

The Hidrotambo hydroelectric dam threatens one of Ecuador's richest food-producing regions, without reducing Ecuador's reliance on fossil fuels.

Rachel Conrad is an environmental analyst, Fulbright Scholar, and activist. Since graduating from Pitzer College, she has worked to support farming communities in the Dulcepamba watershed in Ecuador in their struggle for water justice, and is a part of the team collecting data on the Dulcepampa water supply and demand. Learn more about the Dulcepamba Project at www.waterjusticedulcepamba.com.

shiny green billboard shouts its message down at passersby on the dirt road that snakes along the Dulcepampa River: "Clean energy for everyone! San Jose del Tambo hydroelectric Project." Campesinos from the nearby town of two hundred people have come to scoff at the billboard's deceiving message when they pass by.

On the banks of the Dulcepampa River and its tributaries in Ecuador's Bolívar province, dozens of communities have for generations made their living on the green western slopes of the Andes mountains. Using gravity-based irrigation systems, farmers grow corn, beans, peas, wheat, cane sugar, tree tomatoes, and blackberries. Downstream, where mixed crops are intermingled with the forest in a complex agro-ecosystem, farmers cultivate organic cacao, coffee, oranges, bananas, and market vegetables. It is a traditional mixed economy of small, local producers. Cattle, pigs, chickens, and ducks roam freely in the fields; fish from the river provide a further source of protein for rural families.



The bountiful waters that nourish the basin's communities have in recent years attracted nonlocals with different ideas about how the river ought to be used. A little over a decade ago, while in pursuit of business opportunities that might be supported by the burgeoning global market in carbon offsets, a little-known Ecuadoran energy research firm called the Corporation for Energy Research (CIE) formed a partnership with Canadian, Ecuadoran, and Spanish Investors to form Hidrotambo, S.A. The dam that is now under construction as a result of the partnership threatens the livelihoods of those who live in the Dulcepampa River basin.

With the purpose of generating clean energy that could serve the Ecuadoran grid and in turn generate saleable pollution credits to be sold in European carbon markets, Hidrotambo in 2003 quietly petitioned the Ecuadoran water authority (now called SENAGUA) for a license to harness the river's flow. The Dulcepampa would power what is called a "run of the river" dam, as opposed to "storage" dams that are known for their obstructive infrastructure. Absent the greenhouse gas

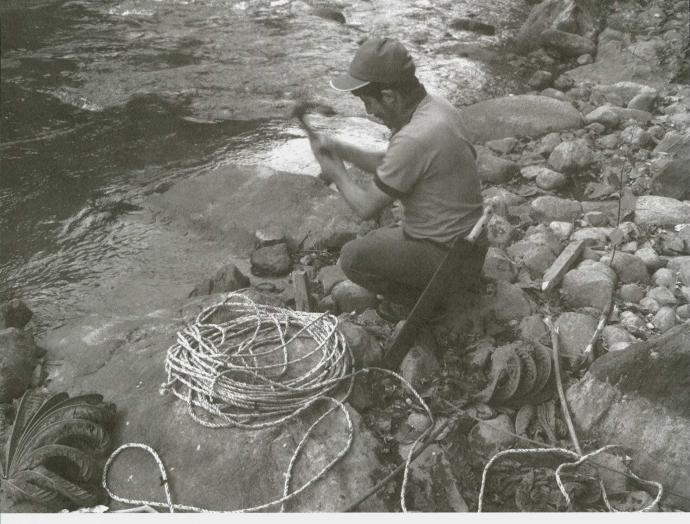
emitting reservoir associated with conventional storage dams, the project was touted as a low-impact project: waters conveyed through a narrow concrete chute would move turbine-generators arrayed at the bottom of a steep mountain slope, and then be returned to the river.

What no one bothered to explain to the 72 communities upstream of the dam was that with a stroke of the pen, Hidrotambo's water concessions vaporized the rights of thousands of local water users. Though Hidrotambo claimed otherwise when seeking the concession, a flow of the magnitude that Hidrotambo sought and obtained the rights to—6.50 cubic meters per second in the rainy season, and 1.96 in the dry season—would mean upstream farmers would have to cease diverting water to their crops, livestocks, and homesteads during certain parts of the dry season, just when they need water the most.

Hidrotambo embodies some of the worst unintended contradictions of global carbon markets. The dam was built in part to generate energy for sale to clients in Ecuador, and also to profit from the sale of so-called "carbon offsets," or pollution credits generated under the United Nations Clean Development Mechanism (CDM). This program, linked to carbon markets in the European Trading System, was designed pursuant to the 1997 Kyoto Accords, and was meant to assist polluters in reducing their greenhouse gas emissions while simultaneously enabling developing countries to leap-frog wealthier countries in the development of alternative energies and sustainable forests. In theory, it would do so by enabling antiquated industries in the world's wealthy countries to purchase pollution credits from clean energy and reforestation projects in the global South.

In the case of the Dulcepampa River, however, a project lauded by the United Nations as part of the solution to our global climate crisis instead threatens to eliminate small-scale, largely pesticide-free production in one of Ecuador's richest food-producing regions while failing to assist Ecuador in any meaningful way in severing its reliance on fossil fuels.

n a rush to turn water into gold, it appears that Hidrotambo underestimated the resistance it would encounter from communities facing displacement from the project. As the project moved through the licensing process with ease in 2003, community leaders



Farmer and community leader Don Manuel Trujillo helps the author, Rachel Conrad, set up a transect for a discharge measurement of the Salunguirí River, one of the Dulcepamba River's major tributaries. RACHEL CONRAD

charged that government agencies were failing to enforce citizens' rights to water as documented in the 1972 Water Law. The statute in place established priority of human consumption over all other claims to water, including hydropower generation. Under this law, communities pointed out, the government had legal basis to grant rights to Hidrotambo for only the quantity of water that reached the base of the watershed after all upstream users had satisfied their water needs. Therefore, they argued, Hidrotambo's concession had no legal basis.

Activists further complained that Hidrotambo's officials were criminally liable. The company, for example, produced documents certifying that it had completed the constitutionally required process of prior informed consultation with affected communities, when, according to an Ecuadoran human rights commission's report on the issue, no such consultation had occurred. In

addition, the company did not obtain lands legally at fair market value through an eminent domain process, but instead offered bribes to dozens of farmers to hand over their properties and/or to remain passive as bull-dozens stripped their lands, also according to the commission's report.

The region moved toward open conflict as many residents rejected bribes and began mobilizing against Hidrotambo. Community leaders from San Pablo de Amalí, the town located next to the dam site, called on farmers from the basin's 72 communities to support them in non-violent resistance. The company in return convinced its allies in the national government to dispatch the National Police and the Armed Forces on their behalf. By 2005, soldiers routinely harassed farmers opposing the dam, and leaders faced multiple forms of repression.

One example of state targeting of activists is Don

Manuel Trujillo, a community leader of San Pablo de Amalí, who now faces over four-dozen criminal charges for his actions opposing the dam project. He and another community activist, Manuela Pacheco, have lost thousands of dollars in legal fees and lost income for the time and resources spent traveling to the county seat, where they must register weekly as accused terrorists. They have received death threats, and their houses are crumbling from the dynamite explosions used to build the dam. Don Manuel told me that his family has fallen into deep poverty as a result, and some days they can only afford to eat the oranges and plantains that they grow.

In 2006, a ray of hope appeared for community activists fighting Hidrotambo. Conflict had escalated

in December of that year when 1,500 farmers from affected communities clashed with some 300 soldiers stationed near San Pablo de Amalí. This episode appeared to slow the project's implementation. Later, Hidrotambo's government-approved construction and operation permit seemed in jeopardy when then-presidential candidate Rafael Correa visited San Pablo de Amalí and spoke to assembled campesinos, emphasizing their decision-making role in the dam's construction:

"I just want to say to you all one final thing about this Hidrotambo issue. About the problem of water concessions....We believe, ladies and gentlemen, that those who should approve these kinds of projects are you, the affected communities. Because it is you who have the right to approve a hydroelectric plant, on your land, affecting your environment. If you say no to this project, the project will not be built!"

Once elected, however, President Correa failed to keep his campaign promise to the communities in the Dulcepamba watershed. He directed no review of the concession or revision of the hydropower permits. Rather, despite his public discourse on environmental conservation, including a new constitution that enshrined for the first time in history a human right to water, the rights of nature, and communal rights to Sumak Kawsay, or The Good Way of Living, President Correa has become an avid proponent of hydroelectric dams as well as mining, oil, and gas exports.

Many basin residents believed for some time that the 2008 constitutional guarantees, drafted five years after the dam was first licensed, would stop the project. It seems, however, that company officials at Hidrotambo, who had greater proximity to government officials, were confident that the Constitutional guarantees would be trumped by the government's prioritization of hydroelectric development. The project was still very much in play. In a slightly new tack, Hidrotambo and its allies in government began to claim that farmers denouncing the project were mere opportunists who lacked legal paper titles to river flows—when, in fact, Ecuador's constitutional clause on the "human right to water" should have prevented Hidrotambo from adjudicating water that rightfully belongs to farmers.

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n the face of heavy repression and criminalization of protest, local activists realized that they would have to find a new mode of resistance. They began to unite on an unlikely issue: the technical data that was used to establish Hidrotambo's water concession at the outset. In clear violation of professional standards and the law, neither the SENAGUA, nor the Ministry of the Environment, nor Hidrotambo had determined how much water basin communities were using, nor had they ever determined how much water actually flows through the river and its tributaries. In fact, Hidrotambo's own Environmental Impact Study (EIS) indicated that its technicians traveled to the river above the dam site on only one day, in the wet season. and they did not even carry out a discharge measurement. In the document, authors commented that it was "not possible to realize the discharge calculation for the Dulcepamba River in the site where the barrier will be constructed, nor in any location upriver or downriver, due to the following difficulties: a torrential

flow due to the river's approximately 6% gradient, [the river's] depth, and inaccessibility to the site, etc." The discharge was, therefore, only "visually estimated,"

with little to no actual data collected. The estimated discharge on the day of inspection was "between 16 and/or 18 cubic meters per second, more or less."

This astounding pseudo science became the basis for a new round of opposition. In 2013, distrusting the paltry hydrological data presented by Hidrotambo, basin communities vowed to carry out their own studies of river flows and impacts of the dam.

Since August of 2013, a study team composed of local farmers, an interdisciplinary team from the University of Maryland (UMD), and a stream of temporary volunteers have begun to document the river's seasonal flows and its user demands. To understand the Dulcepampa water supply, the team has made periodic

volumetric flow rate measurements, and continues to monitor river levels on a weekly basis. Preliminary results from their hydrological analysis indicate that the

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EIS overestimated water availability in the watershed, making it appear that there was ample water for all of the Dulcepampa's water users. But in reality, it appears that Hidrotambo will have to block the water access of upstream users in times of water scarcity, if it is to receive its conceded amount.

## Interview with Anti-Extractivist Mayor Ramiro Trujillo

RACHEL CONRAD

S eñor Ramiro Trujillo is the current mayor of Chillanes, the county that encompasses the privatized Dulcepamba watershed in Ecuador. During his mayorship, he has consistently supported the affected communities. He has been both criminalized and physically threatened for not buying into the ruling party Alianza PAIS's extractivist politics. His story sheds light on the way that the Ecuadoran federal government's prioritization of hydroelectric production has swayed local politics.

RC: What have been the main transgressions committed by Hidrotambo against the people of your county?

RT: There have been many continued human rights violations against the underprivileged communities of the Dulcepamba watershed. The first violation is the lack of prior informed consultation surrounding the project, which is required by our country's Constitution. The National Advisory Board on Electricity (CONELEC) requires a Citizen Participation Record from each company that wishes to build a hydroelectric dam, which should contain the signatures of the individuals surrounding the project site, affirming their support of the project. Hidrotambo instead turned in a paper that contains the names and signatures of people who were interested in being employed by the company to work on the dam's construction.

They also invaded land without legally expropriating it, and physically and psychologically injured people from the region. They shot them and hit them, and sent them to jail for "terrorism" and "sabotage" even though all they had done was defend the right to water and the rights of *Pachamama*.

RC: Can you describe the actions that have been taken against you for defending the people of your county?

RT: The owners of Hidrotambo presented a legal case against me for "terrorism" and "sabotage." Political and economic pressures from Hidrotambo and the national government swayed six county councilors to make up a legal case

To understand local water demand, the team has calculated crop water needs throughout the affected watershed. Four Internet-enabled weather stations have been located strategically to capture weather data for the four principal microclimates of the watershed. Using the FAO Penman-Monteith approach, the team uses this weather station data to estimate the total water needs of the 10 most common irrigated crops in the watershed, on a weekly basis, for all 52 weeks of the year. The team is scaling up the data to understand water needs for the total acreage of crops in the watershed, using crop distribution maps generated by aerial and satellite imagery and handheld GPS equipment.

With data that outpaces the government's, communities have enlisted two dedicated local attorneys to apply for their water rights en masse. This challenge to the government's lax licensing procedure will be watched carefully by communities who face similar water grabs in Ecuador and beyond. Farmers plan to use the study to present a case against the Hidrotambo dam in Ecuadoran courts, to the Inter-American Commission

on Human Rights, and to the Special Rapporteur on the Right to Water for the United Nations. "If God is willing," said Doña Manuela, "someone will listen to us, and those damn hidros will get what's coming to them."

hile presented to investors in global carbon markets as a clean, green solution to energy needs and development, the hydroelectric industry in Ecuador and around the world poses threats to thousands of rural communities, and to national food sovereignty. Energy production from hydroelectric dams such as Hidrotambo, meanwhile, principally benefits large industries and overseas investors. If projects like the San José del Tambo are to be avoided in the future throughout Ecuador and Latin America, the struggle for prior rights of communities, and for the use of sound data in the granting of concessions, must be a routine part of water governance.

against me, with which they threw me out of office in an unconstitutional, disrespectful, and violent way. It was brutal. Responding to a request from the owners of Hidrotambo, the councilors contracted hitmen who came to my home. Luckily, the police detained them, and brought them to jail. We have photos and everything.

RC: What kind of pressure did you receive from Alianza PAIS, president Correa's political party, to support the Hidrotambo project?

RT: When Engineer Jorge Glas was running for vice president of Ecuador, they invited me to meet him. When I met him, Señor Glas said, "Ah! You are the mayor of Chillanes! I would like to see you wearing the shirt of Hidrotambo."

It felt like a dare. "I replied to him: it depends, Señor Jorgito. Only if your government listens to our needs."
Right after that is when I was kicked out of office.

RC: What are your concerns about future access to water for the people of the Dulcepamba watershed?

RT: Hidrotambo could control access to water for hundreds and hundreds of years, because their water concessions have virtually no expiration date. We worry that when Hidrotambo's dam finally starts to work, they will use force, threats, and destructive mechanisms in order to block the people from using water during the seven months of the year when water is scarce.

When we don't have access to water, our lands will not produce

anymore. Our brothers and sisters will have to migrate to cities, which will cause internal social collapse. And if we are forced to go to cities, what will we do? We are not prepared to enter into an urban culture and economy.

RC: Why do you think that Hidrotambo chose to build their project in a watershed that contains such a small quantity of water?

RT: San Pablo de Amali and Chillanes are considered to be very underprivileged communities. They think that we do not understand a lot of things and cannot defend ourselves. This is not true. We have seen that there is bountiful knowledge, and bravery here, to defend the right to water. We are always united.

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