

The Price of Carbon

Corporations bought a forest to offset their emissions, but locals are paying the cost

On the southeast coast of Brazil, American companies with significant carbon footprints are working to preserve 50,000 acres of the Atlantic Forest. The idea is simple: by protecting these trees, which soak up carbon dioxide, the companies hope to obtain carbon credits that will allow them to pollute elsewhere. But this practice, called avoided deforestation, is controversial, especially in nearby indigenous communities.



Designated a "biodiversity hot-spot" by the United Nations, the Atlantic Forest of Brazil has a diversity of plants and animals comparable to the forests of the Amazon. But after centuries of development, just 7 percent of the original forest remains. So it could seem a good idea to preserve the forest, turning trees into carbon offsets; and that's the stated goal of the Guaraqueçaba Reserve. Yet avoided deforestation presents challenges: the unreliability of current methods for measuring carbon in trees, the potential of "leakage" (displacing logging to other locations), and, a key objection by Brazil: the risk of placing the fate of a nation's forests in the hands of individual companies. For these reasons, the more lucrative carbon-trading system of the European Union has denied offset status to avoided-deforestation projects—so far.

Some 10,000 people live in and around the Guaraqueçaba forest. Over the last two centuries, Brazilian policies have caused steady encroachment on Guarani territory, to which the communities have never held formal title, but on which at least 60 sacred sites can be found. Explains regional leader Leonardo Werá Tupá, "Before the lines were drawn for Brazil, Argentina, Paraguay, and Bolivia, the Guarani were here."

"Today, along the coast, you find many indigenous peoples. In the reserve that we visited, there are more than 60 archaeological sites. When the land ends up in the hands of environmentalists, the intent is to preserve the land, but they end up limiting many things for the people around. The Guarani have rules that are part of the culture. There is a season for fishing, a season for hunting—therefore, everything is under control. In any event, even up until now, these pursuits have not caused the extinction of any species of animals.

The indigenous are the true environmentalists. It's the Indians that preserve the land. Locations where you have the most jungle, best preserved, are the indigenous lands. It's because nature to us, the Guarani, is living, and has to be respected. The laws imposed here in Brazil are already complicated. And when foreign companies come here investing in this area and buying land, it affects us even more, because it causes an even greater restriction."



Going to Quara-Quara Island, Brazil

Between 2000 and 2002, General Motors, Chevron, and the largest U.S. operator of coal-fired power plants, American Electric Power, donated \$18 million to The Nature Conservancy, US-based conservation organization. The donation launched an experiment in turning the carbon embedded in Guaraqueçaba's trees into offset credits. The Nature Conservancy then gave the money to a Brazilian conservation group, the Society for the Preservation and Study of Wildlife (SPVS), to purchase land and administer a reserve, which



Guaraqueçaba, Brazil



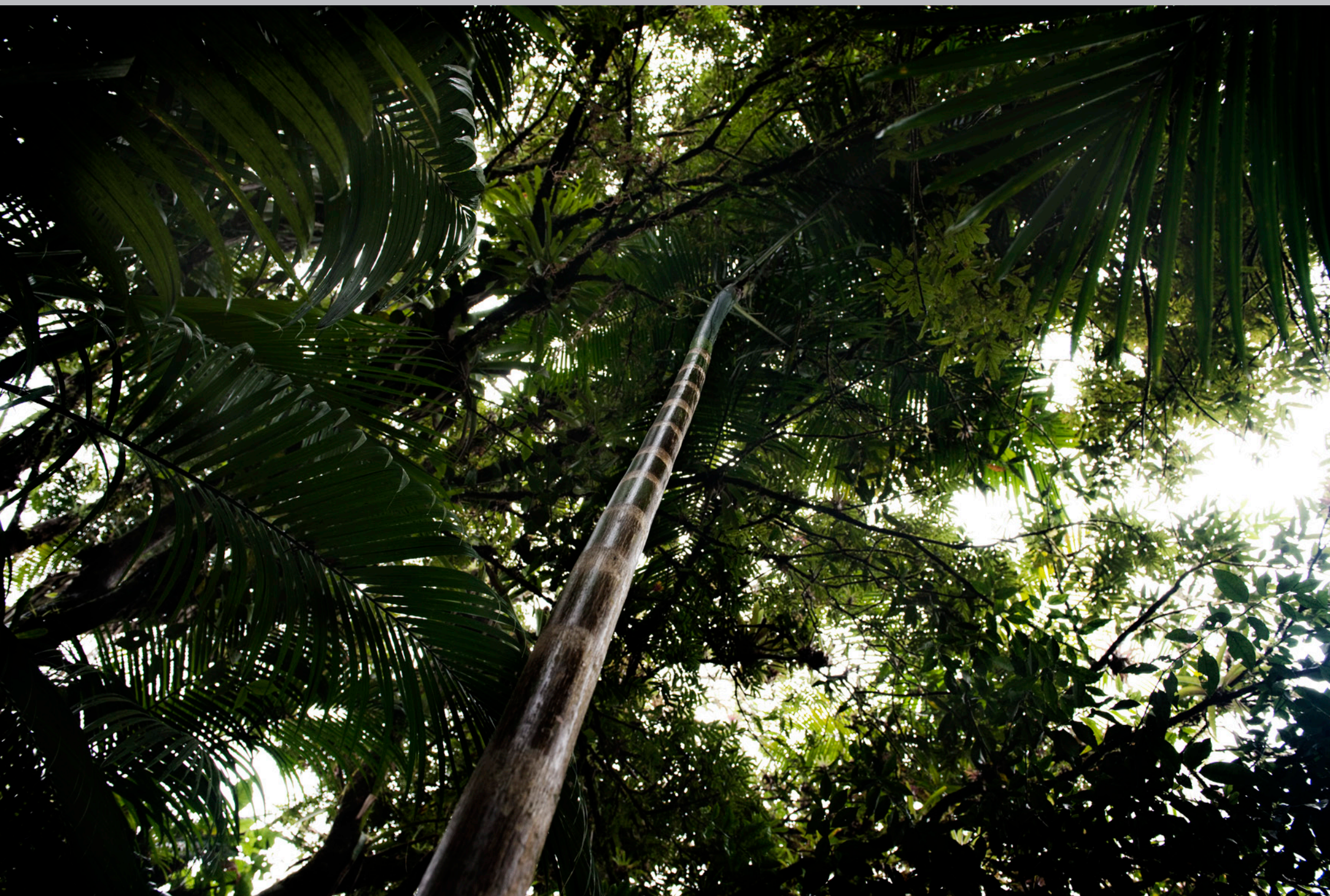
Leonardo da Silva "Werá Tupá" | Prayer house at Cutinga Island, Brazil

sits near this island home of several Guarani families. The companies do not own the land, nor the trees, but they do own the right to possess and trade the carbon in the trees—which they can use to offset their own polluting emissions, or sell to other companies seeking such offsets.



Antonio Alves "bito" | Quara-Quara Island, Brazil

In 2008, Antonio Alves, a fisherman and carpenter, cut down a tree at the edge of the carbon-offset reserve to repair his mother-in-law's home. The Green Police, or Força Verde, arrested Alves and put him in jail for 11 days. He was defended by the town's mayor, a lawyer who has represented scores of residents arrested for similar acts.



Palm tree "Palmito" | near Antonina, Brazil



Jonas da Silva | Rural area of Antonina, Brazil

The endangered palmito tree, source of the delicious heart of palm, has come under siege in Guaraqueçaba. Black marketeers illegally cut down hundreds of these trees at a time for illicit food processors, but when the Força Verde are on patrol, they most often arrest local residents, who have for generations relied on the sustenance found in the forest. One palmito can feed a family of five.

Jorge Gonzales Wochnicki, who farms alongside the reserve, says he has been shot at and harassed when searching for palmitos in the forest. "[The Green Police] don't want us here; they don't want human beings in the forest. But human beings are part of the ecosystem. All this richness that you see was preserved because the people have been here."

Jonas de Souza lives in a settlement abutting the Guaraqueçaba Reserve, where his family grows bananas, cocoa, and coffee. When the local conservation group tried to buy land, the de Souzas and their neighbors refused. Signs soon appeared at the edge of the forest ("No hunting, fishing, cutting of trees, or removal of vegetation") and the Força Verde went on patrol. Restrictions on subsistence practices have created a regional poverty belt: many people whose families have lived in the forest for generations are now forced to resettle in Antonina or the state capital of Curitiba.



Makeshift gong | Rural area of Antonina, Brazil



Oziel Fernandez | Neighboring Morro da Mina reserve

In a community near the Guaraqueçaba Reserve, a makeshift gong is used by locals to announce Green Police patrols. Suddenly finding common cause with Native people, non-Native farmers established formal meetings with the Guarani during the summer of 2009. Growing up, Jonas de Souza recalled, "I'd grab my fishing rod and get a fish to bring to my family or to feed myself. Now you don't [even] have the right to walk into the forest to cut a heart of palm to eat. I'll be called a thief!"

Avoided deforestation has not gained approval for use in the U.N.-sanctioned carbon market, and the European Union has also resisted the practice. Even though avoided-deforestation credits are only traded on a small U.S.-based carbon exchange, a new generation of rural Brazilian youth could still grow up like Oziel Fernandes, 20—with fences, Green Police, and restrictions on hunting, fishing, and planting on the lands that sustained generations before him.



Karai Djeguaka Wera | Guaraqueçaba, Cerco Grande, Brazil

The Guarani opyguá (or shaman) on Cerco Grande Island, Karai Djeguaká Werá, remains convinced that the land's traditional stewards know best how to protect the forest. "Ka'aguy ma ou arandú nhande wy mbya kuery pe," he said, meaning, "all of the indigenous wisdom comes from the forest." When a carbon-offset reserve was established nearby, Werá adds, "No one came here to talk [to us] about it."