

WORKSHOP ON WATER AND HEALTH IN CENTRAL EUROPE: SHARING EXPERIENCE ON THE IMPLEMENTATION OF THE PROTOCOL ON WATER AND HEALTH IN HUNGARY, ROMANIA, SLOVAKIA AND SLOVENIA

Surveillance of water-related disease

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Outline

1. Obligations under the Protocol on Water and Health
2. Key elements of Policy Guidance
3. Water Safety Plans

Legal obligations under the Protocol: Setting targets (Art. 6)

- Establish and publish **national or local targets** for the standards and levels of performance that need to be achieved or maintained for a **high level of protection against water-related disease**
- Make provisions for public participation
- Except where irrelevant for preventing, controlling, or reducing water related diseases, targets shall cover:
 - **Quality of drinking water supplied**
 - **Reduction of the scale of outbreaks and incidents of water-related disease.**

Legal obligations under the Protocol: Response systems (Art. 8)

Establish, improve and maintain national and/or local surveillance and early warning systems which will:

- **Identify outbreaks or incidents of water-related disease or significant threats** of such outbreaks or incidents, incl. those resulting from water-pollution incidents or extreme weather events
- **Give prompt and clear notification to public authorities** regarding such outbreaks, incidents or threats
- In the event of an imminent threat to public health from water-related disease, **disseminate to members of the public who may be affected all information** that is held by a public authority and that could help the public to prevent or mitigate harm
- **Make recommendations** to the relevant public authorities and where appropriate, to the public regarding preventive and remedial actions

Legal obligations under the Protocol: Response systems (Art. 8)

- Prepare comprehensive **national and local response plans** for responses to such outbreaks, incidents and risks in due time
- Ensure that the relevant public authorities have the **necessary capacity to respond** to such outbreaks, incidents or risks in accordance with the relevant contingency plan.

Policy and technical guidance



http://www.euro.who.int/_data/assets/pdf_file/0009/149184/e95620.pdf

http://www.euro.who.int/_data/assets/pdf_file/0011/149186/e95619.pdf

www.unece.org/env/water

- Support countries in the implementation of water-related disease surveillance

**Drinking-water related outbreaks →
simultaneous infection of a large number
of consumers**

**Investing in
prevention produces
benefits far greater
than those directly
related to the cost of
treatment for these
human pathologies**

**Over 30 million cases
of WRDs outbreaks
could be avoided
annually by means of
adequate water and
sanitation
interventions**



Setting up a surveillance system for water-related diseases

- Public health surveillance systems represent the ongoing and systematic collection, analysis and interpretation of health data to describe and monitor a health event.
- The surveillance of WRDs should be included within the context of more general surveillance systems for communicable diseases.
- **Surveillance systems should cover the entire water supply system**, incl. sources and activities in the catchment, transmission infrastructure (piped or unpiped), treatment plants, storage reservoirs and distribution systems.
- A specific surveillance system for waterborne disease outbreaks should include a method for evaluating the evidence that an outbreak is indeed attributable to contaminated water.

Setting up a surveillance system:

Local level

- Outbreak management team at local health unit to:
 - Review evidence of an outbreak
 - Identify the population at risk
 - Decide on control measures
 - Provide quick and adequate information to the public
 - Make arrangements for the commitment of personnel and resources.
- **Need to link routine health surveillance data with data on the quality and distribution of water supplies in the same area.**

Setting up a surveillance system:

Regional level

- Outbreak management team at regional level, to act after outbreaks to:
 - Prepare a notification to be sent to national agencies
 - Prepare a report to be sent to regional authorities responsible for management measures
 - Provide adequate information to the public
 - Provide feedback on surveillance results and analyses to the local outbreak management team in order to sustain the interest and cooperation of the data collectors and providers

Setting up a surveillance system:

National level

- Outbreak management team at national level:
 - Cross-sectoral team composed of representatives from health, environment, waterworks, sanitation, agriculture, animal husbandry, aquaculture, to:
 - Draft notifications on water-related diseases and provide information to the public
 - Map water-related diseases on a national scale, possibly using GIS
 - Identify most critical areas or situations
 - Assess functionality of whole surveillance system
 - Coordinate activities in the case of transboundary water bodies

Response systems

- Phases of the response phase of an outbreak management approach:
 - (a) Trigger event: outbreak detection and confirmation
 - (b) Acute reaction: outbreak declaration, quick preliminary hazard investigation, immediate control measures
 - (c) Analysis: analytical hazard investigation, continuous re-evaluation and control measures
 - (d) Normalization: conclusion of outbreak and declaration of normalization
 - (e) End: evaluation, formal report, lessons learned.

Evaluation of surveillance systems

- Against the following criteria:
 - Sensitivity
 - Timeliness
 - Representativeness
 - Data quality

Water Safety Plans

- « The use of a comprehensive risk assessment and risk management approach that encompasses all steps in water supply from catchment to consumer » (WHO, 2004)
- Applicable to ensuring the safety of water in all types and sizes of water supply systems
- Can be developed for each individual drinking-water system, whether large- or small-scale.
- A tool to improve surveillance of water-related disease

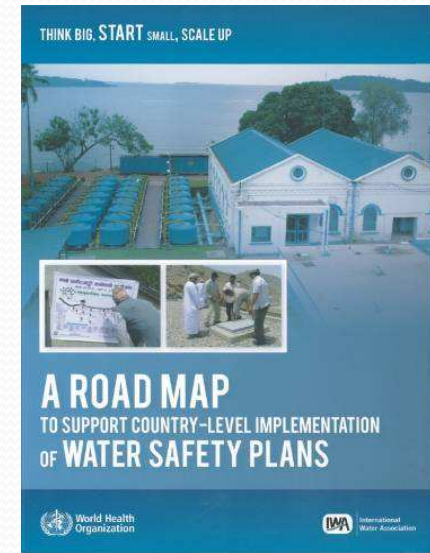
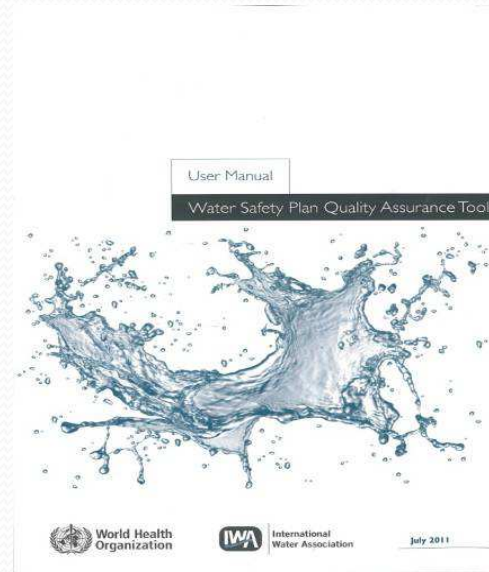
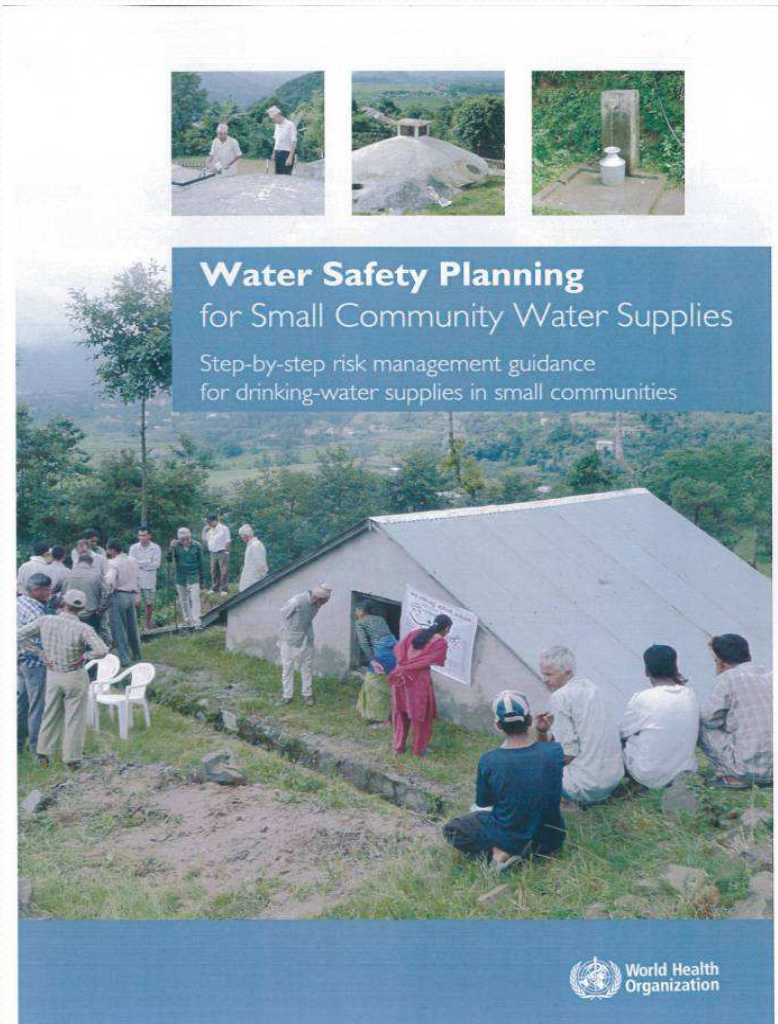
Water Safety Plans – key steps

- WSP team creation
- Description of water supply system
- **Identification of hazards, hazardous events and risks**
- **Determination & validation of control measures, reassessment, prioritization of risks**
- **Development, implementation and maintenance of an improvement/upgrade plan**
- Operational monitoring

Water Safety Plans – key steps

- Verifying effectiveness of WSP
- Preparation of management procedures
- Development of supporting programmes
- Conduct of periodic reviews
- Revision after incident

Water Safety Plan Guidance materials



Questions for discussion

Surveillance of water-related disease

- Are your established national systems for the surveillance of water-related diseases functioning well?
- What are existing challenges with regard to their efficient functioning and effectiveness?
- Is coordination and communication between the local, regional and national level functioning well?
- Can your surveillance system trace outbreaks and incidents back to contaminated water? If not, is it a problem?
- Which targets related to the surveillance and prevention of water related disease did you set?
- How best to link water safety plans with surveillance and response systems?

