

# Catching Raindrops

## Practical Solutions from Nicaragua and India

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### NICARAGUA

Northern Nicaragua is a region known as the “Tropico-Seco” or dry tropics and is typically covered by Pine Forest. Water was plentiful; however, approximately 30 years ago massive deforestation by North American companies occurred and no replanting was done. Water tables have since dropped dramatically, wells have dried up, and rivers have run dry. The damage has been further compounded by the local harvesting of wood (almost 100% of the rural population depends on wood for cooking fuel) and the traditional practice of burning agricultural land which leads to massive soil degradation and wildfires. Local indigenous farmers remember, as little as ten years ago, being able to pull fish out of the rivers which is no longer a reality. Some communities now haul buckets of water balanced precariously on women’s and children’s heads up to 6 kilometers each day from a river called the “Rio Negro” (“Negro” meaning black, the resulting colour from so much contamination). Climate change has also dealt a black card into the already precarious existence of these people as they have faced a three-year drought after being hit by Hurricane Mitch in 1998.

A Nicaraguan woman with her rainwater cistern



Last year, *Falls Brook Centre* with its Nicaraguan counterpart, *Movimiento Comunal Nicaraguense* (MCN) de Somoto, began the Kitchen Gardens Project in this region. This project helps women, landmine survivors, and their families with the practical hands-on training and education necessary to transform their backyards into innovative and creative areas of diversified organic food production. Since they grow the food in the area immediately surrounding their home, the project began working with families in the construction of rainwater cisterns to collect rainwater off their roofs and store it in underground tanks. The cisterns are low-cost (about \$25), the materials can be found locally (primarily mud bricks and sand), and they can collect as much as 16 barrels of water. Even if there are only one or two nights of heavy rainfalls, families will have clean, safe, and readily available water for both consumption and watering use.

### INDIA

Through local expertise and traditional techniques, villagers in Rajasthan, India are starting to harvest rainwater to mitigate the devastating effects of drought and desertification. *Falls Brook Centre-Canada* and *Social Work Research Centre-India* are implementing a joint project of starting 40 village based night schools in very remote villages of South-east Rajasthan. Along side each of these schools is built a 12,000L capacity cistern for rainwater; some schools are collecting rainwater into dry dug wells with the intention of recharging the water table of the local area. Both techniques of water harvesting are old techniques that were replaced by piped tube wells and hand pumps. Unfortunately, with rising population and changes in climatic patterns, the result has been a major lowering of the water table and an increased reliance on outside expertise for the simple necessity of a drink of water.

Food and water security are intrinsically linked no matter whether in Nicaragua, India, or Canada. Our experience working with SWRC in India and MCN in Nicaragua demonstrates that local solutions are starting to create possibilities for villages in dire circumstances; in fact, local resilience especially in terms of water security is becoming more necessary around the globe. Here in New Brunswick we are experiencing changes in our water quality related to

Villagers In Rajasthan Harvesting Rainwater



consumption, forestry, agriculture practices, urbanization, and global climate change. There are many lessons to be learned from work being done in India and Nicaragua where pressures have thus far been more severe.

### Projects and Discussion Questions for Teachers and Students:

- 1) Collect rainwater at your school or at your home and think of ways to use it; for example, you could try growing plants!
- 2) What are some of the ways that people in Canada can conserve natural resources? Make a list and try to implement your suggestions in your home.
- 3) Is it important for the Canadian government to help communities that are struggling in different countries? How can Canadians provide the most effective help?

Rain barrels at work at Falls Brook Centre, NB



*A Letter from a friend working on Water issues in Kenya (broadening the context of water issues)*

Greetings from Kenya.

I am one of the people in Kenya trying to collect "community voices" to feed into the 3rd World Water Forum. As I was discussing with some people from the local communities, the issue of water came up (just to put this into context, Kenya is in the process of revising the Water Act to give provision for community participation in its management. At the same time, the country is discussing issues of water ownership, access, payment, etc). The question that most of our people are asking is on conservation and benefit sharing.

Most of our natural resources are found away from towns and cities. These are the areas where we have most people depending directly on the natural resources for their livelihoods. For example, people in our rural areas fetch water directly from springs and rivers, unlike the town people who have to wait for the water to come through a pipe to a tap. When we lack water or electricity in the towns and cities, we blame the city council or the Kenya Power and Lighting Company for failing to provide water or electricity while the city council blames it on dwindling water resources because the people near catchments have tampered with the forests and other natural resources in the area. When we don't pay for the water on time, the city council people come and disconnect the water.

The main question that people from local communities have asked - and we are struggling with - is what is the process involved in getting the consumers in towns and cities to share the benefits of water and electricity; and how can we get the water department of the town/city council and the hydro power generating companies to share benefits accrued from the damming and selling of water that has been conserved at far away places by local communities.

The main argument is that, in order to help conserve the river, communities are denied or deny themselves natural resources at water catchment areas, as well as on their private farms, through sound cultivation methods; what can they get in return?

In my opinion, and based on my experience working with local communities, answers to most of these questions can be found by looking at the type of policy documents we as a country or countries within an ecosystem have. For Example in Kenya, our current Agricultural Act states that one can only cultivate up to 6 meters from a water course and the Water Act states up to 12 meters from a riverbank. Of course, the two Acts contradict each other. But implementation of the buffer zones specified in either Act has not been adhered to. People cultivate right up to the inside of the river and no one takes any action. So the issue of policy formulation and implementation in relation to sustainable local livelihoods arises.

As do so many more issues.

All the best to all of you.

Eileen Omosa