



Potential Projects for CEPAD Delegations in Nicaragua

Water Filters

Reason Needed: Most of rural Nicaragua draws its water from surface, or near surface, water sources such as shallow hand-dug wells, streams, or ponds. These sources are almost always contaminated by human and/or animal feces and agricultural run-off. Some areas have a so-called “potable water” system that draws from a mountain spring. The quality of this water depends on how close to the actual spring the water is captured. If the water flows even a few hundred feet above ground before is diverted into the system, it is probably contaminated from the same kind of sources.

Solutions and Approximate Costs: There are many commercially available water filters and many groups in the US and Canada that specialize in water issues. Because of the very scattered rural areas where CEPAD works, CEPAD has favored individual in-home water filters over larger systems designed to serve a larger community.

In the interest of long-term self-development, CEPAD also favors filter systems that involve the local community recipients in the construction and management of their own system, as opposed to simply buying a commercially made filter and giving it to people. Building on the work of other organizations, a CEPAD staff person has designed a water filter which can be assembled on-site at a cost of \$40-\$50 per unit, depending on how many are being built. This filter has been tested by MINSA (the Nicaraguan Ministry of Health) and meets their standards for water quality. These filters are capable of producing at least 20-30 liters of clean water per day.

Work Needed from a Group: This filter is assembled with sand, gravel and activated charcoal inside a PVC pipe inside a plastic container (usually a garbage can). Visiting groups will cut, drill, sand and assemble the PVC and the container. Local people will be responsible for thoroughly washing the various-sized aggregates and drying them for several days in the sun. The actual assembly is quite rapid and done onsite. In areas where houses are close together, it would be easily possible for a three-person team to assemble 18-20 filters per day. In areas where the houses are more scattered, the total would be much lower.

Planning Timeline: It would be best to start planning at least six months in advance to allow CEPAD to select the community or communities, the recipient families, and do the education needed on the care and maintenance of the filters. It would also be very helpful to know six months in advance how much money will be available so that CEPAD can know how many filters to plan since a project like this is not covered in CEPAD's annual budgets.

Family Gardens

Reasons Needed: Due to living in severe poverty, many families survive on a diet high in carbohydrates and vegetables. This lack of a healthy diet can also greatly limit children and their growth as well as their well-being throughout their lives. This project is especially aimed at increasing healthy foods for children under 5 years of age.

Many families rely on the food that they grow themselves which often includes foods high in carbohydrates such as rice, beans, corn and sorghum. Any fruits and vegetables have to be purchased and high levels of poverty often make purchasing these foods nearly impossible.

Solutions and Approximate Costs: Five women per village are chosen to participate in the program by the leaders in their village.

Each year, women receive three, two-day trainings on topics that begin with the basics of establishing, planting and maintaining a healthy fruit and vegetable garden as well as the nutritional value of the fruits and vegetables they are planting and preparation of their harvest for family meals. Trainings also cover topics of food security, seed selection, effects of climate change on crops, gender and community development, sustaining family food production and working together in alliances to ensure success.

Each participant also receives a packet of seeds and tools such as a shovel, a pickax and a roll of wire to create a fence around their garden. The fruit and vegetables cultivated include squash, cucumber, melon, lettuce, cabbage, tomato, peppers, radish, onion, beets, watermelon, quequisque and papaya.

The cost for seeds is \$50/participant and 3 yearly trainings cost \$250/participant. Tools such as pickaxes usually cost about \$15 each. Please check with your coordinator to see if tools will be needed for your group.

How You Can Help: Combined with your financial support, you can help women prepare the ground and establish the plants and seedlings in their home garden. Your gift of support will also assist in purchasing the seeds for many women who will greatly benefit from their garden. Groups can also participate in creating a fence and ensuring the plants are safe from animals that would like to eat them.

If the garden has already been established, you can help to repair any fencing that has fallen, weed the plants as needed or harvest fruits and vegetables together with the family. Be prepared to share any recipes you might have and to try some delicious, home grown produce.

Community Plan Nurseries

Reason Needed: For years, many Nicaraguan small-scale farmers have depended on crops of corn and beans as their staple foods and as a source of family income. While this may make a reasonable protein combination, it is seriously lacking in many of the vitamins and minerals that a more balanced diet of fruits and vegetables provides. However, fruit is often not available locally and almost all green vegetables are quite expensive and most families don't know how to grow and prepare them. Even the plants needed to begin to grow a small garden are quite expensive. Furthermore, the effects of climate change are severe in much of Nicaragua. The lack of rain during what was normally the rainy season has caused a lot of loss among people who did have gardens. Local community nurseries are needed to help replace those plants.

Solutions and Approximate Costs: CEPAD is currently working toward the goal of establishing a community nursery in each of the 42 communities where it is working. The cost for materials and plants for each community nursery is approximately \$200.

Work Needed from a Group: Establishing a nursery requires leveling a flat place near a water source, usually in a low-lying area near a spring or creek. The dirt is screened to get out all rock and roots, then often mixed with organic compost. Then this dirt is used to fill hundreds of small plastic bags, into which are inserted the seeds or plants, a total of almost 1,000 bags per nursery.

Planning Timeline: This is an ongoing project of CEPAD, already being done in some communities. It would be possible for a group to decide to help with this with much less lead time than some other projects. The important issue would be for CEPAD to know the financing possibilities as far in advance as possible.

Micro-Reservoirs

Reasons Needed: Global climate change is having serious effects in Nicaragua. It is no longer possible to depend on a rainy season in which 2 or 3 harvests are possible. The traditional agriculture of six months of regular rain simply isn't happening any more. Each year, rains has become less dependable than normal, and much of rural Nicaragua has been in serious drought for several years. This obviously has become a serious issue of food security.

Solution and Approximate Costs: This is a world-wide climate issue and we can't talk about a solutions on a scale as small as 40-50 communities in Nicaragua. One possible method of remediation of the problem is in the construction of very small micro-reservoirs in the communities most effected by the drought. These small reservoirs do not hold enough water to last through the traditional dry season, but they will hold whatever small amounts of water are available to get through the dry portions in a regular rainy season.

Costs of these vary according to the terrain but average about \$150/reservoir. In some zones, groups may also need to cover the cost of tools to dig (such as pickaxes) which cost about \$15 each.

Work Needed from a Group: These micro-reservoirs are basically a hole in the ground dug in low-lying areas where water can collect and is lined with plastic sheeting. In some areas, this could take the form of a small dam across the low area where water runs off after a rain. In other areas, it will be necessary to dig small trenches to run the water to the reservoir. All of this work would be done by local people and a volunteer group working under the leadership of one of the CEPAD agronomists.

The other piece of these water capture systems involves putting a system on the rooftops of houses to capture runoff and store the water in barrels with hoses attached to bring the water to the crops.

Planning Timeline: It would be best to start planning at least six months in advance to allow CEPAD to select the community or communities, the recipient sites within the community, and prepare and order the plastic lining. It would also be very helpful to know at least six months in advance how much money will be available so that CEPAD can know how many reservoirs to plan.