

# Precious Drops: The Value of Water

## Narrative Stories from Kenya

The water works in Kericho Town draws water from a freshwater river in the Mau Forest, a gazetted (protected) forest. The community takes great measures to ensure a clean water supply. The forest intake is 15 to 20 kilometers from town, deep in the forest; the treatment works sits about 13 kilometers from the town center. These distances prevent contamination by pollution from farms and industries.

The Mau Forest is owned and protected by the government of Kenya. Development, farming, and tree harvesting are forbidden by law within the forest, which lies almost entirely within Kericho District. The treatment works was built at great expense, considering the distances involved for moving water. A German corporation sponsored and funded the multimillion-dollar construction project, which is now managed by the town council. The Kericho Town's progress, in matters related to clean water, is immeasurable.

Unfortunately, the municipal water supply fails to reach every home in the district. Many families are forced to use local streams, wells, and springs for their water needs. Many communities form self-help groups, which undertake water projects to protect local sources from contamination or to construct rooftop rainwater catchment systems. Such groups make direct investments of money, time, and sweat to provide themselves and their children with clean water.

Families that cannot afford to invest in protected water supplies use water drawn from sources that may be contaminated with pesticides, viruses, bacteria, or protozoa. Those with enough resources boil their water using wood, kerosene, propane, or charcoal. Others drink unboiled water, commonly resulting in illnesses such as cholera, typhoid, giardia, amoebic dysentery, and other forms of dysentery. Such diseases claim many lives and adversely impact Kericho's productivity, whether measured in school days, agricultural output, or work hours. Although my local community is blessed with well-designed water facilities, much work is needed to ensure a safe water supply for the entire district.

*by David Frommell, Badoo  
Rift Valley Province, Kenya*

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Farms around this area have joined in huge water projects benefiting hundreds of people per project. They have built intakes in the mountain rivers, bringing piped water to many farmers. Although this seems like good development and progress, especially helping women, I have noticed some detrimental effects. The river water is not measured or monitored. Anyone who has money can join a water project and so, as time passes, more and more people are drawing on the rivers. Some rivers have become seasonal from too much use. They dry up in the hot months when we have no rain.

Another detrimental effect is that farmers along rivers and streams farm right up to the very edge of the waterways. They do not follow the law requiring eight feet of natural, indigenous vegetation to be left along the river edges. This farming up to the banks of the rivers leads to erosion, especially following hard rains (which we have almost daily). The rivers are filled with silt and chemical runoff, damaging the water quality as well as its plant and animal life. These contaminated rivers flow for miles and miles, picking up more contaminants as they pass through farms and towns. People who drink directly from these rivers often get sick. The main illnesses are typhoid and worms.

*by Kendall Rondeau  
Mikarati, Kenya*

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Two major environmental concerns, which have greatly damaged water quality, are deforestation and agriculture. For the most part, agricultural techniques in Vihiga are low input and low impact, especially compared with those in the United States. Still, farmers regularly use fertilizers and pesticides, which eventually end up contaminating the watershed. In addition, soil erosion from cultivating Vihiga's steep hills increases sedimentation in the rivers.

The problem of soil erosion is augmented by the dangerously high deforestation rate. Hills that were covered with indigenous forest three years ago are now bald, with no trees left to prevent the soil from washing into the rivers to be deposited in Lake Victoria. To compensate for the lack of fuel wood, the Maragoli people plant blue gum trees, of the Eucalyptus species. Unbeknownst to most Maragoli, these trees require a lot of water. A popular place to plant trees is near rivers, where the land is too swampy to cultivate. Now these "swamps," or wetlands, no longer exist due to the eucalyptus trees that drink up all the water. This is very unfortunate, considering that wetlands are natural filtering and cleansing systems for watersheds.

Damage to water quality by deforestation and agriculture is greatly exacerbated by population expansion. With a population density of over 1,100 people per square kilometer, Vihiga is incredibly overcrowded and still growing. As the numbers rise, water quality declines even further, due to more human and livestock waste, more garbage thrown on the streets, more land being intensively farmed, more agricultural chemicals being used, and more trees being felled. So far, the only steps I've seen taken to increase the availability of clean water (not necessarily to actively improve water quality) are protecting springs and building pumps to access groundwater before it becomes severely contaminated.

*by Barbara Hinsman  
Vigeze Village, Vihiga, Kenya*