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## In Brazil, Paying Farmers to Let the Trees Stand



Damon Winter/The New York Times

Roque Ferreira, a vaquero on the ranch of Guilherme Pinezzi Honorio, prepares his saddle and horse to work on the ranch. [More Photos >](#)

By ELISABETH ROSENTHAL  
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QUERENCIA, [Brazil](#) — José Marcolini, a farmer here, has a permit from the Brazilian government to raze 12,500 acres of [rain forest](#) this year to create highly profitable new soy fields.

### By Degrees *A Cool Shield*

This is one in a series of articles about stopgap measures that could limit global warming.

But he says he is struggling with his conscience. A Brazilian environmental group is offering him a yearly cash payment to leave his forest standing to help combat [climate change](#).

Mr. Marcolini says he cares about the environment. But he also has a family to feed, and he is dubious that the group's initial offer in the negotiation — \$12 per acre, per year — is enough for him to accept.

“For me to resist the pressure, surrounded by soybeans, I’ll have to be paid — a lot,” said Mr. Marcolini, 53, noting that cleared farmland here in the state of Mato Grosso sells for up to \$1,300 an acre.

Mato Grosso means thick forests, and the name was once apt. But today, this Brazilian state is a global epicenter of

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deforestation. Driven by profits derived from fertile soil, the region's dense forests have been aggressively cleared over the past decade, and Mato Grosso is now Brazil's leading producer of soy, corn and cattle, exported across the globe by multinational companies.

Deforestation, a critical contributor to climate change, effectively accounts for 20 percent of the world's carbon dioxide emissions and [70 percent of the emissions in Brazil](#). Halting new deforestation, experts say, is as powerful a way to combat warming as closing the world's coal plants.

But until now, there has been no financial reward for keeping forest standing. Which is why a growing number of scientists, politicians and environmentalists argue that cash payments — like that offered to Mr. Marcolini — are the only way to end tropical forest destruction and provide a game-changing strategy in efforts to limit global warming.

Unlike high-tech solutions like capturing and sequestering carbon dioxide or making “green” fuel from algae, preserving a forest yields a strikingly simple environmental payback: a landowner reduces his property's emissions to zero.

Yvo de Boer, executive secretary of the [United Nations](#) Framework on Climate Change, said that deforestation “absolutely” needed to be addressed by a new international climate agreement being negotiated this year. “But people cut down trees because there is an economic rationale for doing it, and you need to provide them with a financial alternative,” he said.

Both the most recent [draft of the agreement](#) and the climate bill passed by the House in late June in the United States include plans for rich countries and companies to pay the poor to preserve their forests.

The payment strategies may include direct payments to landowners to keep forests standing, as well as indirect subsidies, like higher prices for beef and soy that are produced without resorting to clear-cutting. Deforestation creates carbon emissions through fires and machinery that are used to fell trees, and it also destroys the plant life that helps absorb carbon dioxide emissions from cars and factories around the globe.

But getting the cash incentives right is a complex and uncharted business. In much of the developing world, including here, deforestation has been tied to economic progress. Pedro Alves Guimarães, 73, a weathered man sitting at the edge of the region's River of the Dead, came to Mato Grosso in 1964 in search of free land, pushing into the jungle until he found a site and built a hut as a base for raising cattle. While he regrets the loss of the forest, he has welcomed amenities like the school built a few years ago that his grandchildren attend, or the electricity put in last year that allowed him to buy his first freezer.

Also, environmental groups caution that, designed poorly, programs to pay for forest preservation could merely serve as a cash cow for the very people who are destroying them. For example, one proposed version of the new United Nations plan would allow plantations of trees, like palms grown for palm oil, to count as forest, even though tree plantations do not have nearly the carbon absorption potential of genuine forest and are far less diverse in plant and animal life.



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“There is the capacity to get a very perverse outcome,” said Sean Cadman, a spokesman for the Wilderness Society of Australia.

Global as well as local economic forces are driving deforestation — Brazil and Indonesia lead the world in the extent of their rain forests lost each year. The forests are felled to help feed the world’s growing population and meet its growing appetite for meat. Much of Brazil’s soy is bought by American-based companies like Cargill or Archer Daniels Midland and used to feed cows as far away as Europe and China. In Indonesia, rain forests are felled to plant palms for the palm oil, which is a component of [biofuels](#).

Brazil has tried to balance development and conservation.

Last year, with a grant from Norway that could bring the country \$1 billion, it created an [Amazon Fund](#) to help communities maintain their forest. National laws stipulate that 80 percent of every tract in the upper Amazon — and 50 percent in more developed regions — must remain forested, but it is a vast territory with little law enforcement. Soy exporters officially have a moratorium on using product from newly deforested land.

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