



NATIONS:

A place where poverty and darkness create more vulnerability to powerful storms

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LES ANGLAIS, Haiti—Little comes easy in this tiny coastal village where kids fill plastic buckets with charcoal to sell at market and women sweep bean pods into tidy mounds alongside pastel-painted mud and concrete houses.

Litane Morece, who makes her living selling Chiclets gum and candies in front of the local school, burns a few sticks of wood to make her morning coffee. Showing off her steel stove, which she will place atop three large stones to cook fish and rice for that evening's dinner, Morece says charcoal makes the food tastier, but wood is cheaper.

SPECIAL SERIES



In this series, E&E examines the plight of the world's islands and island nations. They contributed very little to the changing climate from man-made greenhouse gas emissions, but some may pay with their lives. [Click here](#) to view the report.

At the open-air courthouse, a young woman sinks into a folded metal chair and tells Judge Mario Gelvard of being robbed at gunpoint. A legal secretary writes out the testimony longhand in an oversized ledger, and will travel one hour by bus to the nearby town of Tiburon the following week to type that case and dozens of others into a shared computer.

And a few corrugated metal roofs down the street, a cheerful and gap-toothed Marie Lourdes Saint-Cyr holds court with customers at the bright blue pharmacy she started with money from her nurse's pension. Each week when the ice truck comes through town, Saint-Cyr said, she spends 750 Haitian gourdes, about \$17, on blocks of ice to keep both sodas and medicines cold.

"A lot of people would like to have electricity, because we're safer when we have it. And with the light, you can work anytime you want," she said. "If I had electricity, I would have a big refrigerator for beverages and a big TV."

Degrees of poverty in rural Haiti have a common denominator: darkness. Come nightfall here, most shops close and remaining outdoor vendors sell soap, candies and small bottles of Bakara rum by the light of kerosene lamps. A few use solar-powered lanterns they purchased from the local "Eneji Pwop" clean energy store financed by the D.C.-based nonprofit EarthSpark International.

About an eight-hour drive from the devastation that still remains in the capital of Port-au-Prince three years after a deadly earthquake struck, towns like Les Anglais remain largely ignored by the Haitian government. And while this particular village is actually on its way toward electrification thanks to a micro-grid project EarthSpark International is spearheading, leaders acknowledge it is a struggle to make rural development a priority when the needs in urban areas remain vast.

"Because we in the metropolitan areas don't have electricity 24/7, we complain. Meanwhile, there are people who have never had access to an electrical lamp," Haiti's Energy Minister Delegate for Energy Security Rene Jean-Jumeau told *ClimateWire*.

Energy economy based on charcoal and wood

One year into his post and with a bare-bones staff of just 10 trained aides, Jean-Jumeau has made rural electrification a central goal. He recently unveiled a plan to light 200,000 rural homes in two years and is pushing for the creation of a rural electrification bureau.

"If we don't have a rural energy bureau, the issue of rural energy isn't going to be solved, because the urban issues are big enough to take up all the time," he lamented.

Haiti, which shares the island of Hispaniola with the Dominican Republic, has the lowest rate of energy access in the Caribbean. According to the U.S. State Department, just 25 percent of people there can flip a light switch, and only 5 percent in rural areas.

It's a situation that experts say ties directly to climate change because it feeds the already rampant deforestation in the country to make way for charcoal production. Denuded of 98 percent of its natural forests, Haiti loses more than 14,000 acres of soil each year to erosion -- making poverty-stricken communities ever more vulnerable to fiercer storms, floods and hurricanes. Meanwhile, the energy choices Haiti must make to fuel its growing population could also have a direct impact on rising temperatures.

Luc Bretous, who works with Haiti's Inter-Ministerial Territorial Planning Committee, noted that tropical storms and hurricanes already are a reality for his country. In 2012 alone, a series of disasters including the summer tropical storm Isaac and October's Hurricane Sandy destroyed agricultural yields, roads, homes and infrastructure -- particularly in the south and western regions.

"It is expected that we will have more hurricanes, and the hurricanes will become stronger. That's a huge issue for us, and we are already so vulnerable," Bretous said.

Untangling the reasons behind energy poverty in Haiti is as complex as getting to the root of poverty itself in this country rocked by centuries of oppression, occupation, corruption and neglect -- and in recent years beset by food shortages, economic decline and a series of natural disasters. But as energy experts look to Haiti's future, many insist they see a bright horizon.



By the end of next year the EarthSpark International micro-grid will serve the entire village of Les Anglais. For now, though, many women still cook like Litane Morece, using a three-stone cooking fire sparked by wood, charcoal or kerosene. Photo by Lisa Friedman.

SLIDESHOW

LEARNING WITHOUT LIGHT
A Look at Two Schools in
HAITI
A PHOTO GALLERY
by LISA FRIEDMAN

In Haiti, energy poverty is bad. But the biggest problem is not a lack of energy, but a lack of access to it. In Haiti, energy poverty is bad. But the biggest problem is not a lack of energy, but a lack of access to it. In Haiti, energy poverty is bad. But the biggest problem is not a lack of energy, but a lack of access to it.

About 95 percent of schools in Haiti don't have access to electricity. [Click here](#) to view a slideshow on what it means to learn without light.

"Haiti is starting from scratch, which is a challenge but also presents an enormous opportunity," said Alexander Ochs, climate and energy director at the D.C.-based Worldwatch Institute, which has been conducting assessments of sustainable energy resources in Caribbean nations including Haiti.

Renewable energy or coal or nothing?

While the specter of small islands sinking into the sea gets top billing at international conferences, experts say the question of from where islands will get their future energy is an often ignored but critical one. From the Maldives in the Indian Ocean to Barbados in the Lesser Antilles, small-island leaders are increasingly looking for ways to wean their nations off the oil and diesel imports on which they've come to depend.

Caribbean islands, Ochs said, tend to have more developed energy systems than those in the Pacific -- with the exception of Haiti. But, he argued, the absence of a national grid in Haiti can actually help it avoid becoming heavily dependent on the oil imports that suck away billions of government dollars each year in neighboring Jamaica and Dominican Republic.

A **renewable energy assessment** Ochs' team conducted with the support of the Haitian government showed a number of promising things, including that almost all the country has high levels of the solar radiation needed to harness solar photovoltaics. Meanwhile, wind resource maps showed three regions with particularly high potential, all near major population centers.

"The potential is there," agreed Mark Konold, who is developing the clean energy road map as Worldwatch Institute's project manager.

Haitian leaders, for their part, are proceeding carefully. Jean-Jumeau noted with frustration that after the catastrophic 2010 earthquake, big-name energy leaders from all over the world tried to push grand visions of national solar energy solutions on his country,



Rene Jean-Jumeau, Haiti's minister delegate for energy security. Photo courtesy of Jean-Jumeau.

with little understanding of what might and might not work. Fossil fuels including coal, he said, are sources that Haiti has the right and the need to explore. He said the nation has about 40 years' worth of lignite that could be developed.

"We have to look at the development options that are needed today. The amount of power that is needed to make a difference in the short term needs to be developed by proven energies," Jean-Jumeau said, though he emphasized he believes fossil energies are "to be used cautiously."

"Energy is indispensable, be it in education or tourism or industry or agriculture. But if we're not careful, we could eventually create more harm than good," Jean-Jumeau cautioned. Still, he said, "The people that we all know and care about, the people who are living, breathing people who want a better life, who are struggling for a better life and who are looking to us to help provide that -- well, that doesn't seem to matter to a number of people throughout the world who just want a laboratory to develop their ideas."

And yet, he and others acknowledge, in some places such living laboratories are producing extraordinary results. Case in point is Les Anglais, seemingly abandoned by local and national governments. Even driving to the southwest village is precarious, involving a long stretch across a dried-up riverbed with no bridge.

Residents say the river floods catastrophically in hurricane season, but they no longer believe officials' assurances that a bridge will be built.

Cellphones bring a micro-grid

But EarthSpark International, which has been working in the town since 2009 providing solar lanterns, cellphone chargers and clean cookstoves, is now embarking on one of the country's most ambitious decentralized energy projects yet. Using excess diesel-powered electricity from a local cellular phone tower, the organization has developed a micro-grid to deliver 24-hour electricity to the town.

Currently, 14 homes are on the grid, which is in its first phase of development, and about 40 are expected to come online by the end of this month. The rest of the town as well as businesses will be included in the coming year.



The "clean energy store" in Les Anglais, run by the D.C.-based EarthSpark International, has been supplying solar lanterns and clean cookstoves to the coastal village of Les Anglais since 2010. Now the group is on a mission to supply the entire town with energy by creating a pre-paid micro-grid using excess generation from a cellular phone tower. Photo by Lisa Friedman.

"This may not sound like a big deal for those of us in the United States, but when you think that not even in the national capital of Port-au-Prince do most people have electricity 24/7, it is quite an accomplishment," said Rachel McManus, project manager for EarthSpark International. Currently, she said, customers prepay for power on a model similar to the way residents currently pay for cellphone use.

The electricity doesn't power much -- a couple of light bulbs in each home and a cellphone charger. But, McManus said, for now that's what community members in extensive consultations said they want and need. "People didn't want a huge solar system to run a television and a laptop and a freezer. They wanted a light for their home," she said.

EarthSpark International is exploring ways to build on what it's doing in Les Anglais in other villages, and a handful of other nonprofits and private companies are doing other small-scale distributed solar work in the country. But experts say that ultimately Haiti needs to grapple with entrenched issues -- like a lack of political coordination, a near complete absence of data collection and rampant energy theft -- before any type of large-scale rural energy projects can become economically viable.

And, others like Konold agreed, the country needs an agency laser-focused on the electricity needs of the rural poor.

"It's so, so important because without it, I think the rural areas really run the risk of getting left behind," he said.

Meanwhile, residents of Les Anglais said they're not waiting for the government, preferring to put their faith in the foreign aid groups working in the community. Jean Noel Marc Paget, a high school math teacher in Les Anglais who also manages the clean energy store, said he believes the micro-grid is going to transform his

town. Already, he said, homes like his on the micro-grid have better and more reliable power than those of residents in the nearest big city of Les Cayes.

"It's going to be better for Les Anglais, because electricity is the light of the community," he said. "When you have electricity, so many things could be happening with your brain and your spirit. With electricity, you can do anything."

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