

Polluters plant rain forests to earn eco rain checks

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GEORGEVILLE, BELIZE

The rough dirt road winds up and down the jungle-covered foothills of western Belize, passing Maya peasant families on foot or bearded Amish farmers in their horse-drawn buggies. It passes through banana plantations and scrubby pastures carved from the ever-shrinking tropical forests.

The road eventually leads into a tidy compound staffed by a couple dozen Swiss, Germans, and Austrians. Locals come to the Maya Ranch Reserve for the homemade ice cream. But the staff of this remote research station is hoping to provide a great deal more for the people of Belize and, perhaps, the rest of the world: provide oxygen, store carbon.

This project is funded by several German companies. And as concern over climate change heats up, electrical utilities and other polluters are investing in tropical forests. By protecting existing forests or growing new ones, companies hope to use the trees for pollution credits if a proposed international carbon trading scheme gets under way later this decade.

In the US, Dynegy Inc., a leading energy company, recently completed planting 6.3 million trees in five states. The US is currently lobbying the United Nations that countries receive environmental credits for replenishing forests.

"We can promote biodiversity and protect against climate change at the same time," says Thomas Qubeck, vice president of the Janus Foundation, the Bern, Switzerland, based nonprofit that runs the ranch.

Conservationists, who have fought a losing battle to protect the world's rain forests, hope the forests will be saved for their trees, which absorb carbon dioxide, store the carbon as new plant material, and emit oxygen.

"We've struggled for years to find a value of living forests that's greater than the value of clearing them for lumber or slash-and-burn agriculture," says Tia Nelson of The Nature Conservancy, the Arlington, Va.,-based land trust that's brokered several large forest-protection projects in Latin America. "Suddenly investors and decisionmakers are recognizing the value forests play in climate change."

The Conservancy brokered the largest project of its type, the protection of 1.5 million acres of Bolivian forests as a carbon sink. Three electrical utilities - BP Amoco, American Electric Power, and PacifiCorp - invested \$9.6 million to buy and retire the logging rights to the land, which was then turned over to the government of Bolivia, which incorporated it into the Noel Kempff Mercado National Park.

Over the 30-year span of the project, the forest is expected to store an estimated 6-to-8 million tons of carbon that would otherwise have been released into the atmosphere. If a carbon trading regime is set up, the three utilities will split this carbon credit with Bolivia.

"If there's ever an economic windfall, both parties will share in the benefits," says the project's manager at the Conservancy, Margo Burnham. The project will help local people set up small agroforestry operations like palmetto planting that generate income without destroying forests.

The Conservancy has brokered similar projects to protect Atlantic rain forests in southern Brazil and lowland forests in northwestern Belize. In all three cases, most of the carbon-storage benefits come from not cutting down existing forests.

But the Janus Foundation's research takes the idea a step further by developing ways to replant complex tropical forests that have already been lost.

Behind the main lodge staff members tend to a verdant nursery where they are growing two dozen species of local trees, some of them now difficult to find after decades of clear-cutting by British loggers and Belizean farmers. Several acres of larger trees that started their lives in the nursery now grow in a nearby pasture, part of Janus' 5000-acre forest preserve.

"Instead of planting a monoculture of trees, we believe it's possible to plant a functionally diverse forest that can store more carbon and provide far better habitat for other species," says forest botanist Heinz Rennenberg of the University of Freiburg, Germany.

Dr. Rennenberg says it's impossible to plant all the species that were in the original forest as there are more than 500 tree species alone in this part of Belize. Instead, his team is looking for a handful of species that represent different functional groups like shade trees or bottom plants. They hope to figure out how and when to plant each species in the area they wish to reforest.

"If we're successful, this approach could be transferred to other areas," he says, "But you need to have the time and funding to collect information on what the local forests looked like before they were cut down."