

# HEALTH ASPECTS OF PLUMBING



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# Preface

The United Nations has declared 2005–2015 the International Decade for Action “Water for Life”, setting a world agenda that focuses increased attention on water-related issues. This initiative is of extraordinary importance in a world where preventable diseases related to water and sanitation claim the lives of about 3.1 million people a year, most of them children less than five years old. Of these, about 1.6 million people die from diarrhoeal diseases associated with lack of safe drinking-water and adequate sanitation.

By including safe drinking-water supply and sanitation in the Millennium Development Goals, the world community has acknowledged the importance of their promotion as development and health interventions and has set a series of goals and targets accordingly. Goal 7, target 10 requests the world to “halve by 2015 the proportion of people without sustainable access to safe drinking-water and basic sanitation”. The task is huge: in 2002, 1.1 billion people (two thirds of them in Asia, and 42% of the population in sub-Saharan Africa) lacked access to improved water sources. At least 2.6 billion people lacked access to improved sanitation; over half of them live in China and India. Only 31% of rural inhabitants in developing countries have access to improved sanitation, versus 73% of urban dwellers (WHO 2004b). Achieving the Millennium Development Goal drinking-water and sanitation target requires that 97 million additional people gain access to drinking-water services and 138 million additional people to sanitation annually up to 2015.

The United Nations Committee on Economic, Cultural and Social Rights has issued a statement declaring access to safe drinking-water to be a human right. The declaration reads:

“Water is fundamental to life and health. The human right to water is indispensable for leading a healthy life in human dignity. It is a prerequisite to the realization of other human rights.”

The World Plumbing Council and the World Health Organization, working within the spirit of those resolutions, present this document on health aspects of plumbing noting that sustainable health, especially for children, is not possible without access to safe drinking-water and basic sanitation facilities. This publication is dedicated to assisting in achieving the best possible plumbing levels to ensure the highest health benefits from use of sound plumbing practices. This is

especially important at a time when only 50% of the world population has access to piped drinking-water systems within the property and 31% has piped sanitation facilities connected to a public sewer system. The World Health Organization and United Nations Children's Fund statistics on drinking-water and sanitation indicate a sharp acceleration of efforts towards access to types of drinking-water and sanitation facilities requiring a considerable level of plumbing. It is thus vital that developing countries adopt or improve their plumbing practices taking into account the need to minimize the current and future risks of epidemics and diseases associated with poor plumbing.

The World Health Organization and the World Plumbing Council will feel rewarded if this document achieves its ultimate aim: to play a strategic role in facilitating the adoption of good plumbing practices in developing countries to ensure the health gains and well-being expected from such systems.

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# Abbreviations and acronyms

CDC	Centers for Disease Control and Prevention (USA)
CPVC	chlorinated polyvinylchloride
HPC	heterotrophic plate count
ISO	International Organization for Standardization
PE	polyethylene
PVC	polyvinylchloride
WHO	World Health Organization
WSP	water safety plan