How important is water safety?
Unsafe water and inadequate sanitation and hygiene are significant contributors to the 1.8 million deaths caused by diarrhoea every year. For children under five years of age, this burden is greater than that covered by HIV and malaria combined.

Water transmits disease when it is contaminated by pathogenic microbes and/or chemicals. Bacteria, viruses and parasites can enter drinking water in many ways, for example as a result of animals excreting into a catchment area, from seepage of contaminated water into ‘leaky’ pipes in a distribution system, and from unhygienic handling of stored household water. Chemical contamination may come from natural or human sources.

Solution
Protecting source water from pollution is critical. Households can avoid most disease and poisoning through ‘safe water’ approaches, by drawing on a well-managed supply system or by treating and safely storing water at home. Such interventions are most effective when coupled with improved sanitation and hygiene (including food) to ensure the multiple pathways of disease transmission are prevented.

WHO role
WHO is the international authority on drinking-water safety, promoting health-based regulations to governments and working with partners to promote effective risk management practices to water suppliers, communities and individual households. With networks established, and evidence and guidance in place, the challenge now is to sustainably scale up interventions.

While the focus of this flyer is prevention of endemic waterborne disease, WHO also works to prevent outbreaks, secure safe water and sanitation in public places including healthcare facilities, anticipate emerging threats, and provide evidence for policy-making.

What is WHO doing?
WHO carries out its activities in response to evidence of where the greatest health burdens exist, and where the greatest impacts can be made. Therefore, activities focus on poor communities that lack access to safe drinking-water services, e.g. in sub-Saharan Africa, and large cities with vulnerable water supply systems, e.g. in Asia.

WHO supports the scaling up of household water treatment and safe storage (HWTS) in places where water supplies do not deliver safe water, or where water is subject to recontamination during collection, transport and storage in the home.

In addition, WHO supports country-wide scale-up of its comprehensive ‘Catchment to consumer’ Water Safety Plan (WSP) approach to risk management.

Promoting effective regulations and developing capacities of regulators
Since 1958, WHO has been the authority on drinking-water quality, with its Guidelines for Drinking-water Quality (GDWQ) being used as the scientific basis for standard setting in most countries.

WHO supports countries to develop regulations based on a holistic risk-benefit approach, which leads to rational prioritization and management of contaminants in drinking water.

A Regulators Network, which includes more than 25 regulatory bodies from developed and developing countries, enables the sharing of best practices and addressing challenges in drinking-water regulation.

The WHO Department of Public Health and Environment (PHE) works to promote a healthier environment, intensify primary prevention and influence public policies in all sectors in order to address the root causes of environmental threats to health.
Achievements

To most effectively manage the safety of drinking-water supplies in order to prevent waterborne disease, water suppliers in more than 40 countries are implementing WSPs, while over 20 countries have a policy or regulation that either promotes or requires water safety planning.

Over two thirds of countries in sub-Saharan Africa have national plans concerning HWTS, and a number of countries now actively integrate water-related interventions with child and maternal health, as well as HIV programmes, demonstrating commitment to provide immediate safe drinking-water solutions where reliable and safe water supplies do not exist.