

Mason Todd  
Sioux Central High School  
Sioux Rapids, IA  
Bolivia, Factor11

Increasing access to safe, potable water supplies and education on proper sanitation, hygiene and food preparation techniques in the country of Bolivia will help reduce the transmission of food and water-borne disease

Bolivia, home to over 9 million people, at 424,162 square miles is the fifth largest country in South America. It is surrounded by the country's of Peru and Chile to the west, Argentina and Paraguay to the south, and Brazil to the north and east. Its ecological landscapes are high and cold with the Andean mountains running through the west side, and the east side is low and wet populated with swamps, grasslands, plains, and tropical and subtropical forest that cover over 70% of the country. Cities are spaced out by quiet rural areas, lush with crops such as coca, cocaine, corn, quinoa, habas, wheat, alfalfa, and potatoes.

Bolivia is the only country in the world with 2 capitals, La Paz and Sucre. This way La Paz is home to the executive branch, and Sucre houses the judiciary branch of Bolivia's government.

A typical rural farm consists of 5 or more family members. Each member has a special role, Dad is the head of the family, he holds most of the responsibilities with the farm and making family decisions. Mother is second, her job is to help Dad with sell goods at the town market. Mother also feeds the family while keeping control of the children.

The children have responsibilities based on their age, older brothers help dad in the field and herding the livestock while older sisters tend to Mother and her duties, the younger siblings usually tag along to watch and learn from their older brothers or parents until they become old enough to do the job themselves.

A meal for the rural family is full carbohydrates but lacking in other food categories. The primary food is the potato, along with grains like quinoa, barley, and also legumes, especially the broad bean. Air-dried jerky (ch'arki) from cattle is a common snack.

The meat in a daily diet is not only beef their is also a supplement of fish, swine, and poultry. Maize beer (chicha) is a traditional and important beverage. A favorite is deep-fried pork (chicharrón) it is mostly consumed at important ceremonial occasions. Most meals are served with hot pepper sauces and many cultural restrictions focus on food preparation, such as avoiding uncooked, unprocessed foods.

Education is highly valued in Bolivia. Infants and children usually are raised by their parents or close relatives. Adoption and fosterage is widely practiced. Children are taught early to contribute to household responsibilities.

It is very common for rural children to pasture flocks of sheep or help Mother sell goods at the markets in town. Children are taught the importance of respect (respeto) for their elders. Children begin to attend school from about age six, although attendance rates for rural areas are much lower than urban ones. Girls are not as likely to complete their education as boys. Cultural emphasize learning by watching, but not completely explicit teaching.

Many rural areas and low income neighborhoods lack or don't have access to basic medical care. The country has one of the highest infant mortality rates in South America. Between 68 to 75 every 1000 live

births. Deceases of infant and child mortality include respiratory infections, diarrhea, and malnutrition. 30% of infants under the age of 3 will suffer from chronic malnutrition. Most sick people are cared for by family members with what medical knowledge they have. Health beliefs and practices often include aspects of Western medicine. Traditional medical practices consist of rituals and ritual practitioners, diagnostic specialists, curers, herbalists, and diviners.

Divination, rituals, and ritual sacrifices are important in treating illness, and along with the use of coca leaves, alcoholic, and guinea pigs. Dozens of illness categories, many psychosomatic, are recognized. Many curing rituals emphasize balanced, reciprocal relations with deities, who are "fed" and offered drink to dissipate illnesses.

The increase of fresh potable water systems in bolivia will allow the people to reduce the chances of water-borne disease, also the eduction of proper food preparation would also cause the likeness of food transmitted diseases to go down.

The lack of proper food preparation causes the spread of diseases, and in some cases in rural Bolivia. They don't have the technology to perform the correct medical treatment to treat the disease. This situation in Bolivia is very severe, people die every day due to the lack of medicine to treat transmitted water-borne diseases. Their has been only a slight increase of portable fresh water systems. Engineers are designing, creating, and testing new systems everyday. They all have the same goal, that goal is to successfully design and market a low costing reliable portable water filtration system that is able to use natural energy.

Like the Portable Solar Powered Water Purification Systems designed by Aqua Sun International. It can be taken most anywhere to produce fresh drinking water from most Creeks, Rivers, Lakes, and even Boreholes. This is a reliable freshwater source, because it is able to bring purified water where electrical power is unattainable. With its briefcase size the system is self contained and portable. It is able to produce from 1 gallon of fresh water per minute it can also purify over 100 gallons per day. The larger systems for emergency relief can produce a rate of 500 gallons per day.

But Bolivia doesn't have the money to support all rural areas of the country and provide the water they need. Fifteen dollars would provide water to a family for a week. The water could be used for sewage, cooking, hydration, hygiene, or irrigation. These are all needs for human survival and they are being ignored by the public. The increase in population, water scarcity, or energy demand could set back this issue horrendously. Population would require people to share the systems in their communities; this would prevent families from getting the amount of water they really need. Water scarcity would cause people to move so the system would just move with the community. Energy demands could cause the project to be set aside, although the water purification unit uses solar panels; Bolivia would need the extra money to import the energy needed.

Bolivia needs to use some of their tax dollars to buy these systems along with the donations from other third world countries maybe we can supply each family one Aqua Sun purification system to bring them fresh water.

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Paul Urzagaste

Amy Porter