

SOSTENICA Promotes Agro-Ecology with Micro-Finance

By Rachel Lindsay

[Rachel Lindsay is a 2009 Fulbright Scholar studying the promotion of organic agriculture through the intersection of financial and technical resources available to small farmers in Western Nicaragua.]

The Center for the Promotion of Local Development and Poverty Eradication (CEPRODEL) office in Nagarote is easy to spot. Centrally located and bright orange, the office prominently displays the CEPRODEL logo: a silhouetted group of people under the shade of a jenízero, a native tree known for its impressive heights and ample shade. Some may find the image of a caring microfinance institution allowing its clients to relax in the shade of financial security to be unrealistic, if not romantic, but a current collaborative project between CEPRODEL and the Sustainable Development Fund of Nicaragua (SOSTENICA) is quite literally transforming their logo into a reality.



Madonio Rolando Carrion Avilez, from the Comarca la Candelaria, demonstrating how to make a compost pile. All of the clients participating manage livestock and have animal manure, which is a valuable organic fertilizer when properly handled and readily available.

When the Nobel Peace Prize was awarded to the Grameen Bank in Bangladesh microfinance institutions entered the international spotlight and the movement has blossomed world wide. A 2008 report by the Central American Network of Microfinance Institutions (REDCAMIF) reports that Nicaragua is currently home to 23 registered microfinance institutions, more than any other country in Central America. Between 2004 and 2008 the size of the portfolio managed by Nicaraguan microfinance institutions tripled, dramatically increasing the number of families with access to credit - a vital resource for those struggling to pull themselves out of poverty. But while microfinance continues to proclaim commitment to improving the financial situation of the poorest citizens, it is rarely also committed to preserving the natural resources the poor rely on – until now. The collaborative work of SOSTENICA and CEPRODEL integrate environmental and educational projects with financial services, creating a more holistic and long-term approach to the alleviation of poverty.

Since its inception in 2001, SOSTENICA has provided US individuals and organizations with the opportunity to participate in the growth of microfinance in Nicaragua. Partnered with CERPDOEL, SOSTENICA currently has a portfolio of over \$2,000,000 on loan in the department of León. Motivated by the vision of microfinance playing an active role in creating an environmentally secure future, SOSTENICA and CEPRODEL launched the Sustainable Rural Development Project. In addition to encouraging sustainable farm management, the project also strengthens the greater community by bringing together numerous NGOs and educational institutions. The most recent of these undertakings is a riparian (river bank) reforestation project in the municipality of Nagarote.

In 2008, several of CEPRODEL's office managers and top administrators began discussing the relevance of water preservation to their current work while attending an agro-ecology training in Mexico. They asked themselves what value a micro-loan has to a farmer (for purchasing more cattle, for example) if the river upon which they depend dries up before the next rainy season. If the natural resources available to small farmers today disappear, a secure future is impossible – regardless of how much credit is available. The project that emerged from that conversation strives to preserve the sources of fresh water, augment species diversity on individual farms, and create a long-term financial development plan for each farm by offering "credit" in the form of trees to current CEPRODEL clients.

A Vulnerable Water Supply

The municipality of Nagarote stretches from Lake Xolotlan in the northeast to the Pacific Ocean in the southwest. It was chosen for the pilot project in part because of the hundreds of small streams in the region which empty into both bodies of water. The main agricultural crops in the municipality are conventional sugarcane and peanuts. The runoff from the nitrogen heavy fertilizers and agrochemicals used on these crops pollutes the stream waters used by small farmers to water cattle. Nagarote has the third largest cattle market in the department of León, with over 21,000 head of cattle in the 600 square kilometer municipality.

Export crops and cattle farming constantly require more cleared land, and Nagarote's municipal environmental department has recorded an average of over 1,000 fires a year intended to clear land and hunt iguana. After forest fires and agriculture, the most commonly cited cause of deforestation in Nicaragua is harvesting firewood for fuel. Firewood and charcoal are staple cooking fuels and important sources of income for many families in the 35 rural communities of Nagarote. Deforestation associated with these activities contributes to continual soil erosion and the drying up of streams and rivers.

Reforestation and conversion to organic and less chemically intensive farming are two physical changes that can protect and enhance waterways. However, the biggest challenge in implementing these changes is influencing the attitudes of the people who use them. Although many farmers understand the value of their natural resources, most do not incorporate those values into their management practices due to a lack of available technical information and consistent encouragement. This project supplements rural credit, which is most often used in this region to purchase cattle, with technical and educational material meant to inspire a broader change in the agricultural practices of CEPRODEL clients.

Changing Landscapes and Mentalities

Twenty-four CEPRODEL clients in Nagarote were chosen to participate in the pilot project. Each client's land has at least one source of water, and 30% of the participants sell firewood or produce charcoal for income. Each participant was offered a "credit" of up to 980 trees, including seven different varieties of hardwood trees (jenízero included of course!), six varieties of fruit trees, and two varieties of plantains. The clients agree to pay back the initial quantity of seedlings over two years time, allowing the project to be brought to other CEPRODEL clients. During the course of the loan CEPRODEL will offer a series of agro-workshops, imparting the skills needed to seed hardwood and fruit trees, harvest plantain corms, and produce organic fertilizers and insecticides – all skills which alone could result in additional income and business opportunities.

The varieties of trees were chosen for their potential to increase each farm's crop diversity and earnings potential. Planted along the river banks, the jenízero [*Enterolobium cyclocarpum*] trees will prevent erosion with their extensive root systems and protect the water from evaporation with their shade. As all but one of the clients are cattle farmers, leguminous species were chosen for the role they play in silvopasture systems. In silvopasture, the integration of nitrogen fixing trees into existing pastures improves soil fertility, while the leaves and pods from some trees provide cattle forage. The result is improved nutrition and higher milk yields during the dry season. The hardwood species also provide future sources of fuel, easing the pressure that firewood harvesting puts on existing forests. The plantains and fruit trees offer the clients sustainable short and long term income while increasing the biodiversity of farms and enriching family diets.



The families of participants such as Julio Cesar Torres Trujillo were encouraged to participate in the workshops and the tree planting. UNAN León agroecology student Orlando Tellez, on the far right, is one of the interns who stayed with the family for several weeks to lead workshops and help establish trees with neighboring clients.

Clients applied themes from the agro-workshops to their specific terrains to incorporate the trees into comprehensive designs of their farms. For farmer Julio Cesar Torres Trujillo, that meant rearranging his corrals and pastures. The corral closest to the river, which in May was a barren slope leading straight down the riverbank, is now crisscrossed with small citrus saplings and green with sprouting undergrowth. His plantains will be planted along the contours of the riverbank, preventing further soil erosion by heavy rains that had previously carried the manure from the corral directly into the river. He has moved the corral to his son's nearby farm and will, in return, share the fruit harvest with him. Fresh new verdant shoots have doubled the size of the saplings in the last six weeks, which Trujillo attributes to good soil fertility from years of manure build up. "The plantains closer to the river will catch all that goodness, too" he predicted, anticipating a bumper plantain harvest in eight months. Adopting soil conservation techniques and involving a younger generation both promote prospects for a more sustainable long-term economic future for the family.

National financial institutions such as CEPRODEL work primarily with clients on an individual basis. In contrast, the workshops held at the beginning of June encouraged cooperation and community building among participants. Clients

discussed the importance of natural water resources, soil conservation, and organic farm management. They worked together in practical assignments such as making compost piles and constructing terraces to prevent soil erosion. Miguel Angel Calderón, the director of the Nagarote CEPRODEL office, was particularly impressed with how the farmers shared rides to the trainings on their oxcarts, and collectively organized the transport of trees and fertilizers to each farm. Since the group trainings, the clients have maintained contact with each other and continue to play active roles in the organization of the project. This created community will enable an ongoing dialogue about responsible sustainable farming practices.

Engaging the Greater Community

The reforestation project is supported by several local organizations. The hardwood trees were grown by the participants of an environmental youth program run by the Norwalk/Nagarote Sister City Project (N/NSCP). N/NSCP also offered their beautiful nursery and organic garden as a workshop site, and the municipality donated the use of the former town train station for presentations. Three students from the Department of Agro-ecology at the National Autonomous University (UNAN) in León interned for the first six weeks of the project. With the support of several faculty members from the same department the students ran three-day workshops in the communities and followed up with technical support at each farm. The quality of the workshops was enhanced by these collaborations, and the CEPRODEL clients continue to have access to the diagnostic laboratories and technical resources provided by the municipality and UNAN León.



Lack of access to credit is just one of the reasons that small landowners sell and migrate to urban areas or other countries. The disintegration of natural resources exacerbates the difficulties of making a living off the land. Simply by offering credit to the rural poor, microfinance works to keep land in the hands of small farmers instead of large agro-industrial companies, which are more likely to engage in long term environmentally damaging practices. This project expands that role of microfinance in rural sustainable development, directly promoting the preservation of natural resources and ecologically sound farm management. Through personal contact with individual borrowers, microfinance institutions have already created the necessary infrastructure to offer these additional services. In Nagarote, Director Calderón reflects on the ways in which microfinance institutions should deepen their impact in development beyond simply lending money. “We are walking a new path of education and credit by

accompanying our clients more closely in the development of their businesses. Most financial institutions see social and environmental projects as not profitable, and shy away from them.”

In some cases, however, investing in social and environmental projects may indeed prove profitable. The CEPRODEL Departmental Director of León, Franklin Fletes, cites CEPRODEL’s commitment to social projects as one reason that this microfinance institution has avoided being seriously affected by the current “No Pago” Movement. The movement, led by indebted agricultural clients of microfinance institutions, accuses the institutions of unjust interest rates and fees, and demands debt cancellation on a national level. Fletes explains, “First and foremost, the movement attacks institutions that charge higher rates of interest and operate solely as banks. CEPRODEL has formed alliances with our clients through the social projects that we offer along with credit, and by always being open to negotiate with clients on an individual basis. Projects like the reforestation initiative in Nagarote show that CEPRODEL is not just a financial institution but also a social institution.”

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The reforestation and water preservation project in Nagarote is just one possibility of combining financial credit with tailored educational and technical resources. SOSTENICA and CEPRODEL have been also recognized recently for working extensively with housing cooperatives, and are currently working on formulating environmental conservation and food security projects. As in Nagarote, these projects draw together various organizations working within a community, increasing clients' access to a variety of resources. In a credit market that some suggest is nearing saturation, these focused projects offer examples of how microfinance institutions can stay on the cutting edge and strengthen their commitment to poverty alleviation and sustainable socioeconomic development. For more information or to invest in rural development in Nicaragua, visit www.sostenica.org or send an e-mail to info@sostenica.org.