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## Brazil, Alarmed, Reconsiders Policy on Climate Change



Lalo de Almeida for The New York Times

**Brazil has resisted programs to reduce deforestation. In the Amazon, areas the size of New Jersey have been razed each year.**

By [LARRY ROHTER](#)

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MANAUS, [Brazil](#) — Alarmed at recent indications of [climate change](#) here in the Amazon and in other regions of Brazil, the government of President [Luiz Inácio Lula da Silva](#) has begun showing signs of new flexibility in the tangled, politically volatile international negotiations to limit human-caused global warming.

The factors behind the re-evaluation range from a drought here in the Amazon rain forest, the world's largest, and the impact that it could have on agriculture if it recurs, to new phenomena like a hurricane in the south of Brazil. As a result, environmental advocates, scientists and some politicians say, Brazilian policy makers and the public they serve are increasingly seeing climate change not as a distant problem, but as one that could affect them too.

Brazil remains suspicious of foreign involvement in its management of the Amazon, which it views as a domestic matter. But negotiators and others who monitor international climate talks say Brazil is now willing to discuss issues that until recently it considered off the table, including market-based programs to curb the carbon emissions that result

from massive deforestation in the Amazon, in which areas the size of New Jersey or larger are razed each year.

“I think things have advanced, certainly, compared to three years ago, when the government simply refused to discuss deforestation in international forums,” said Márcio Santilli, a former government official who helped start the Socio-Environmental Institute, an environmental group in Brasília. “There has been a change of posture which reflects the worries of Brazilian public opinion on this issue, which in turn puts pressure on politicians.”

For years, Brazil’s position in international climate change talks has been that Northern Hemisphere industrial countries must shoulder the burden of reducing greenhouse gas emissions. Fearing a loss of sovereignty, it has resisted plans to create market mechanisms to provide payments for reductions in deforestation and carbon emissions, accompanied by international monitoring.

Brazil’s stance on such issues is vitally important because by most calculations it is the fourth-largest producer of the greenhouse gases that most scientists believe are the principal cause of global warming. Three-quarters of those emissions result from deforestation, the overwhelming bulk of which occurs here.

The government’s new, slightly more nuanced position is not a result of a sudden burst of green awareness on the part of Mr. da Silva, whose knowledge of the technical details of the debate is widely described as sketchy. And in public, Mr. da Silva continues to want to shift the blame northward.

“Everyone knows that the rich countries are responsible for 60 percent of the gas emissions, and therefore need to assume their responsibilities,” he said during a meeting of the [Group of 8](#) in June. “We don’t accept the idea that the emerging nations are the ones who have to make sacrifices, because poverty itself is already a sacrifice.”

A number of recent events have led political leaders and ordinary Brazilians to conclude that they are not immune to climate change. First and foremost was a disastrous 2005 drought in the Amazon that killed crops, kindled forest fires, dried up transportation routes, caused disease and wreaked economic havoc.

Brazil sees itself as an emerging agricultural and industrial power, and global warming could have a disastrous impact on those aspirations. Scientists note that Brazil’s southern breadbasket flourishes largely because of rainfall patterns in the Amazon that are likely to be altered if droughts recur or climate change accelerates.

“Once they really register that the Amazon rain machine is very important to the south of Brazil, they are going to be much more interested in avoiding deforestation,” said Thomas Lovejoy, president of the Heinz Center for Science, Economics and the Environment. “You don’t have to be interested in biodiversity to want rain to keep that amazing agricultural system going.”

Brazil also envisions constructing a large network of dams throughout the Amazon over the next several decades to supply electricity to its industrial heartland in São Paulo, 2,000 miles south of here. But those plans depend on water flows in the region's vast rivers not drying up.

“If rainfall is reduced, as many projections show, either you are not going to have enough water at all or you will have to have much bigger lakes to fill the dams,” said Paulo Moutinho, scientific coordinator at the Amazon Institute for Environmental Research.

In addition, in 2004 a hurricane formed in the South Atlantic for the first time since weather records began being kept. The storm came ashore in the southern Brazilian state of Santa Catarina, which was not prepared for it, and destroyed houses and forced thousands to flee.

“There was no previous registry of this happening, not even in the literature of colonial times,” said Carlos Nobre, Brazil's most prominent climate scientist, who works at the National Institute for Space Research.

The latest report of the United Nations Intergovernmental Panel on Climate Change, issued in April, has added to concerns here. “By mid-century, increases in temperature and associated decreases in soil water are projected to lead to gradual replacement of tropical forest by savanna in eastern Amazonia,” it predicted, while also warning that “crop productivity is projected to decrease for even small local temperature increases” in tropical areas, “which would increase risk of hunger.”

Among climatologists who study the Amazon, the buzz words these days are “tipping point” — the moment at which damage to the environment is so severe and widespread that it pushes the ecosystem into an irreversible cycle of self-destruction.

Scientists disagree how close the Amazon is to such an event. Some warn that it is just a few years away, while others argue that the margin of safety is decades. But almost all agree that the danger exists.

“Obviously the uncertainty range is huge, but the momentum is pushing us in that direction, and the fact that it is close is important, because the process is like steering a big ship,” said Philip Fearnside, a researcher here at the National Institute for Amazon Research. “People on the Titanic saw the iceberg, but they couldn't turn in time.”

In the debate over how to reduce carbon emissions and postpone or avoid such a tipping point, one area of disagreement between Brazil and the international community has been the issue of compensation for what is known as “avoided deforestation.” This approach sets a monetary value for greenhouse gas emissions and pays farmers and indigenous people not to raze the forest.

Brazil has been wary of allowing such a market mechanism, preferring that donations flow into a government fund that it would administer. Potential donors say they worry

about waste and inefficiency and fear that such a fund would end up, as one person said, asking not to be identified because negotiations were still under way, being “money down a rathole, a total scam that did nothing at all for the people out there in the forest.”

In the absence of a clear direction at the federal level, governors of some Amazon states are moving on their own. In June, Eduardo Braga, governor of Amazonas, announced a new climate change law, the first in Brazil, that allowed compensation for “environmental services,” including payments to farmers and river dwellers for avoiding deforestation.

“This action would have raised big questions and objections just four months ago, but there’s been a big turnabout,” Mr. Braga said.

Mr. Braga’s initiative is especially important because his state, the biggest in Brazil, has largely avoided the devastation occurring in neighboring states to the east and south.

But in the end, how much and how rapidly policy shifts depends largely on Mr. da Silva, who has consistently argued that “the Amazon is not untouchable.” In April, he saw [Al Gore](#)’s film “An Inconvenient Truth” in Brasília in the company of some of Brazil’s leading environmentalists.

“My impression is that Lula’s intuitive sensitivity to the gravity of the situation is greater than that of those who surround him,” said Mr. Santilli, who was present at the screening. “I think he understands and accepts the idea of these differentiated instruments, but I don’t know if he realizes that the government’s position is contrary to this.”