Framework for Preventative Drinking Water Safety Managements:

WHO Guidelines on Drinking Water Quality, 4th edition

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WHO Guidelines on Drinking Water Quality

- Since 1958
- Evidence-based Recommendations for Safe Drinking Water
- International scientific point of reference on water safety
- Advisory in nature for adaptation to national priorities
Purpose and scope of the guidelines

- Purpose of the Guidelines is *protection of public health*
- The guidelines provide WHO recommendations for *managing risks from hazards that may compromise water safety*
Microbiological aspect

- Health consequences of microbial contamination of drinking water are the *greatest public health concern in water safety*

- Control of microbial contamination *must not be compromised at any time*

- *Multiple barriers corresponding to risk nature and magnitude* are needed for microbial safety of drinking water

- *A preventative water safety management framework and implementing comprehensive water safety plans* ensure drinking water safety
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- 1st recommended in 3rd edition of WHO Guidelines for DWQ 2006
- Ascertained in the 4th edition of the WHO Guidelines for DWQ 2011
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Health-based targets for water safety

Adequate and properly managed water supply systems from source to consumer *achieved through implementing a comprehensive WATER SAFETY PLANS*

A system of independent surveillance

Public health outcomes
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- **Health-based targets** (by regulators)
  - Set by regulatory bodies
  - Based on **public health protection** and disease prevention
  - **Different types** for different situations and purposes:
    - Health outcome
    - Water quality
    - Specified performance
    - Specified technology

- **Adequate and properly managed water systems from source to consumer** (by water operator/utilities)

- **A system of independent surveillance** (by Public Health Authorities)
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Health-based targets
(by regulators)

Adequate and properly managed systems for risk management from source to consumer
(by Utilities)

A system of independent surveillance
(by Public Health Authorities)

Water Safety Management Plan
- Assess risks
- Define and manage control measures
- Establishes monitoring and system assessment procedures (validation, operational, and verification monitoring)
- Defines institutional and oversight responsibilities
- System documentation
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- **Health-based targets**
- **Adequate and properly managed water systems from source to consumer**
- **A system of independent surveillance**

- **Health status**
- **Systematic surveillance to verify the WSP is operating properly**
- **Audit** of WSP (effectiveness of the control measures)
- **Final check** of end product quality
Water Safety Plan steps

WSP cycle

Map the supply system

Identify hazards & assess risks

Review adequacy of preventive control measures

Prioritize & implement improvements

Review WSP
Water Safety Plan Vision

- Institutionalize the Preventative Drinking Water Management System

- Water Safety Plans are developed and executed for all water supply systems
THINK BIG, START SMALL, SCALE UP

Introducing and Scaling Up the Application of Water Safety Plans within Countries
1. UNDERSTAND AND APPRECIATE THE BENEFITS OF A WSP APPROACH

2. ESTABLISH PRELIMINARY WSP VISION

3. ATTAIN PRACTICAL WSP EXPERIENCE

4. ESTABLISH NATIONAL STRATEGY TO SCALE UP WSP IMPLEMENTATION

5. ESTABLISH MECHANISMS FOR ONGOING SUPPORT OF WSPs

6. ESTABLISH POLICY AND REGULATORY INSTRUMENTS TO SUPPORT WSP IMPLEMENTATION

7. IMPLEMENT WSPs AND VERIFY THEIR EFFECTIVENESS

8. REVIEW OVERALL WSP EXPERIENCES AND SHARE LESSONS LEARNED
Resources

Water Safety Plan Manual (Arabic, English & French)

Step-by-step guidance for WSP implementation – tips, tools and case studies
Resources

Water Safety Portal (www.wsportal.org)

Tools, case studies and other resources to support WSP implementation
Resources

Road-Map to Support Country-Level WSP implementation

A ROAD MAP TO SUPPORT COUNTRY-LEVEL IMPLEMENTATION OF WATER SAFETY PLANS

Key steps for commencing and scaling-up WSP implementation
WSP Quality Assurance Tool

Assess the completeness and effectiveness of WSPs

Introduction to the WSP Quality Assurance Tool

Both the WHO Guidelines for Drinking-water Quality and the IWA Demand Charter for Safe Drinking Water advocate for the implementation of Water Safety Plans (WSPs), a risk-based preventative approach to managing drinking-water safety from catchment to consumer. Since their introduction in 2004, WSPs are increasingly being recognized as the most effective approach to ensuring drinking-water safety, and are being promoted by governments and implemented by water suppliers across the globe.

The WSP Quality Assurance Tool provides a mechanism to objectively assess efforts in Water Safety Planning. It aims to support the development, implementation and assessment of WSPs by systematically highlighting the areas where progress is being made and opportunities for improvement. This CD-ROM contains the Tool, the User Manual, resources underpinning the Tool and other WSP related resources.

Why use the WSP Quality Assurance Tool?

- To increase confidence that safe water is consistently being delivered to consumers by ensuring that key elements in the WSP process are not overlooked and that the WSP remains up-to-date and is effective.

Who should use the WSP Quality Assurance Tool?

- The WSP team set up by the water supplier or similar entity managing the organization's drinking-water supplies.

When should the WSP Quality Assurance Tool be used?

- The Tool is likely to be of most benefit when applied at intermediate stages in the cycle of WSP implementation.
Thank you