

AROUND THE GLOBE

WHO Guidelines Revised To Reduce Water-Borne Disease

from the World Health Organization

Ensuring safe drinking water is a challenge in every part of the world, whether the water comes from rural wells, is piped into people's homes, or trucked to refugee camps in an emergency. Contamination of drinking water too often is detected only after a health crisis, when people have fallen ill or died as a result of drinking unsafe water. In September, to address the growing challenge of providing safe drinking water, the World Health Organization (WHO) released updated *Guidelines for Drinking-water Quality* (GDWQ) to help regulators and water service providers worldwide maintain and improve the quality of their drinking water and pre-empt contamination.

Traditionally, drinking water regulations have emphasized the testing of water samples for levels of chemical and biological contaminants, which generally means that problems are detected long after water is consumed. The updated guidelines represent a paradigm shift in advice on how to manage the provision of drinking water, both in the developed and developing worlds, in large urban settings and in rural areas or villages. Henceforth, according to the revised GDWQ, the recommended approach for regulators and operators is to manage drinking water quality in a holistic, systematic fashion from source to tap. This includes ensuring water reservoirs or local wells are not at risk of contamination from human and animal waste, and checking basics like regularly changing water filters.

The new edition has reviewed and revised the recommended values for chemical limits in drinking water in line with the latest scientific evidence. The GDWQ reconfirms guideline values for over 100 chemicals. Because routine monitoring for all of the chemicals is not possible, the guidelines set out practical approaches to rule out some chemicals and to prioritize others.

"This third edition of the WHO *Guidelines for Drinking-water Quality* is the most significant water-related public health



Near Alem Kitmama, Ethiopia. Photo from World Health Organization

development since the introduction of chlorine. The *Guidelines'* requirement for drinking water safety plans should be incorporated in regulations across the world," said Michael Rouse, president of the International Water Association.

Outbreaks Can Happen Anywhere

Outbreaks due to microbes in drinking water can affect hundreds of thousands of people, without regard to wealth or political boundaries. In recent years, communities large and small in some of the world's most developed countries have been affected by contaminated drinking water, such as *E. coli* and *Campylobacter* outbreaks in Canada and *Cryptosporidium* outbreaks in the United States. Conversely, the hepatitis E outbreak currently sweeping through displaced-persons camps in Darfur, Sudan, and refugee camps in neighboring Chad underscores how waterborne disease can disproportionately affect poor and disadvantaged populations.

A variety of drinking water quality issues throughout the world may be better addressed by the more holistic and preventative approach of the new guidelines. Only 24 percent of the urban population of Latin America and the Caribbean has any water quality control surveillance system, and more than one-

third of the deaths of children less than five years old are due to communicable diseases. Some 35 million people in Bangladesh consume water that contains elevated levels of naturally occurring arsenic; India, China, Myanmar, Vietnam, Laos, and Cambodia face similar problems. Pacific Island countries face severe logistical challenges in organizing safe drinking-water supplies: vulnerable fresh water lenses on islands demand holistic management and public participation if water resources are to be sustained. Disease outbreaks related to water continue to occur in the most economically developed western European countries, where the main cause of outbreaks often is contamination of the raw water supply combined with missing or faulty disinfection procedures. For many of these populations, a standard "sampling and analysis" approach to monitoring does not ensure quality; preventive monitoring is more likely to work.

The WHO guidelines are available at www.who.int/water_sanitation_health/dwq/gdwq3/en/.

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