Biological sand filters, a practical approach to combat poverty and inequality

September 24 2008

Microbiologically contaminated water plagues approximately 1.1 billion people in rural and peri-urban populations in developing countries. Roughly 2.2 million people without safe access to drinking water die each year from the consumption of unsafe water, and most of them are children under 5 years of age.

A new article published in *Current Protocols in Microbiology* provides detailed instructions for constructing and using low-cost biological sand (biosand) filters capable of dramatically improving the quality of drinking water. The article has been made available for free and can be viewed here.

Biological sand filters, which have gained acceptance by the World Health Organization as a viable household water treatment technology, work by having water percolate slowly through a layer of sand, where microorganisms form a bacteriological purification zone. This process filters harmful pathogens from contaminated water. To use the filter, a person simply pours contaminated water into the household biosand filter and immediately collects treated water.

The filters will do more than provide safe, clean drinking water. According to Michael Lea, author of the article, "the filters will provide a cost-effective practical approach to combat poverty and inequality."

Source: Wiley