

## WATER and HEALTH

### Water : Health: Health : Water:

Forty percent of the world's six billion people lack no acceptable means of sanitation, and more than one billion lack safe water sources. Proper water supply and sanitation would reduce the prevalence of water-related disease and would hence save millions of lives.

### Water Supply and Sanitation Diseases:

- Water-Borne Diseases: Water-borne diseases are "dirty-water" diseases—those caused by water contaminated by human, animal, or chemical wastes. Water-borne diseases include cholera, typhoid, shigella, polio, meningitis, and hepatitis A and E, as well as toxic substances found in freshwater resources.
- Water-Based Diseases: Water-based diseases are caused by aquatic organisms that spend part of their life cycle in the water and another part as parasites on or in animals. Water-based diseases include guinea worm (dracunculiasis), paragonimiasis, clonorchiasis, and schistosomiasis (bilharzia). These diseases are caused by a variety of flukes, tapeworms, roundworms and tissue nematodes, often collectively referred to as helminthes.
- Water-Related Vector Diseases: Vectors are insects or other animals capable of transmitting an infection, such as mosquitoes and tsetse flies that breed and live in or near both polluted and unpolluted water. Vectors infect millions of people with diseases including malaria, yellow fever, dengue fever, sleeping sickness, and filariasis.
- Water-Scarce or Water-Washed Diseases: Many other diseases—including trachoma, leprosy, tuberculosis, whooping cough, tetanus, and diphtheria—are considered water-scarce (also known as water-washed) in that they thrive in conditions where freshwater is scarce and sanitation is poor. Infections are transmitted when too little fresh water is available for washing hands.



(Map: WHO, 2005)



*Aedes aegypti* (Linnaeus) yellow fever mosquito (Diptera: Culicidae)  
photo: sel.barc.usda.gov



Photo: R. Nyberg/USAID



Learn More: When considering water and health, think about the reasons water is filtered. What contaminants are filtered out? Who sets the limits for the safe contamination levels? What processes are needed to insure drinking water and sewage treatment standards on a large scale?