.org/assets/documents/global_warming/Deforestation-Today-It-s-Just-Business.pdf.
- 9 Greenpeace. 2009. *Slaughtering the Amazon*. Amsterdam. Online at <http://www.greenpeace.org/international/en/publications/reports/slaughtering-the-amazon>. And: Amigos da Terra–Amazônia Brasileira. 2009. *Time to pay the bill*. Sao Paulo: Friends of the Earth-Brazilian Amazon. Online at http://www.amazonia.org.br/guiadelahes.cfm?id=313449&tipo=6&cat_id=85&subcat_id=413.
- 10 Phillips, T. 2010. Brazil election sees breakthrough for greens and environmental agenda. *The Guardian*, October 4. Online at <http://www.guardian.co.uk/world/2010/oct/04/brazil-election-breakthrough-greens>.
- 11 See: IMAZON (<http://www.imazon.org.br/novo2008/index.php>); IPAM (<http://www.ipam.org.br/#>).
- 12 For example, the U.S. commitment during the 2010 to 2012 period amounts to just about one dollar for each American citizen annually.