

ANNEX 1

Supporting documentation to the Guidelines

The *Guidelines for drinking-water quality* are accompanied by separate texts that provide background information substantiating the derivation of the Guidelines and providing guidance on good practice towards effective implementation. These are available as published texts, through the Internet (http://www.who.int/water_sanitation_health/water-quality/guidelines/drinking-water-guidelines-publications/en/) and on CD-ROM. These can be ordered at <http://www.who.int/bookorders>.

Published supporting documents

A practical guide to auditing water safety plans

Published in 2015 by the World Health Organization

Provides guidance on developing and implementing a WSP auditing scheme, including examples, case studies and tools from more than a dozen low-, middle- and high-income countries with WSP auditing experience

http://www.who.int/water_sanitation_health/publications/auditing-water-safety-plans/en/

Assessing microbial safety of drinking water: Improving approaches and methods

Edited by A. Dufour et al.

Published in 2003 by IWA Publishing on behalf of the World Health Organization and the Organisation for Economic Co-operation and Development

A state-of-the-art review of approaches and methods used in assessing the microbial safety of drinking-water.

http://www.who.int/water_sanitation_health/publications/assessing-microbial-safety-of-drinking-water/en/

Boil water

Published in 2015 by the World Health Organization

Provides the scientific basis for the efficacy of boiling water

http://www.who.int/water_sanitation_health/publications/boiling-water/en/

Calcium and magnesium in drinking-water: Public health significance

Edited by J. Cotruvo and J. Bartram

Published in 2009 by the World Health Organization

A review of the contribution of drinking-water to total daily intake of calcium and magnesium, and an assessment of possible health benefits, including reducing cardiovascular disease mortality and osteoporosis.

http://www.who.int/water_sanitation_health/publications/publication_9789241563550/en/

Chemical safety of drinking-water: Assessing priorities for risk management

T. Thompson et al.

Published in 2007 by the World Health Organization

A tool to assist in undertaking a systematic assessment of water supply systems to prioritize, control or eliminate chemicals in drinking-water.

http://www.who.int/water_sanitation_health/publications/dwchem_safety/en/

Domestic water quantity, service level and health

G. Howard and J. Bartram

Published in 2003 by the World Health Organization

Requirements for water for health-related purposes to determine acceptable minimum needs for consumption (hydration and food preparation) and basic hygiene.

http://www.who.int/water_sanitation_health/publications/wsh0302/en/*Evaluating household water treatment options: Health-based targets and microbiological performance specifications*

J. Brown and M. Sobsey

Published in 2011 by the World Health Organization

Establishes health-based targets and testing protocols for point-of-use water treatment approaches, including to inform development of country certification programmes.

http://www.who.int/water_sanitation_health/publications/household_water/en/*Evaluation of the H₂S method for detection of faecal contamination of drinking water*

M. Sobsey and F. Pfaender

Published in 2002 by the World Health Organization

The scientific basis, validity, available data and other information concerning the use of “H₂S tests” as measures or indicators of faecal contamination in drinking-water.http://www.who.int/water_sanitation_health/publications/h2s-method-for-detection-of-fecal-contamination/en/*Fluoride in drinking-water*

J.K. Fawell et al.

Published in 2006 by IWA Publishing on behalf of the World Health Organization

Provides information on the occurrence of fluoride in drinking-water, its health effects, ways of reducing excess levels and methods for analysis of fluoride in water.

http://www.who.int/water_sanitation_health/publications/fluoride-in-drinking-water/en/*Guide to hygiene and sanitation in aviation, 3rd edition. Module 1: Water; Module 2: Cleaning and disinfection of facilities*

Published in 2009 by the World Health Organization

Addresses water and cleaning and disinfection of facilities with the ultimate goal of assisting all types of airport and aircraft operators and other responsible bodies in achieving high standards of hygiene and sanitation, to protect travellers.

http://www.who.int/water_sanitation_health/publications/aviation_guide/en/*Guide to ship sanitation, 3rd edition*

Published in 2011 by the World Health Organization

Presents the public health significance of ships in terms of disease and highlights the importance of applying appropriate control measures.

http://www.who.int/water_sanitation_health/publications/ship_sanitation_guide/en/*Hazard characterization for pathogens in food and water: Guidelines*

Published in 2003 by the Food and Agriculture Organization of the United Nations and the World Health Organization

A practical framework and structured approach for the characterization of microbial hazards in food and water, to assist governmental and research scientists.

http://www.who.int/water_sanitation_health/publications/hazard-characterization-for-pathogens/en/

Health aspects of plumbing

Published in 2006 by the World Health Organization and the World Plumbing Council
A description of the processes involved in the design, installation and maintenance of effective plumbing systems and consideration of the microbial, chemical, physical and financial concerns associated with plumbing.

http://www.who.int/water_sanitation_health/publications/plumbing-health-aspects/en/

Heterotrophic plate counts and drinking-water safety: The significance of HPCs for water quality and human health

Edited by J. Bartram et al.

Published in 2003 by IWA Publishing on behalf of the World Health Organization
Assessment of the role of the heterotrophic plate count measurement in drinking-water safety management.

http://www.who.int/water_sanitation_health/publications/hpc/en/

Legionella and the prevention of legionellosis

Edited by J. Bartram et al.

Published in 2007 by the World Health Organization

An overview of the sources, ecology and laboratory detection of *Legionella* bacteria, risk assessment and risk management of susceptible environments, the necessary measures to prevent or adequately control the risks and the policies and practices for outbreak management.

http://www.who.int/water_sanitation_health/publications/legionella/en/

Management of cyanobacteria in drinking-water supplies: information for regulators and water suppliers

Published in 2015 by the World Health Organization

Guidance for regulators and water suppliers to prevent and manage cyanobacterial blooms

http://www.who.int/water_sanitation_health/publications/cyanobacteria_in_drinking-water/en/

Managing water in the home: Accelerated health gains from improved water supply

M. Sobsey

Published in 2002 by the World Health Organization

A review of the various methods and systems for household water collection, treatment and storage.

http://www.who.int/water_sanitation_health/publications/wsh0207/en/

Pathogenic mycobacteria in water: A guide to public health consequences, monitoring and management

Edited by J. Bartram et al.

Published in 2004 by IWA Publishing on behalf of the World Health Organization

A description of the distribution, routes of transmission and infection, and guidance on the control of pathogenic environmental mycobacteria in water and other parts of the environment.

http://www.who.int/water_sanitation_health/publications/pathogenic-mycobacteria-in-water/en/

Pharmaceuticals in drinking-water

Published in 2012 by the World Health Organization

Provides evidence-based, practical guidance and recommendations for managing pharmaceuticals in drinking-water.

http://www.who.int/water_sanitation_health/publications/pharmaceuticals-in-drinking-water/en/

Protecting groundwater for health: Managing the quality of drinking-water sources

Edited by O. Schmoll et al.

Published in 2006 by the World Health Organization

An analysis of the hazards to groundwater quality, and the risk they may present to a specific supply. This is a tool for developing strategies to protect groundwater for health by managing the quality of drinking-water sources.

http://www.who.int/water_sanitation_health/publications/protecting_groundwater/en/

Protecting surface water for health: identifying, assessing and managing drinking-water quality risks in surface water catchments

Published in 2016 by the World Health Organization

Provides a structured approach to understanding surface waters and their catchments to support the identification, assessment and prioritization of the risks, and the development of management strategies for their control, as a basis for providing safe drinking-water

http://www.who.int/water_sanitation_health/publications/pswh/en

Quantifying public health risk in the WHO Guidelines for drinking-water quality: A burden of disease approach

A.H. Havelaar and J.M. Melse

Published in 2003 by the National Institute for Public Health and the Environment of the Netherlands

A discussion paper on the concepts and methodology of disability-adjusted life years (DALYs) as a common public health metric and its usefulness for drinking-water quality.

http://www.who.int/water_sanitation_health/publications/quantifyinghealthrisks/en/

Quantitative microbial risk assessment: application for water safety management

Published in 2016 by the World Health Organization

Synthesizes the current knowledge on quantitative microbial risk assessment (QMRA) to facilitate its application in the practice of water supply, water reuse and water recreation to support the management of risks associated with faecal pathogens in the water-related context.

http://www.who.int/water_sanitation_health/publications/qmra/en

Rapid assessment of drinking-water quality: A handbook for implementation

Published in 2011 by the World Health Organization and the United Nations Children's Fund

A practical guide to rapidly monitor water quality and safety, incorporating statistical methods, sanitary survey, and field approaches.

http://www.who.int/water_sanitation_health/publications/rapid_assessment/en/

Review of latest available evidence on potential transmission of avian influenza (H5N1) through water and sewage and ways to reduce the risks to human health

Published in 2006 by the World Health Organization

A summary of the latest available studies and findings on avian influenza (H5N1) pertaining to water resources, water supplies, sanitation (human excreta, sewerage systems and health-care waste) and hygiene.

http://www.who.int/water_sanitation_health/publications/potential-transmission-of-avian-influenza/en/

Risk assessment of Cryptosporidium in drinking water

G. Medema et al.

Published in 2009 by the World Health Organization

A text supporting the Guidelines for drinking-water quality by providing further data on *Cryptosporidium* to assist country authorities in setting health-based targets and water suppliers in determining required performance of water treatment processes as part of a system-specific water safety plan.

http://www.who.int/water_sanitation_health/publications/cryptoRA/en/

Safe drinking-water from desalination

Published in 2011 by the World Health Organization

Highlights the principal health risks related to different desalination processes and provides guidance on appropriate risk assessment and risk management procedures in order to ensure the safety of desalinated drinking-water.

http://www.who.int/water_sanitation_health/publications/desalination_guidance/en/

Safe piped water: Managing microbial water quality in piped distribution systems

Edited by R. Ainsworth

Published in 2004 by IWA Publishing on behalf of the World Health Organization

A report on microbial contaminants and growth of microorganisms in distribution networks and the practices that contribute to ensuring drinking-water safety in piped distribution systems.

http://www.who.int/water_sanitation_health/publications/safe-piped-water/en/

Scaling up household water treatment among low-income populations

T. Clasen

Published in 2009 by the World Health Organization

Examines the evidence to date regarding the scalability of household water treatment systems. Its primary aims are to review the development and evolution of leading household water treatment technologies in their efforts to achieve scale, identify the main constraints that they have encountered and recommend ways forward.

http://www.who.int/water_sanitation_health/publications/household_water_treatment/en/

Toxic cyanobacteria in water: A guide to their public health consequences, monitoring and management

Edited by I. Chorus and J. Bartram

Published in 1999 by E & FN Spon on behalf of the World Health Organization

A report on all aspects of risk management, detailing the information needed for protecting drinking-water sources and recreational water bodies from the health hazards caused by cyanobacteria and their toxins.

http://www.who.int/water_sanitation_health/publications/toxiccyanobact/en/

Turbidity: information for regulators and operators of water supplies

Published in 2017 by the World Health Organization

Provides information on the uses and significance of turbidity, and is intended for regulators and operators of drinking-water supplies.

Upgrading water treatment plants

E.G. Wagner and R.G. Pinheiro

Published in 2001 by Spon Press on behalf of the World Health Organization

A practical guide to improving the performance of water treatment plants.

http://www.who.int/water_sanitation_health/publications/treatplants/en/

Water quality—Guidelines, standards and health: Assessment of risk and risk management for water-related infectious disease

Edited by L. Fewtrell and J. Bartram

Published in 2001 by IWA Publishing on behalf of the World Health Organization

Guidance on issues relating to microbial water quality and health, including environmental and public health scientists, water scientists, policy-makers and those responsible for developing standards and regulations.

http://www.who.int/water_sanitation_health/publications/whoiwa/en/

Water safety in buildings

Edited by D. Cunliffe et al.

Published in 2011 by the World Health Organization

Provides guidance for managing water supplies in buildings (e.g. hospitals, schools, care facilities, hotels) where people may drink water; use water for food preparation; wash, shower, swim or use water for other recreational activities; or be exposed to aerosols produced by water-using devices, such as cooling towers.

http://www.who.int/water_sanitation_health/publications/9789241548106/en/

Water safety in distribution systems

Published in 2014 by the World Health Organization

A reference tool to help water suppliers and regulators who are familiar with the water safety plan approach to enhance risk assessment and management and investment planning for their water distribution systems.

http://www.who.int/water_sanitation_health/publications/water-safety-in-distribution-system/en/

Water safety plan: a field guide to improving drinking-water safety in small communities

Published in 2014 by the World Health Organization Regional Office for Europe

Contains short explanations of the water safety planning process (including practical templates and tips) that support WSP development and implementation in small communities

<http://www.euro.who.int/en/health-topics/environment-and-health/water-and-sanitation/publications/2014/water-safety-plan-a-field-guide-to-improving-drinking-water-safety-in-small-communities>

ANNEX 1. SUPPORTING DOCUMENTATION TO THE GUIDELINES

Water safety plan manual: Step-by-step risk management for drinking-water suppliers

J. Bartram et al.

Published in 2009 by the World Health Organization

Guidance on developing and implementing a water safety plan through 11 learning modules, each representing a key step in the water safety plan development and implementation process.

http://www.who.int/water_sanitation_health/publications/publication_9789241562638/en/

Water safety planning for small community water supplies

Published in 2012 by the World Health Organization

Step-by-step guidance for the planning, design and implementation of water safety plans by and for rural and remote communities, including communities with piped schemes, those served by point sources and community-wide water supply services using various technical options.

http://www.who.int/water_sanitation_health/publications/small-comm-water_supplies/en/

Water safety plans: Managing drinking-water quality from catchment to consumer

A. Davison et al.

Published in 2005 by the World Health Organization

Guidance on improved strategies for the preventive management, control and monitoring of drinking-water quality.

http://who.int/water_sanitation_health/publications/wsp0506/en/

Water treatment and pathogen control: Process efficiency in achieving safe drinking-water

M.W. LeChevallier and K.K. Au

Published in 2004 by IWA Publishing on behalf of the World Health Organization

A critical analysis of the removal and inactivation of pathogenic microbes in water to aid the water quality specialist and design engineer in making decisions regarding microbial water quality.

http://www.who.int/water_sanitation_health/publications/water-treatment-and-pathogen-control/en/

Waterborne zoonoses: Identification, causes and control

Edited by J.A. Cotruvo et al.

Published in 2004 by IWA Publishing on behalf of the World Health Organization

An invaluable tool for all professionals concerned with assessing and managing water-borne zoonoses, which are diseases caused by microorganisms of animal origin that also infect humans.

http://www.who.int/water_sanitation_health/publications/waterborne-zoonoses/en/