

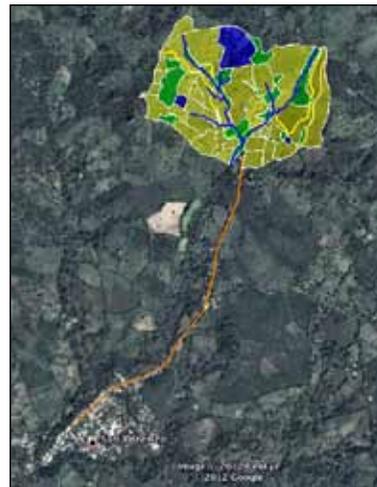


El Porvenir's mission is to improve the standard of living of poor people in Nicaragua through sustainable self-help water, sanitation, and reforestation projects.

Looking Upstream: Watershed Restoration



A seventy year old Nicaraguan man who has lived his entire life in Las Montañas remembers when the tiny stream cutting through the village was more of a river. He remembers when the river didn't dry up like it does now when there is no rain (see photo on left). He remembers when the hillsides were covered in trees.



Las Montañas is a small community north of the town of San Lorenzo, where El Porvenir has partnered with villagers since 2006. The water the people of San Lorenzo drink comes from the watershed around Las Montañas. The light green area in the photo above right shows the Las Montañas watershed. The orange line is the stream as it flows into the town of San Lorenzo in the bottom left.



The deforestation in the watershed is severe. The people living there cut down trees to make room for grazing cattle and to grow beans and vegetables. As cropland deteriorates due to slash and burn agriculture, they cut down more trees for cropland. This destructive cycle has led to uncontrolled rainwater runoff, taking topsoil with it and leaving the ground unable to absorb rainwater. As topsoil erodes, the people cut down trees higher up on the

steep slopes for farming plots. In the photo above, you can see how the plots reach all the way to the top of the hillside (the top edge of the watershed). Farming on steep slopes significantly damages the watershed.

Scrub bushes now cover the hillsides, not trees. The trees that remain cannot root well in poor soil; the photo to the right shows a healthy tree that fell over as its roots became more and more exposed. Without trees, infiltration of rainwater is low and soil erosion is high.

See next page for El Porvenir's solution.



Restoring Streamflow; Improving Agricultural Production

Continued from page 1. El Porvenir reforesters are working with the people of Las Montañitas to control run off, improve soil retention, and improve water infiltration in order to prevent erosion and restore cropland and stream flow level. This improves the livelihoods of not only all the people who live in Las Montañitas, but also those of the townspeople of San Lorenzo who drink the water from this watershed.



Board members and brothers-in-law Dick Whitmore (left side of the photo) and Fred Cooper have been training El Porvenir reforesters in watershed restoration. Dick is a professional forester, and Fred is an environmental engineer. With input from El Porvenir staff and the people of Las Montañitas, they have carefully crafted a plan to reverse the decline of the watershed.

Twenty-six contour berms have already been constructed throughout the watershed on previously fertile cropland. Berms hold water, organic matter, and soil, forcing water to pool and be absorbed into the ground. They also work well as all-weather trails. In the hills of Nicaragua, there are no constructed trails, just areas where people typically walk. This contributes to the erosion problem. Constructing all-weather trails is an important part of this project.

In the photo to the right, Nicaraguans and volunteers from Washington work together to construct a contour berm. The photo below right shows completed berms. Numerous bridges and check and diversion dams are slated to be built. The project also includes animal enclosures, irrigation systems, composting infrastructure, biodigesters, and sanitation systems.

The end goals are to

1. Ensure generations of safe drinking water for the people living in the watershed and the people in the town of San Lorenzo
2. Enable community members to produce more food on smaller pieces of cropland lower in the valley
3. Improve the lives, health, and economy of those living in the watershed.

Change is happening: as El Porvenir reforesters participate in workshops on restoration and agricultural practices, the Nicaraguans who live there have started coming to the workshops to learn, too. One Nicaraguan farmer said, "We know we aren't doing it right, but we don't know any other way. We want to learn."



Dreams Do Come True

You can ensure lifetimes of clean water for Nicaraguans with advance planning. Designating a portion of your estate, retirement account, or life insurance policy to El Porvenir means your wish to support water, sanitation, and reforestation projects will be fulfilled in the future. You will make dreams come true for Nicaraguans who want clean water and latrines.

“When we decided to name several organizations as beneficiaries of our will, El Porvenir was one of the first to be put on our list. El Porvenir makes it possible for us to help the poor in Nicaragua better their lives, in a way we could never do on our own. We have great confidence in the work El Porvenir does and are happy we can contribute to its financial future in this way. It feels like a way for us to ‘keep on living’!” —Bob and Nancy Baglan, St. Louis, Missouri



Most Nicaraguan children love to go to school—carrying water and looking for firewood keep them out of school. Your estate gift provides health as well as educational and economic opportunities for rural Nicaraguans.

*“Building and using the new latrines, well, and washing stations has given us dignity, especially for us women...I have water nearby, I have a pretty latrine, and I can do my daily chores easily. **It’s a dream come true.**”*—Ana Rosa Delgadillo, El Pavon, Nicaragua

From the Board President: Sustainability

Having been an environmental engineer for forty years, I believe there are three global issues that corporations, governments, and non-profits need to address with their products and programs: water availability, food security, and sustainability.

On my first visit to Nicaragua 15 years ago, I noticed that El Porvenir went beyond building potable water and improved sanitation projects. El Porvenir establishes partnerships with community members that empower them to meet their own needs. El Porvenir recognized what was occurring with the environment and began several sustainability initiatives. Rural farmers were encouraged to set aside small plots in their fields to grow trees for firewood and fencing using seedlings grown in tree nurseries established by the farmers. School children were learning about health and hygiene as well as the importance of reforestation.

Over the years, other sustainability practices have been integrated into El Porvenir’s project work. For a small nonprofit, El Porvenir has a wide range of sustainability practices, including:

- Local communities build their own projects and learn maintenance techniques
- Communities and municipalities pay a percentage of project costs
- Local committees maintain water facilities, collect tariffs for future repairs, and register the committee with the municipality
- Trained public health promoters in small communities (“train the trainer”)
- Watershed management practices
- Water rights ensured for community water systems

Our newest sustainability initiative, watershed management, addresses the total hydrologic system and the factors that degrade both the quantity and quality of water supply sources. El Porvenir has begun work on a watershed management project to restore perennial stream flow, encourage groundwater recharge, improve agricultural practices, and prevent soil erosion. The land owners and the people of the communities have embraced this project that will have a long lasting positive impact in the rural areas of Nicaragua.

—Fred Cooper, PhD, P.E.

President, El Porvenir Board of Directors

Join a Watershed Restoration Discussion

We invite you to join a discussion with El Porvenir Executive Director, Rob Bell, and Board member, Dick Whitmore, by phone and/or internet to discuss watershed restoration in Nicaragua: looking upstream for water quality, water quantity, and community stability.

Rob and Dick will discuss the need for watershed restoration that improves agricultural methods, sanitation systems, and soil absorption as well as includes extensive reforestation. Photographs and other images will be available at the meeting link below if you would like to access the meeting via internet. There will be time for discussion at the end. We strongly encourage you to learn more about our new initiative by reading pages 1-2 of this newsletter and calling in!



Board member Dick Whitmore and El Porvenir Reforester Erick Velasquez teach a Nicaraguan man how to prune trees to encourage tree growth. Learn more on April 22nd!

Watershed Restoration: Looking Upstream

Monday, April 22, 1:30-2 PM Eastern time

Dial-in number: 559-546-1200

Meeting ID: 421-469-445

Meeting link (optional): <http://www.FreeScreenSharing.com/meetings/421-469-445>

***Please RSVP to Jenn Evon at info@elporvenir.org or 303-861-1499 as the number of callers is limited.**

Clean Water for Nicaragua



WE'VE MOVED!



**El Porvenir
10955 Westmoor Dr, Ste 400
Westminster, CO 80021**

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