



## The Partnership through Health to Water

The **Partnership to Health through Water (PHW)** is a global alliance of programs and initiatives dedicated to reducing the incidence of water-related disease worldwide.

# The Partnership to Health through Water (PHW)

Every year approximately three million people die from water-related diseases. This figure includes 1.8 million deaths due to diarrhoeal diseases, the vast majority of which are attributable to unsafe water supply, inadequate sanitation and hygiene. The figure also includes deaths from disease related to improper management of water resources, including such vector-borne diseases as malaria, schistosomiasis, filariasis and various arboviral infections. Not only do water-related diseases cause human suffering, they are costly to families, communities and nations, too.

With a goal of reducing death and disease associated with water, the PHW mobilizes its partners to raise awareness among policy makers regarding the applicability and efficacy of water-related interventions; to generate and make use of data regarding the implications of water-related disease; to facilitate the development of initiatives to implement short and long-term approaches to reduce water-related diseases; and to strengthen technical capacity with respect to programme design, implementation, management, and evaluation. An intersectoral approach to preventing water-related diseases may also help advance progress towards meeting the diverse Millennium Development Goals related to health, water and sanitation.

To promote constructive policy dialogue PHW

- **fosters and disseminates country-level research** regarding the social, political, and economic implications of water-related disease and its prevention; and
- **conducts outreach and facilitates communication** about health and water among actors in local, national and international health, water, finance and planning sectors.

To inform policy discussions and to facilitate programme implementation PHW works

- **at the household level:** by raising awareness of the efficacy and cost-effectiveness of addressing household water treatment, by promoting research regarding barriers to scaling-up water-related activities, and by implementing projects in diverse locations;
- **at the community level:** by promoting the adoption and implementation of water safety plans, a comprehensive risk assessment and risk management approach that encompasses all steps in water supply from catchment to consumer; and
- **at the catchment level:** by building national capacity to identify and assess the potential health effects of water infrastructure projects, and to design and implement environmental management measures as health safeguards.



# Asian Water Quality Initiative

THE INTERSECTORAL APPROACH ADOPTED BY THE ASIAN WATER QUALITY INITIATIVE IS AN IMPORTANT FOCUS OF THE PARTNERSHIP TO HEALTH THROUGH WATER

**THE PROBLEM** Of the 1.1 billion people worldwide who do not have access to improved water supply, 63%, or almost 700 million, live in Asia. In addition to microbial contamination, chemical hazards are an increasing source of concern for those responsible for regional water safety. Arsenic concentrations exceeding both WHO guideline values and national standards have been reported in Bangladesh, Cambodia, China, India, the Lao People's Democratic Republic, Nepal, and Viet Nam. Fluorosis, resulting from excess fluoride in drinking water, affects over 100 million people in India alone, and is prevalent in Afghanistan, China and Pakistan.

**THE SOLUTION** Preventing the diverse health problems arising from contaminated water supplies as well as those related to water infrastructure project management requires an integrated, intersectoral approach. Actions that can help address water-related health problems include deployment of risk assessment tools, rigorous research and analysis, risk monitoring and management, and sustained emphasis on sanitation and hygiene programmes.

**HOW A PARTNERSHIP CAN HELP** In September 2004 representatives of international organizations and national development and technical agencies met in New Delhi to advance the Asian Water Quality Initiative (AWQI) and to share information and experience in addressing water quality concerns with respect to human health.

**EXAMPLE** The AWQI adopts an integrated approach to promoting health through water-related policy and action. The Initiative's mission is to "provide sound, accessible and relevant tools and information to support efforts to ensure safe water, thereby contributing to health, social, and economic development in Asian countries at all stages of development".

**WHO ARE THE PARTNERS?** The partners include the World Health Organization, the Australia Agency for International Development, the United Kingdom's Department for International Development, the United States Environmental Protection Agency and the United States Agency for International Development.

The AWQI framework around which activities will be developed includes

- **Risk assessment** tools to ensure that proposed technical solutions resolve current risks and avoid causing other, potentially more serious, problems.
- **Burden of disease studies** to provide a quantified estimate the contribution made by various risk factors to the health burden within the home, the community, and at the regional and national levels.
- **Water safety plans** to enhance control measures for risk monitoring and verification and management plans for normal and incident conditions to ensure a consistent supply of safe drinking-water.
- **Sustained emphasis on sanitation and hygiene programmes** to monitor on-site sanitation and sewers discharging untreated waste.
- **Monitoring and surveillance activities** to ensure water quality and to identify potential risks before they affect human health and the environment.

**For more information** contact AWQI at [awqi@whosea.org](mailto:awqi@whosea.org)



# Household water treatment and safe storage (HWTS)

PROMOTING HOUSEHOLD WATER TREATMENT AND SAFE STORAGE IS A KEY ELEMENT OF THE PARTNERSHIP TO HEALTH THROUGH WATER

**THE PROBLEM** Families who cannot count on a reliable supply of safe drinking-water to their homes or communities often must gather and store water themselves. If the water they collect is already contaminated, or if they are not able to prevent the water from becoming contaminated when it is stored, family members become vulnerable to water-related diseases. The problem is most acute in developing countries in Asia, the Pacific Islands, and sub-Saharan Africa but also affects small communities in more developed regions.

**THE SOLUTION** Simple techniques exist for treating and safely storing water in the home. Families can choose from a range of inexpensive and highly effective treatment options, including filtration or disinfection using chlorine or sunlight, which lead to significant health gains. It is estimated that household water treatment could avert at least 114 000 child deaths per year in Africa alone. In addition, rainwater is an essential source of water for a growing number of households. Improved rainwater harvesting and storage techniques can help those households keep their water safe. Evidence suggests that these interventions can be successfully scaled up and applied in a variety of settings.

**HOW A PARTNERSHIP CAN HELP** Coordinated action can help raise awareness about the efficacy and cost-effectiveness of household water treatment, advocate household water treatment programmes and promote research and analysis regarding barriers to scaling-up programme implementation. In 2003, WHO established the International Network to Promote Household Water Treatment and Safe Storage. Participants engage with decision-makers, carry out research, and implement pilot projects in more than 50 countries. The Network organizes a yearly conference in different regions of the world to raise awareness about household water treatment technologies and the activities of its members and to generate support for household water treatment and safe storage initiatives.

**EXAMPLE** To be sustainable, home interventions must be locally available and appropriate for the community in which they will be carried out.

A recent SODIS (solar disinfection) project in Kenya succeeded because community members were easily able to secure the bottles they used for disinfecting their water. It also built on the local understanding that leaving pots, plates and utensils in the sun would help disinfect them.

To answer the main concern of users, namely, "Does it work? Does it kill the germs?" the project implementers carried out tests and discussed their findings with community members.

**EXAMPLE** Studies have demonstrated that not only can household treatment significantly reduce diarrhoea in families but that it can also be self sustaining and promote local entrepreneurship. In Madagascar, locally produced sodium hypochlorite, sold under the brand name SUREAU, has been used by 18% of all households since its introduction in 2000. This has been made possible through social marketing and the creation of a network of more than 10 000 community-based retailers.

**EXAMPLE** Some household interventions have been successfully introduced without motivational campaigns.

All the households that received ceramic filters in a rural Bolivian community indicated that they liked the filters.

Thus, the filters were used regularly, resulting in a reported 70% reduction in the incidence of diarrhoea.

**WHO ARE THE PARTNERS?** The Network has grown substantially, from 24 organization-members in early 2003 to 67 in 2005. It comprises a variety of groups, including nongovernmental organizations, the majority of which are engaged in HWTS implementation (24); private-sector participants, including companies which develop and/or produce new technologies or supply materials such as disinfectants (14); academic institutions that carry out research on HWTS (11); government ministries or agencies (6); professional associations, including health sector representatives such as nurses; and international organizations (7).

**For more information** consult the Network's Secretariat, hosted at [http://www.who.int/household\\_water/en/](http://www.who.int/household_water/en/)



## Water safety plans and community level actions

THE PARTNERSHIP TO HEALTH THROUGH WATER ADVOCATES THE ADOPTION AND IMPLEMENTATION OF WATER SAFETY PLANS AS A MEANS OF PROTECTING COMMUNITY WATER SUPPLIES FROM CATCHMENT TO CONSUMER

**THE PROBLEM** Contaminated drinking-water, whether in village wells, small towns or piped systems to large cities, is a significant cause of disease, including major outbreaks. Such contamination can be prevented.

**THE SOLUTION** Preventive approaches that block sources of pollution as they occur from source to consumer are preferable. Traditionally water quality control measures have focused on water supply analysis, but the results are not always available in time to prevent contamination of the supply. Recent developments have demonstrated the effectiveness of a more systematic review and control process.

The "water safety plan" approach is at the heart of the most recent WHO "Guidelines for drinking-water quality" and is an important element of both the International Water Association's Bonn Charter for Safe Drinking Water and the "Australian Drinking Water Guidelines 2004". Water safety plans help organize and systematize a long history of risk management practices applied to drinking-water. By ensuring the application of these practices to the management of drinking-water quality, the plans help minimize contamination of source waters, facilitate the reduction or removal of contamination through treatment, and prevent contamination through storage, distribution and handling of drinking water.

**HOW A PARTNERSHIP CAN HELP** Collaboration between regulators, investigators, technical agencies, nongovernmental organizations and international organizations can help disseminate information and share examples of effective implementation of water safety plans with communities concerned about the quality of their drinking-water. A num-

ber of developing and developed countries have recently decided that cooperating on the technical and managerial aspects of water safety plans may accelerate progress towards meeting the water target of the Millennium Development Goals.

### EXAMPLE

- WHO's "Guidelines for Drinking-water quality," the International Water Association's Bonn Charter for Safe Drinking Water, and the Australia Agency for International Development's "Safe Water Guide" offer frameworks for implementation.
- Australia, Germany and Iceland are among the developed countries that systematically apply the WSP approach. Developing countries that do so include Bangladesh, Mozambique, and Uganda. Work is expected to begin shortly in Bhutan, the Lao People's Democratic Republic, and Viet Nam.

**WHO ARE THE PARTNERS?** The partners are the Australia Agency for International Development, the International Water Association, the United Kingdom's Department for International Development, the United States Agency for International Development, the United States Environmental Protection Agency, the United States Department of Health and Human Services' Centers for Disease Control and Prevention, and the World Health Organization.

**For more information** [www.who.int/water\\_sanitation\\_health/dwq/guidelines/](http://www.who.int/water_sanitation_health/dwq/guidelines/)



# Health in water resources development and management

THE PARTNERSHIP TO HEALTH THROUGH WATER ENCOURAGES THE USE OF HEALTH IMPACT ASSESSMENTS AND ENVIRONMENTAL MANAGEMENT MEASURES IN WATER RESOURCES PLANNING, DEVELOPMENT, DESIGN, AND IMPLEMENTATION

**THE PROBLEM** Aquatic ecosystems sustain many life forms, including insect-vectors and species of intermediate hosts that play an essential role in the transmission of human diseases. Among the vector-borne diseases, malaria stands out globally because of its heavy disease burden and because it accounts for more than a million deaths per year. Water infrastructure projects, which include dams, irrigation schemes, and flood control projects, can increase the burden of water-related diseases. Unless properly planned and executed, water projects can transfer hidden costs to the health sector, undermine the health status of vulnerable communities they are intended to benefit, and limit the potential of development initiatives.

**THE SOLUTION** Advance planning and fostering intersectoral collaboration in the development process is essential. Two activities, health impact assessment (HIA) and environmental management, have proven effective in helping planners address health with respect to water resources development.

- HIA is a combination of procedures, methods and tools by which a policy, programme or project may be judged as to its potential effects on the health of a population.
- Environmental management measures entail the incorporation of design and operational features in water resources development projects that render the environment less conducive to disease transmission.

**HOW A PARTNERSHIP CAN HELP** Successfully addressing health concerns in water resources development and management hinges on positive collaboration between diverse individuals and organizations and on effective institutional arrangements between regulation and implementation.

#### EXAMPLES

- In connection with the planned Nam Theun 2 dam, the Government of the Lao People's Democratic Republic has embarked on a comprehensive programme of HIA capacity building that spearheads a scaled up activity for all countries of the Mekong region.

**WHO ARE THE PARTNERS?** The partners include the DBL Institute for Health Research and Development, the Environmental Health Project, the Food and Agriculture Organization of the United Nations, the International Water Management Institute, the Mahidol University Faculty of Tropical Medicine, the Queensland Institute of Medical Research, the Swiss Tropical Institute, the United Nations Environment Programme, the World Health Organization and the World Conservation Union (IUCN).

**For more information** [www.who.int/water\\_sanitation\\_health/resources](http://www.who.int/water_sanitation_health/resources)

