

## **An Analysis of the Relationship between Water Accessibility, Use, and Health in Muthara, Kenya**

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The Millennium Development Goals outline targets for improving living conditions in less developed countries around the world: one target is to halve the number of people in the world without reasonable access to water by 2015. The World Health Organization defines the term reasonable access as the availability of at least 20 liters per person per day (L/capita-day) from a source within one kilometer of the user's dwelling. Using this target, development agencies can know where to focus their efforts.

Improving access to water will help improve the living conditions of those people currently without. However, access to water may not need to be brought to the level of “reasonable” in order for living conditions of inhabitants of an area to be improved. This report investigates the relationship between access to water and health of the household in rural Kenya. While in Kenya as a Peace Corps Volunteer, the author of this report reviewed literature to find connections between access to water, the use of water and the health in the households of users. This report also describes the process of preparing to collect and collecting information in a cross-cultural setting.

The average water use for the Muthara area is 16.7 L/capita-day including laundry and 12.3 L/capita-day without laundry. These values fall within the Basic Access service level (around 20 L/capita-day). Some of the water sources used by villagers are unimproved and some are improved. Reviewing the collection times of respondents of the Access, Use and Health Survey suggests that the quantity of water used does not depend on the collection times. Instead, users collect water to fulfill their needs. This contradicts previous studies which suggest that as collection time increases, the quantity of water collected will decrease. When estimating the amounts of water used for various purposes in the household, the estimations were 1.2 to 6 times greater than the actual volume of water collected for the household each day. The percentages of different water use categories are consumption (21%), hygiene (51%) and productive uses (28%). The link between water accessibility and health based on the data collected from the Access, Use and Health Survey is not strong as the literature suggests. The hygiene practices that take place in the household have a large impact on the health of the household. Handwashing occurs at different times throughout the day: the importance of handwashing is shown because children are not taught its importance at home and at school. Wearing shoes, disposing of trash and bathing are more health behaviors that villagers practice at home.