Nicaragua: Water Access and Sanitation

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The Current Situation

Nicaragua is the “land of lakes and volcanoes.”

Around 10% of the country is surface water.

So, why are 800,000 people (13% of pop.) without access to safe drinking water?

Why are 215 children dying every year due to diarrhoea?

Why do 37% of rural communities rely on contaminated sources of water?
Facts and Statistics:

URBAN

- Lake Managua has been described as “the world’s biggest toilet”
  - Collecting sewage and chemical run off since 1972
  - Mosquitoes build homes in the “swamps” of polluted water
- Fecal contamination in 90% of municipalities, even in protected wells (RADWQ)
- Insufficient chlorine residues meaning insufficient disinfection (36% public piped water)

RURAL

- 37% without access to “improved” water-sources
- On Caribbean coast, only 18% have access to safe drinking water
- Mining industries and oil refineries along river dump cyanide, DDT, and mercury into the waters
- Outsides are used as latrines
- In Siuna, delivered water is yellow and contaminated with bacteria
- Erosion due to deforestation is also a problem
Why is this such a big problem?

- **Health effects**
  - Diarrhoea
  - Hepatitis A
  - Typhoid fever
  - Mosquito-borne diseases such as malaria and dengue
  - Chronic pain
  - HIV/AIDS

- **Gender disparities**
  - Women and girls have the burden of finding and carrying water
  - Cannot work or get an education

- **Socioeconomic disparities**
  - Rural regions and indigenous groups disproportionately affected

- **Economic effects**
  - Reduce productivity of workforce
  - Limit the numbers of the workforce
  - Negatively impacts tourism
  - Fishing industries in Lake Managua and mercury poisoning
What are some of the challenges facing water access/sanitation in Nicaragua?

- **Economic development** versus **environmental sustainability**
  - Mining Industry
  - The Nicaraguan Canal
- **Extreme weather and climate change**
  - Hurricane Mitch
  - The “El Niño” Phenomenon and 2014 drought
- Lack of hygiene, especially due to infrastructure, adds another layer of complexity to the problem
  - Using the outdoors as latrines
Who is currently working to improve the situation?

Los CAPS, RASNIC, etc.
Los Comités de Agua Potable y Saneamiento (CAPS)

Ley 722 -- Formation of CAPS
- allows CAPS to gain access to tax exemptions
- gives tax break on electricity for water pumps
- receives technical assistance & training

* RASNIC, MINSA, ENACAL etc.
The Longevity &
Scales of Solutions

Nicaragua
Small-Scale & Short-Term Solutions
Aqua Clara International

Bio-Sand Filters

- removes contaminants like bacteria, heavy metals, and large particles
- 36 liters/day
- Deployed in home
Medium-Scale & Medium-Term Solutions

Bridges to Community

2013 Fonseca Water Project
- 200 ft. well; gravity-fed delivery
- water for ~200 people

2014 Piedra Menuda Water Basin Project

2013 Siuna Hospital Water Project
- Provides training for locals to become water technicians
- Develops software and manuals for designing gravity-fed water systems
Large-Scale & Long-Term Solutions

Advocacy & Policy

Education & Community Action

WaterAid

El Porvenir
Clean Water, Healthy Nicaraguans
Celebrating 25 Years

Actors to focus on:
La Asamblea Nacional
Ministerio de Energía y Minas
Ministerio de Fomento, Industria, y Comercio
Ministerio del Ambiente y Los Recursos Naturales
Any journey of 1,000 miles begins with a single step. The collision of short and long food chains strategies are at the basis of our current crisis. Indigenous peoples living on their ancestral lands can help industrialized countries by living in a sustainable manner (not the contrary). If we destroy their environments and communities, we will lose the answers they have to solving our problems, and to the protection of our common futures. The most complex nuclear power station is less important than a tropical tree, and the most simple and sustainable answer more useful than any National Library.

— Raúl Montenegro