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Huaorani Indians in Yasuni National Park carry the bushmeat they've killed with their blowgun -- including three howler monkeys and one coati. Photo by Danita Delimont via Getty Images.

Editor's note: This piece is part of a collaboration on the Yasuni National Park between the Miami Herald and the PBS NewsHour. Read more about the project [here](#).

TIPUTINI RIVER, Ecuador -- Waving away a cloud of gnats, biologist Phyllis "Lissy" Coley scours the Amazonian underbrush for inga shrubs, whose young leaves are loaded with powerful toxins and chemicals that might be useful in medical research.

Coley and her team from the University of Utah have spent almost two years in the Amazon of Guyana, Peru and Brazil researching the plant -- but this patch of Ecuador was delivering surprises. In a single week, Coley's team found 60 species of inga, 40 of which were unknown to them -- and likely unknown to science. They also found a carnivorous caterpillar. While flesh-eating caterpillars exist in Asia, they've never been recorded in the New World.

Photo essay: [Snapshot of Species in Ecuador's Yasuni National Park](#)

The mysteries of this forest, which scientists like Coley are still discovering, could be at risk after this South American nation quietly began considering pulling the plug on one of the most innovative and ambitious conservation plans ever attempted.

The Yasuní-ITT Initiative was designed to leave more than 846 million barrels of crude oil untouched, in perpetuity, beneath Yasuní National Park -- rioting with unknown species and tribes living in voluntary isolation.

In exchange, the government asked the world to cover just half of the crude's \$7.2 billion market price.

Environmental groups praised the plan as a novel way to slash greenhouse gases. In 2010, the United Nations threw its support behind the project, setting up a trust fund to receive and manage donations. There were hopes that crowd-sourcing conservation might be a model for other developing nations.

But six years after its launch, those goals are proving elusive. The plan has raised less than 10 percent of the \$3.6 billion it's seeking. Ecuador's government says it has received \$116.7 million and has pledged for an additional \$220 million -- some of it in non-cash cooperation. The United Nations trust fund has just \$9.8 million in the bank.

The shortfall is driving speculation that Ecuador might be forced to drill for crude in the ITT oil block (short for Ishpingo, Tambococha, Tiputini), which it says holds 20 percent of the nation's reserves.

"We want to keep 400 million tons of CO₂ out of the atmosphere," Ecuador's president Rafael Correa told a crowd in April. "But if the international community doesn't help share the responsibility, we have to make the best decision for the Ecuadorean people."

Correa and his cabinet held a meeting about the fate of the project in June and are expecting to meet again in coming weeks. Officials say drilling the ITT is on the table.

In the balance is one of the most biodiverse spots on the planet. The ITT block is among the most isolated areas of Yasuní National Park, a 2.4 million-acre U.N. biosphere reserve, which holds about one-third of all of the Amazon's amphibian species, even though it represents just a small fraction of the total area. In any given two-and-a-half acre plot of the Yasuní -- roughly the size of a soccer pitch -- there are more species of trees than in the United States and Canada combined.

"As a biologist, nothing makes me more awestruck than to work in an incredibly diverse and

pristine area where every day you discover something that you couldn't even imagine or anticipate," Coley said.

A family of red howler monkeys eats nuts from a palm tree off the Napo River in Yasuni National Park. Photo by Rebecca Yale via Getty Images. [View full photo essay here.](#)

Even so, she understands the financial pressure Ecuador is facing.

"You can't expect countries just to save rainforest because they're amazing places and we would, as humans, like to keep them around," she said. "Given the potential to make oil money from here, I think it's a remarkably generous offer to say to the rest of the world 'Can you contribute and we won't develop this area.'"

Ecuador needs the money. One of the poorest nations in South America, oil represents more than half of its export earnings and is the country's top source of revenue.

Keeping oil underground is like "a very poor family trying to protect the family jewels, in the meantime most of the people are starving to death," said David Romo, one of the directors of the University of San Francisco de Quito's Tiputini Biodiversity Station, which borders the park and where Coley was doing her research. "So how do you do the trade-off here? The initiative gives us an option for that."

Ivonne Baki is the former Ecuadorean ambassador to the United States, a one-time presidential candidate who speaks six languages. Now, she's traveling the world on behalf of the government, marshaling resources for the project.

Photo of tourists in a dugout canoe in a black water stream in Yasuni National Park by Danita Delimont/Getty Images. [View full photo essay here.](#)

While the initiative has seen a groundswell of popular support, she admits the financing has

been disappointing. The government is considering "Plan B," which includes tapping the oil in the ITT block in a "conscientious" way. But keeping the oil underground is still the administration's priority, she said.

"We believe in conserving and we have done it before," she said. Twenty-five percent of Ecuador's territory is in a national park or protected area, including the world-renowned Galapagos Islands. By contrast, 12 percent of the United States is under protection, according to the World Database on Protected Areas.

The Yasuní-ITT Initiative is "an environmental service we are providing to the world, not just Ecuador," Baki said.

But the world seems deaf to the plea. While countries like Italy, Germany, Spain, Turkey and Luxembourg have supported the effort, the United States -- Ecuador's largest oil buyer and which has a long and troubled history of polluting the Amazon -- has not contributed to the effort. Neither have gas guzzling nations like China, Japan or India.

Baki speculated that crude-consuming nations fear the model might be replicated and push fuel prices higher.

But critics say the country also has a credibility issue. The socialist-leaning Correa administration has broken pledges in the past, defaulting on the national debt in 2008, and unilaterally forcing oil companies to renegotiate their contracts.

And while the country touts the initiative, it's already exploring for oil in Yasuní National Park and has begun building a road in oil block 31, adjacent to the ITT area. It's also building a massive new refinery that's designed to process more oil than the country is currently producing.

"It might seem like the government is operating in bad faith," said Ivonne Yáñez, one of the founders of the Acción Ecológica environmental group. "On one hand, they seem to be pushing Plan B, which is to extract the petroleum, and on the other hand there is Plan A that Ms. Baki is

promoting."

Yánez said the government's mixed messages are likely hurting international support for the initiative.

But Baki said powerful business interests are also undermining the project. In particular, oil companies don't like its implications.

A White Chinned Jacamar perches on branch over the Napo River in Yasuni National Park. Photo by Rebecca Yale/Getty Images. [View full photo essay here.](#)

"They don't want to accept that oil contaminates," she said. "They say they have the best technologies and that the technology works. We saw what happened in the Gulf of Mexico with British Petroleum."

Ecuador doesn't have to look as far afield as the 2010 Gulf oil spill for cautionary tales. Beginning in the 1960s, Texaco and the state-run oil company began punching into the Amazon looking for crude. Critics accuse the company of using obsolete technology and pumping millions of gallons of wastewater into open pits and rivers.

Last year, an Ecuador appellate court ordered Texaco's successor Chevron to pay \$18 billion to clean up the mess and reward local communities. The company is fighting the judgment and is suing Ecuador's legal team on racketeering charges.

But even cutting-edge oil exploration can have unintended consequences. In 1993, Maxus Ecuador built a 112-mile road that cuts through the northern boundary of Yasuní National Park. Only 19-feet wide, it was designed to disappear in a decade after the crude it targeted ran dry. The company also guarded the route to keep colonizers from moving in.

Twenty years later, the crude is still flowing and the road has the marks of permanence. A

handful of Huaorani and Quichua communities have sprung up along the gravel route. Most of the proto-villages are just a few wooden shacks, but others have cinderblock schools and concrete volleyball courts.

For the last two decades, Terry Erwin, one of the world's top entomologists who works at the Smithsonian Museum of Natural History, has been studying the environmental impact of the road. While the construction has had virtually no effect on the insects that he monitors, the same is not true for larger creatures. When Erwin began studying the area, the forests alongside were home to five monkey species.

"By the end of three years, there were no monkeys left," he said. "Everything was out of there -- gone."

The Huaorani, who have ancestral rights to the land, had eradicated all the game animals for about one mile on either side of it, he said.

Some of the species are making a comeback, Erwin said, but that is largely because of changing Huaorani lifestyles -- they are giving up their nomadic hunting ways for more permanent agriculture.

In theory, there are ways to responsibly extract oil from the ITT, Erwin said, "but even with the best ideas possible to start out with, if you let a person in there it's gone."

In some ways, the Yasuní-ITT project is already a success. Yáñez, with Acción Ecológica, said that before the initiative was launched few in Ecuador were aware of the area. Now polls show that more than 80 percent of Ecuadoreans don't want the country to exploit the oil in the ITT, even if the international funds don't materialize. If Correa lifts the drilling ban, he's likely to face a public backlash, she said.

Gas flares from an oil facility near Yasuni National Park. Photo by Alejandra Parra/Bloomberg via Getty Images. [View full photo essay here.](#)

One of the risks of tapping the ITT is that no one is sure what it holds. Researchers recently discovered a fungus near the area with intriguing commercial potential: it consumes plastic. Erwin says 85 percent of all the insects his team collects are unknown to science.

Damaging the forest before it gives up its secrets is analogous to the burning of the legendary library of Alexandria, Egypt in 600 B.C., said Romo with the university research station.

"There are so many wonders and so much information that Yasuní is holding that will be beneficial to humans," he said. "We just don't know it because we haven't had the chance to explore it."