

Framework for Preventative Drinking Water Safety Managements:

WHO Guidelines on Drinking Water Quality, 4th edition

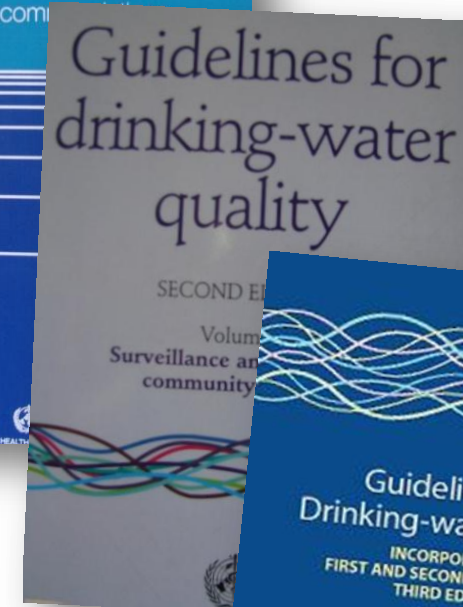
Hamed Bakir,
WHO/EMRO/CEHA

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



1984



1995



2004



2011



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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



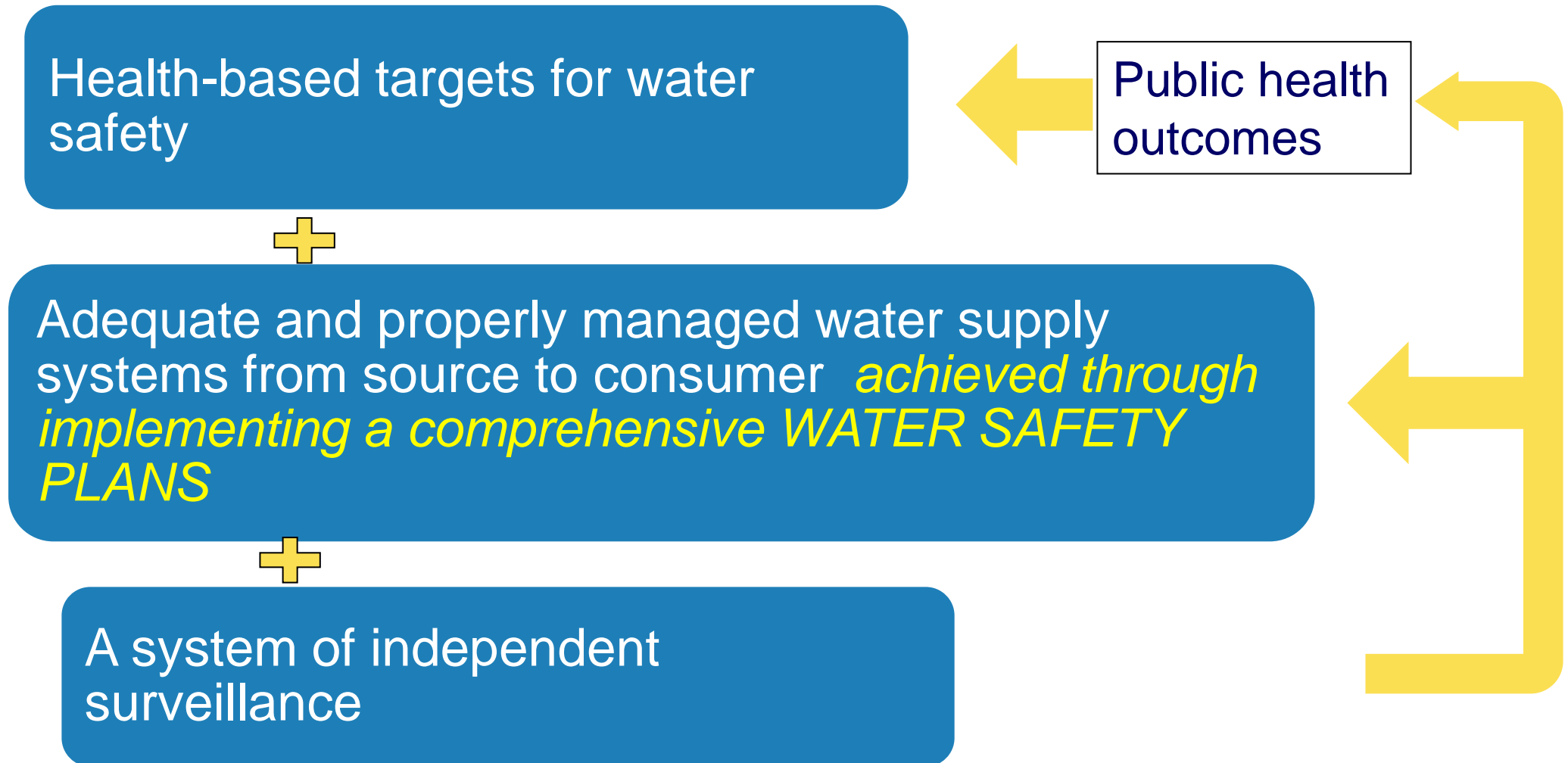
the preventative framework for drinking water safety management

- 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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the preventative framework for drinking water safety management



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Health-based targets
(by regulators)



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



A system of independent
surveillance
(by Public Health Authorities)

- ☐ 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



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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



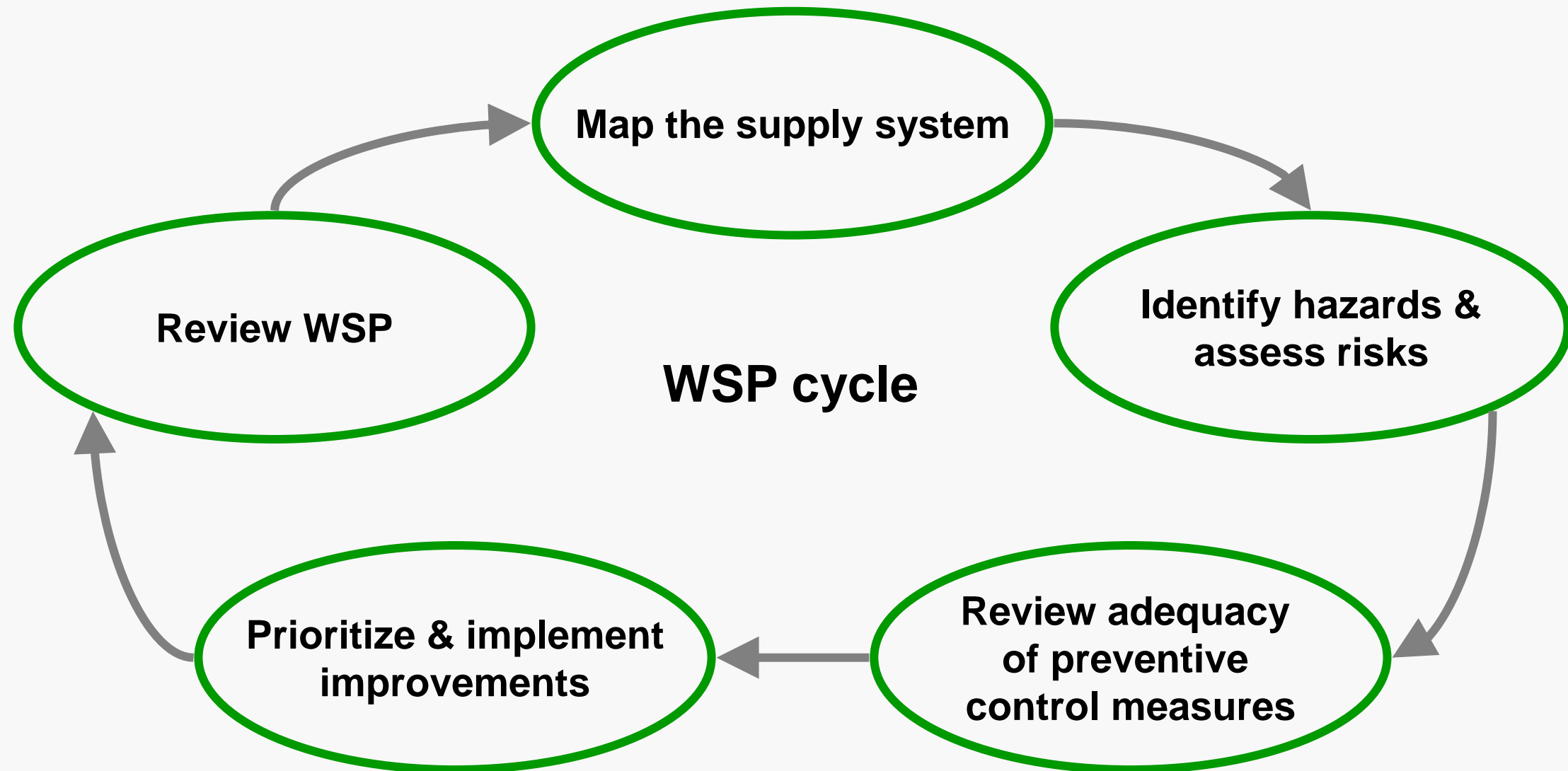
A system of independent surveillance

-
- ☐ 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



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Water Safety Plan steps



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



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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



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Resources

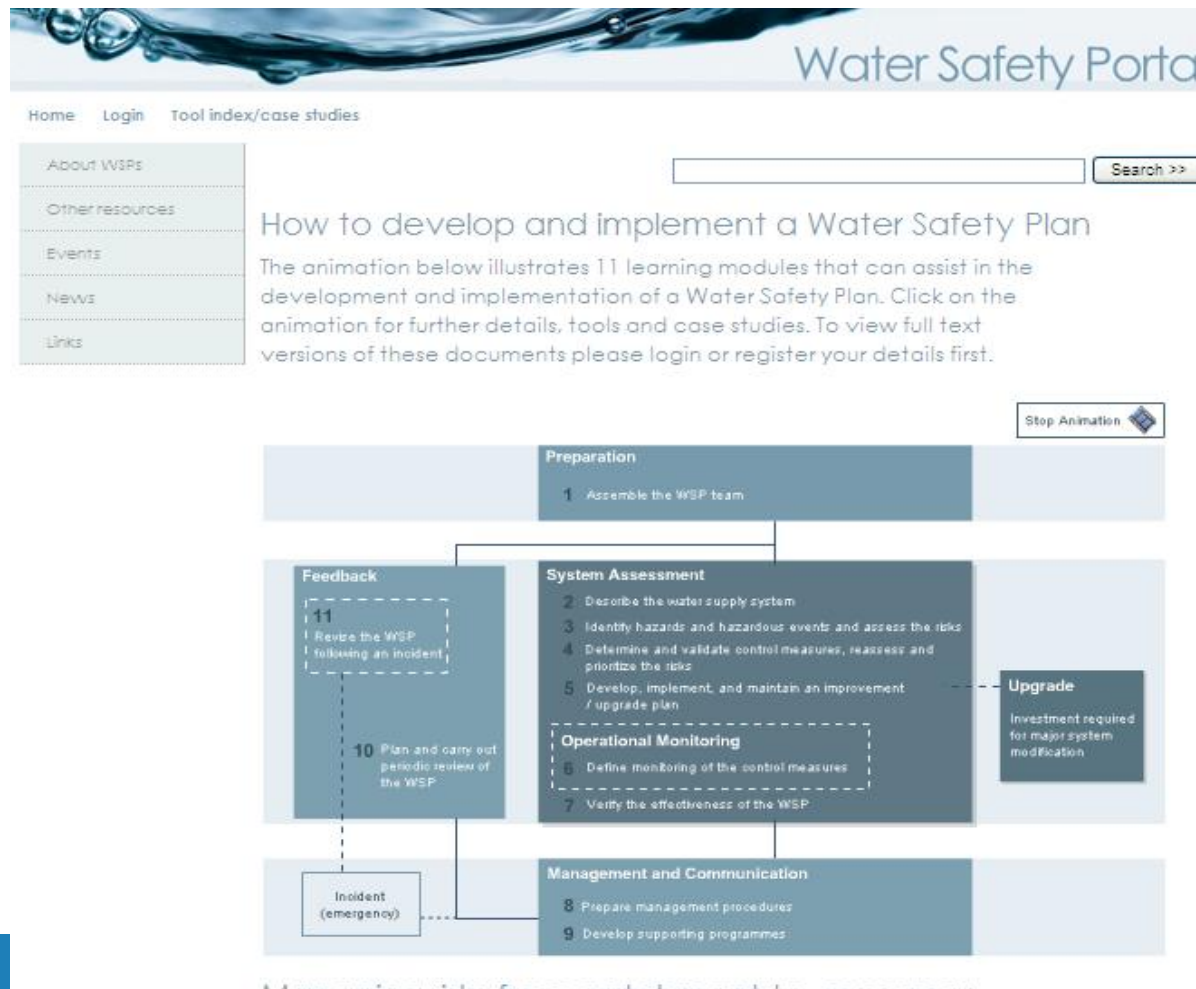
Water Safety Plan Manual (Arabic, English & French)



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

Resources

Water Safety Portal (www.wsportal.org)



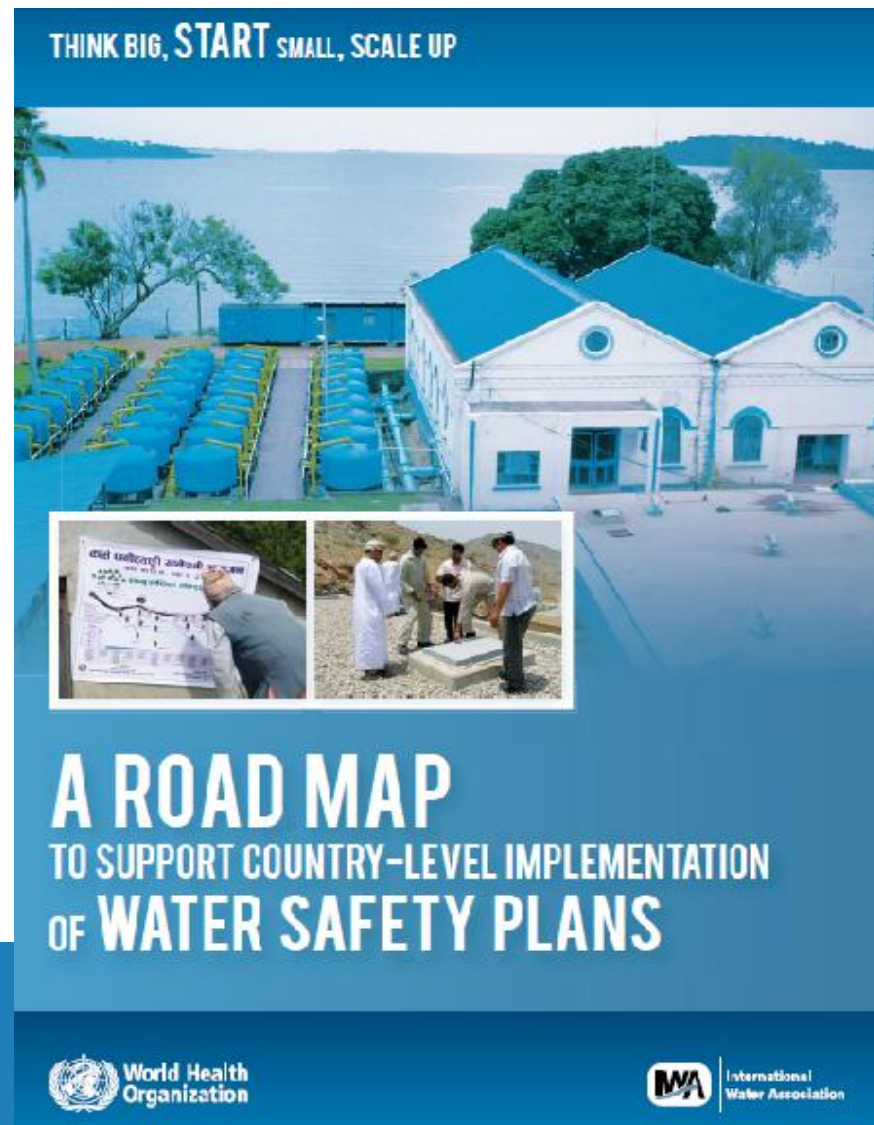
Tools, case studies and other resources to support WSP implementation



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Resources

Road-Map to Support Country-Level WSP implementation



Key steps for
commencing and
scaling-up WSP
implementation

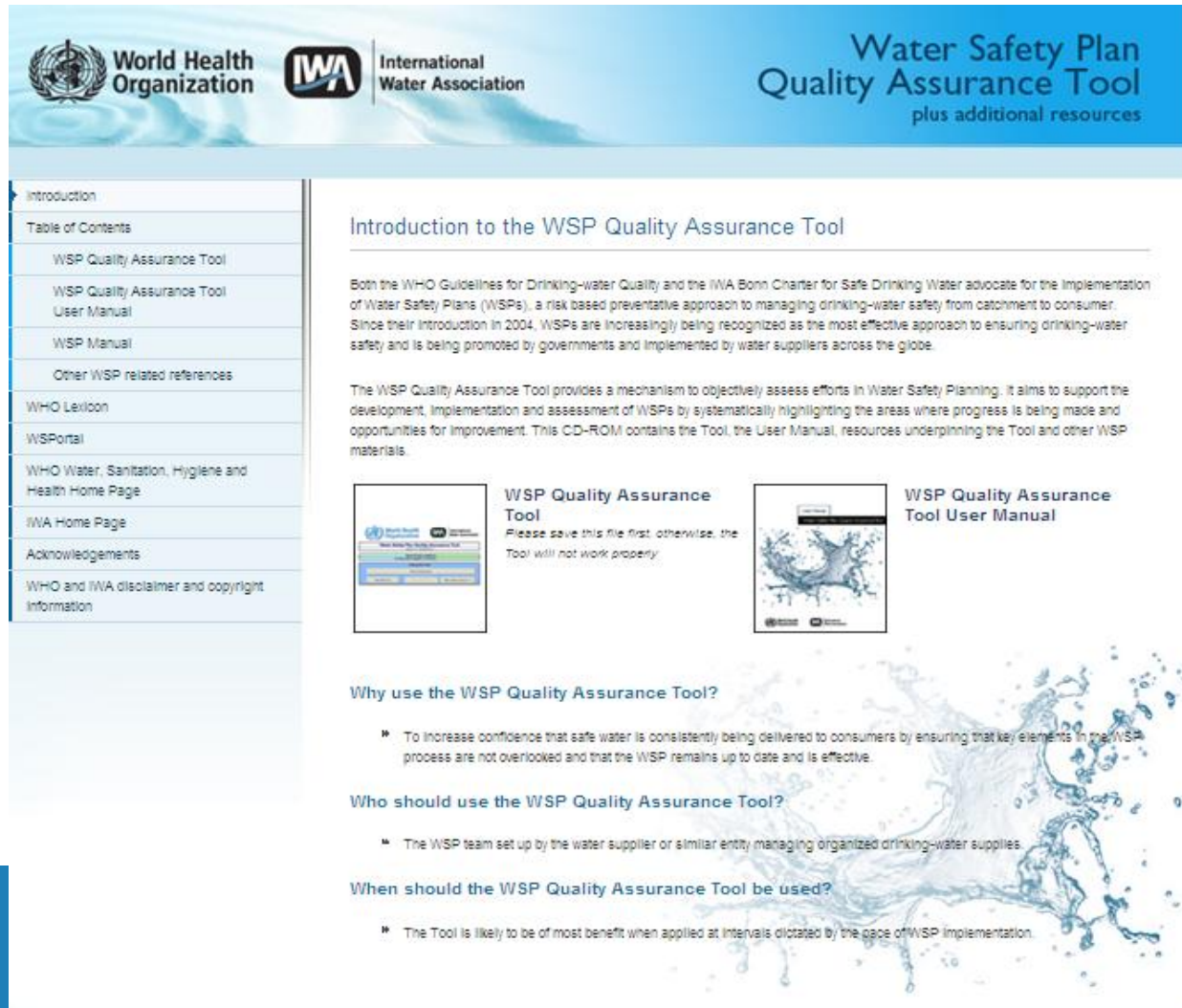


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International Water Association

Resources

WSP Quality Assurance Tool



The screenshot displays the homepage of the WSP Quality Assurance Tool. At the top, the logos for the World Health Organization (WHO) and the International Water Association (IWA) are shown alongside the title "Water Safety Plan Quality Assurance Tool plus additional resources". A left-hand navigation menu lists various sections: Introduction, Table of Contents, WSP Quality Assurance Tool, WSP Quality Assurance Tool User Manual, WSP Manual, Other WSP related references, WHO Lexicon, WSPortal, WHO Water, Sanitation, Hygiene and Health Home Page, IWA Home Page, Acknowledgements, and WHO and IWA disclaimer and copyright information. The main content area features an "Introduction to the WSP Quality Assurance Tool" section, which explains the tool's purpose and provides links to the "WSP Quality Assurance Tool" and the "WSP Quality Assurance Tool User Manual". Below this, there are sections titled "Why use the WSP Quality Assurance Tool?", "Who should use the WSP Quality Assurance Tool?", and "When should the WSP Quality Assurance Tool be used?", each followed by a bulleted list of reasons or guidelines. The background of the page features a blue water splash graphic.

World Health Organization **IWA** **International Water Association**

Water Safety Plan Quality Assurance Tool plus additional resources

- Introduction
- Table of Contents
- WSP Quality Assurance Tool
- WSP Quality Assurance Tool User Manual
- WSP Manual
- Other WSP related references
- WHO Lexicon
- WSPortal
- WHO Water, Sanitation, Hygiene and Health Home Page
- IWA Home Page
- Acknowledgements
- WHO and IWA disclaimer and copyright information

Introduction to the WSP Quality Assurance Tool

Both the WHO Guidelines for Drinking-water Quality and the IWA Bonn 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 is 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 materials.

WSP Quality Assurance Tool
Please save this file first, otherwise, the Tool will not work properly.

WSP Quality Assurance Tool User Manual

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 organized drinking-water supplies.

When should the WSP Quality Assurance Tool be used?

- The Tool is likely to be of most benefit when applied at intervals dictated by the pace of WSP implementation.

Assess the completeness and effectiveness of WSPs



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Thank you



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