



SOSTENICA Update

Sustainable Development Fund of Nicaragua

Fall 2011

“Have you ever built a house with your own hands out of the materials that Nature left lying around? Everyone should have that experience once. It is the most satisfying experience I know... It has made us the tightest little society.” Wallace Stegner, from *Angle of Repose*

Stegner’s protagonist points to the satisfaction gained by building one’s own home. When done with other people, it can forge the strongest of bonds, the most enduring of communities. While few Americans have the opportunity to build their own homes, in Nicaragua many people live in structures built with “materials...left lying around.” Unfortunately, many of these homes would best be described as “shacks” and the found materials tend to be of cardboard, plastic and tin rather than of brick and timber.

As part of our tenth anniversary celebration, SosteNica has thrown its hat into the housing and community building ring. Targeting low income families, SosteNica has pledged to raise \$360,000 over the coming months. Those funds will support 30 Nicaraguan families who have come together to create a housing cooperative of 30 individual units, as well as a single communal structure. To build each house requires \$15,000. 10% of that will come as a grant from the Nicaraguan government (\$1,500 per family). 3.3% comes as a down payment by each family (\$500). The families agree to devote 20 hours per week until the project is completed, building the homes and the communal structure (services valued at \$1,000). That leaves \$12,000 per home for SosteNica to finance. The families then pay into the cooperative a monthly amount, ranging from \$80 to \$175, depending on the financial abilities of the family, over ten years. At the end of the ten years, the families in the coop own their own homes.

Helping to alleviate the shortage of adequate housing is mission enough. But SosteNica has a second, equally important goal in mind. Ours will be the first housing cooperative in Nicaragua to integrate ecological technologies to lighten their ecological foot print. First, we plan to build these homes with “eco-blocks” – made from site materials, using a hydraulic press operated by the families in the cooperative. This reduces the need for cement and steel, two highly energy intensive and polluting building materials. Next, the homes will be fitted out with composting toilets, reducing the need for expensive septic fields and recycling needed nutrients, and cutting out ground water pollution. In addition, homes will capture and filter rain water during the 6-month rainy season. Because well water and public water supplies can be unreliable, cisterns can help families achieve water independence. That very same captured water, once used for washing clothes or dishes, will be filtered through a plant based grey-water treatment system on premises. Every home will be planted with edible landscaping, and their roofs will proudly support photo voltaic panels which will guarantee lighting even when the grid is down. The homes will be cooler than their cinderblock kin thanks to the thermal mass of the earthen block. And they will be beautiful. The kitchens will be equipped with fuel efficient wood burning stoves that get the smoke safely out of the house, while using 33% less wood than the traditional cook stove.

If this vision of building a sustainable community appeals to you, consider funding a house or two. Every \$12,000 10-year investment in SosteNica will get us one house closer to reaching our goal. Investors will receive 3% annual interest, and will have the great satisfaction of knowing that their money is housing a hard working Nicaraguan family in a healthy and sustainable way. Alan Wright, President

Impact Study: Nagarote Reforestation Project

This project began two years ago with the arrival in Nicaragua of SosteNica's current sustainable development coordinator, Rachel Lindsay, who together with CEPRODEL agroecologist, Vernon Barrios, and livestock expert, Luis Rivas, interviewed dozens of families to participate in a reforestation and water conservation project that included an innovative in-kind credit component (clients pay back the credit either with additional species of the same quality and quantity as were provided to them or with monetary repayment at 0% interest). With my arrival this summer as a SosteNica Intern to complete the team, we began evaluating the social, economic and environmental impact of the project.

Based upon priorities, which were submitted separately by SosteNica and CEPRODEL, our team developed an evaluation interview questionnaire containing 144 inquiries that could be answered in twenty to ninety minutes, depending on each interviewee's level of detail and participation. We then met with the program participants to collect data about their successes, failures, hopes, fears and views of the program. Twenty-two of the twenty-four families from the first year of the project agreed to be interviewed. This high level of participation was a tribute to my colleagues' enthusiasm and dedication to the project, and it contributed to the success of the impact study.



We then interpreted the data and prepared a report of our findings (in Spanish), which we presented to CEPRODEL while I was still in Nicaragua. I also prepared a report (in English), which I presented to SosteNica staff after my return to the United States. A summary of our findings are as follows:

Socioeconomic impact: Most of the participants have not repaid their loans in full by the due date, and the direct economic effects of the project are small -- only four participants are selling the fruits of their harvest. But the indirect effects are large -- half of the participants are reaping the harvest this year and three participants are expecting additional harvest next year. This means households are spending less to purchase fruit this year and perhaps next.

Environmental impact: Use of organic insecticides and fertilizer skyrocketed, increasing by 325 percent and 800 percent, respectively, and over seventy percent of participants installed at least one type of soil conservation method during the program. With the help of the project team, participants constructed dikes in ditches and streams to retain water or to slow the speed of flooding and erosion, together with "level curves" or terraces to protect topsoil from water erosion, thereby protecting a total of 17.9 acres. Although the mortality rate among some trees was high, continued program assistance and training could continue to have a very positive effect on water source preservation at the farms.



Technical impact: Workshops were offered in thirteen different topics, with half of the participants attending at least seventy-five percent of them. In 2010 they were invited to attend workshops held at a central location in Nagarote, but in 2011, the project team found that better attendance resulted when participants were invited to attend workshops held at one of the participating farms. In addition, the individual attention offered by Vernon Barrios' numerous regular visits provided the reinforcement necessary to enable participants to properly apply on their farms what they had learned in the group trainings.



Thanks to SosteNica, to CEPRODEL, and to our entire team for their hearty welcome, unreserved support, and complete appreciation of our work, all of which created the opportunity to uncover and to share the real results of the program. *Meghan Mahoney, Master of Arts in Law and Diplomacy Candidate 2012, The Fletcher School, Tufts University*

