

For our Environment

13th IWA Specialized Conference on Small Water and Wastewater Systems

Supporting policy action to improve small-scale water supply and sanitation systems

Bettina Rickert

German Environment Agency (Umweltbundesamt - UBA)

Enkhtsetseg Shinee, Oliver Schmoll, WHO European Centre for Environment and Health

Eva Barrenberg, formerly consultant at WHO European Centre for Environment and Health

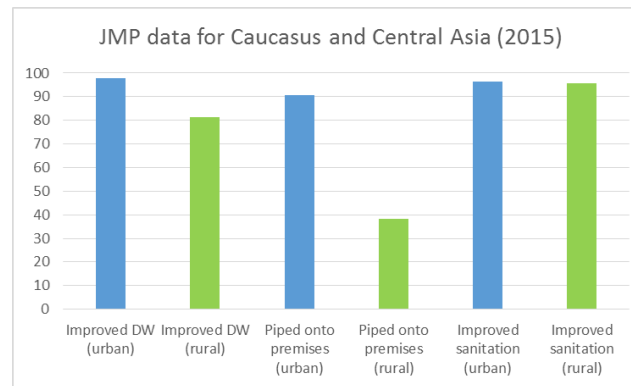
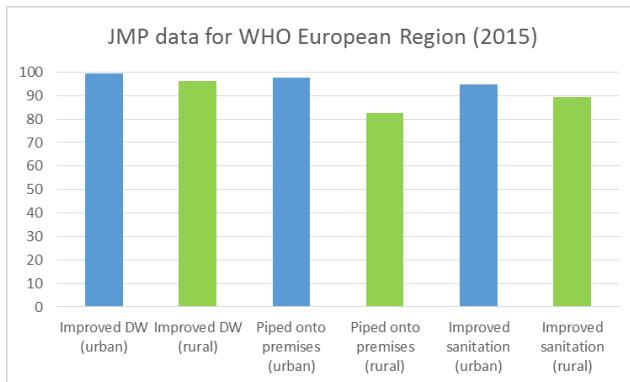
Dragana Jovanovic, Serbian Institute of Public Health

Margriet Samwel, Women in Europe for a Common Future (WECF)

Small scale systems' features

WHY ADDRESS SMALL-SCALE SYSTEMS?

IN THE PAN-EUROPEAN REGION, 30% OF THE PEOPLE LIVE IN RURAL AREAS - URBAN VS. RURAL SETTINGS:



Data source:
WHO/UNICEF Joint
Monitoring Programme
(JMP) for Water Supply
and Sanitation

ADDRESSING DRINKING-WATER AND SANITATION TOGETHER:

- emerging attention to sanitation – MDG on sanitation not met in European Region
- increasing policy attention in other sectors
- protecting human health from potential risks from sanitation

LIMITED INFORMATION AVAILABLE AT NATIONAL LEVEL ON SITUATION AND CONDITIONS:

- SDG 6 calls for universal and equitable access to safe and affordable drinking water for all by 2030 → data gathering challenge

Protocol on Water and Health

Joint secretariat **WHO Regional Office for Europe and UNECE**

WHO **European Region** (53 Members States)

Long-term **policy process**

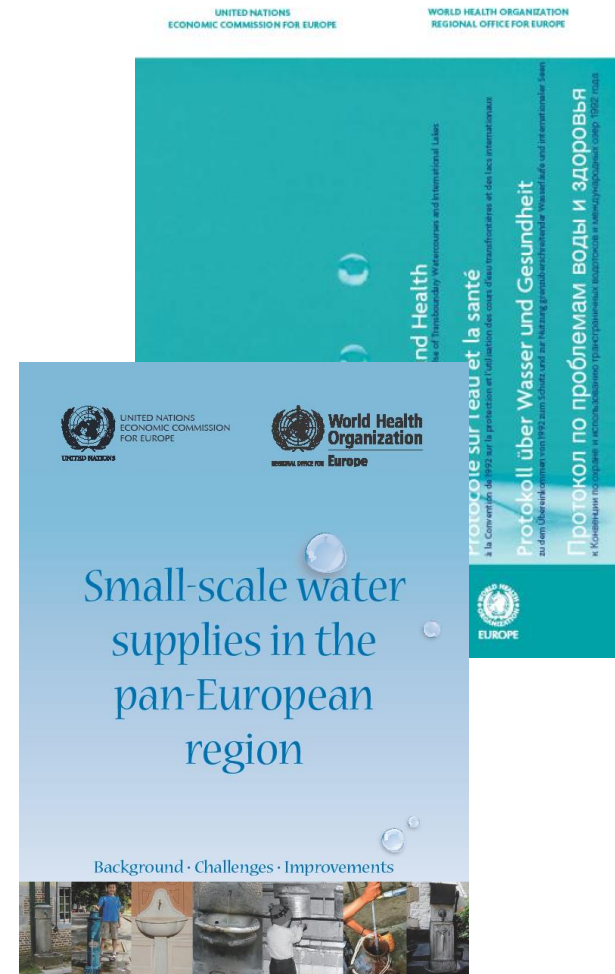
Main aim is to **protect public health** from water-related diseases

Programme area „**Small-scale water supplies and sanitation**“

Awareness raising document: status quo & problem description

Collection of tools and good practices

Situation assessment of small supplies



Survey small-scale water supplies /1

Disseminated in June 2012, questionnaires were returned by 43 of the 53 Member States in the WHO European Region (return rate of 81%); reported information ranging from 2008-2012

Information requested on regulation, numbers and types of small-scale water supplies, water sources used, operators of such supplies and on drinking-water quality

Covering both small-scale public and on-site / individual systems

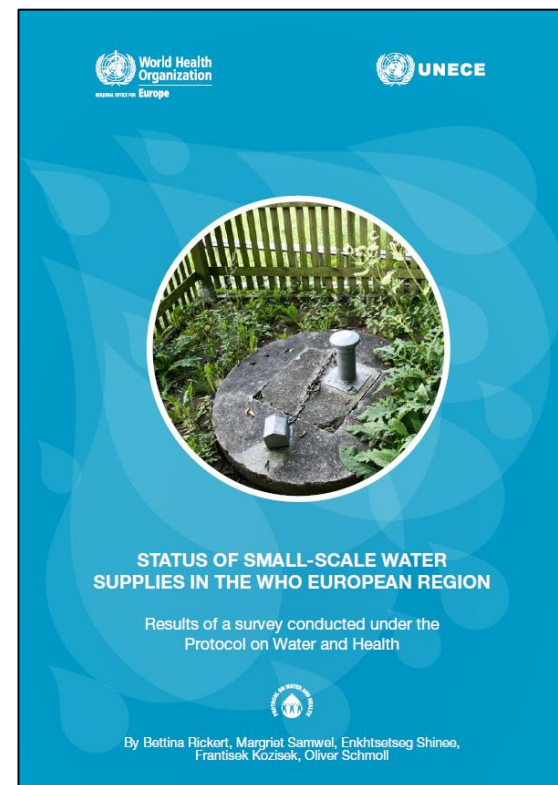
Estimated population served by small-scale systems in the WHO European Region:

Category of small-scale water supply	Proportion of population served by small-scale systems according to survey responses (%)
Population served by individual and non-piped supplies or supplies serving ≤ 50 people ($\leq 10 \text{ m}^3/\text{day}$)	7
Population served by supplies serving 51–5000 people ($>10\text{--}1000 \text{ m}^3/\text{day}$)	16
Total	23

Survey small-scale water supplies /2

RESULTS UNDERPIN PREVIOUSLY IDENTIFIED CHALLENGES:

- **Untrained or undertrained staff:** No **minimum qualifications** or competences required for operators of small public supplies according to 48% of the responses
- **Broad geographical spread and remoteness** leading to limited independent surveillance: information on **surveillance requirements** for small-scale water supplies showed that 11% require self-checking by operators, but no independent surveillance, 5 % require neither self-checking nor independent surveillance
- **Unregulated supplies, or different legislation:** **Legislation and regulations** typically also apply to small-scale public water supplies (87%), however, only in 36% also to individual supplies, partly only for commercial activities
- In 19%, **responsibility for regulating water supplies** with a single institution → coordination with other sectors is crucial
- Stronger influence anticipated effects of **climate change** (extreme variations in quantity, quality)

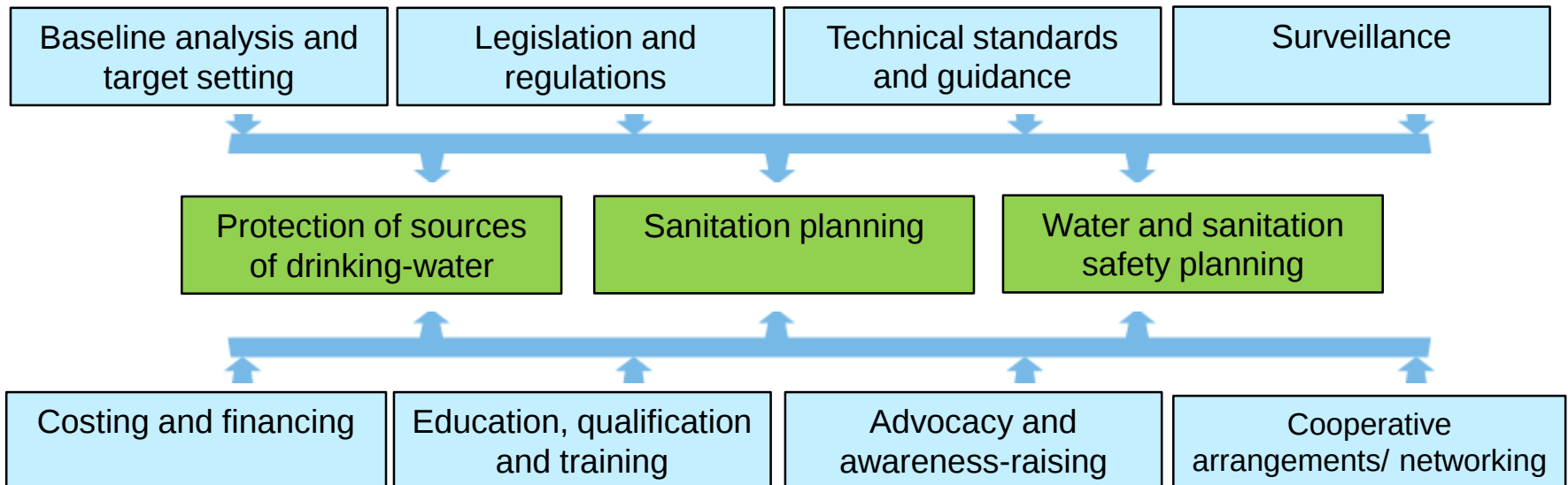


Collection of tools and good practices /1

Primary target audience: policy makers

Covers

- Drinking-water and sanitation
- Small-scale public systems and on-site systems
- Settings across the region



Collection of tools and good practices /2

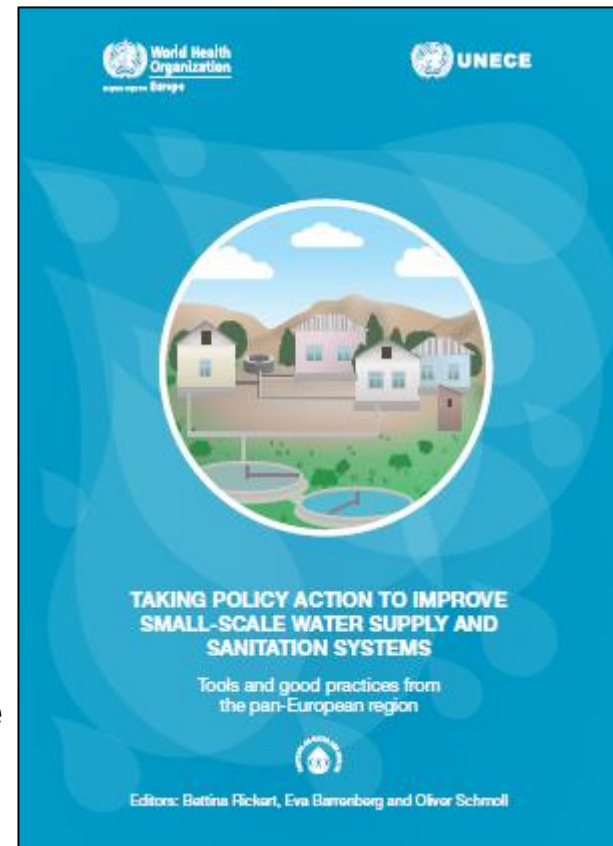
Presents information and examples that illustrate how the tools can be applied in practice, including 42 case studies from 18 countries across the WHO European Region

Financial benefits outweigh the investments in improvements to water and sanitation systems: In the WHO European Region, an investment of US\$ 1 in small-scale water supplies results in a mean return ranging from US\$ 2-21.

Improving the human rights situation: reduction in rural–urban disparities and other inequities

Increasing gender equality

To identify the need to adopt or amend policies and to set national targets for improvement, it is important to determine and appreciate the status quo of small-scale systems in a **baseline analysis**, establishing a clear overview of areas particularly in need of policy attention, and informing mobilization of adequate resources for change.



Collection of tools and good practices /3

Examples from the Region are presented on:

- Targets set on small-scale systems under the Protocol
- Legal and regulatory requirements for small-scale water supplies and for sanitation systems
- Technical standards and guidance documents for small-scale water supplies and for sanitation systems
- Financial solidarity mechanisms
- Regulations for source protection measures in small-scale water supply catchments in the WHO European region
- ...

Case studies are presented on:

- Rapid assessments of small-scale water supply systems
- Regulation, institutional framework and financing of small-scale sanitation systems
- Risk-based surveillance approaches for domestic wastewater treatment and drinking-water systems
- A private water supplies grant scheme
- Competence tests for waterworks employees
- Municipal associations for water supply and sewerage
- Wastewater reuse
- Facilitator training and tools for WSP, combining WSPs and SSPs
- ...

Examples and case studies included in every chapter of the document

Cooperative arrangements: example case study /1

Main advantages for municipalities in cooperative arrangements:

- **capacities and efficiency increase** as a result of extended human, technical and financial resources, e.g. several systems benefit from the training that one person receives
- **flexibility in applying funds** if several municipalities contribute and agree jointly on priorities for their use
- **pooling of knowledge and experience** of staff → higher levels of professionalism
- **Jointly covering drinking-water and wastewater** generates synergetic effects, e.g. construction cost savings when pipes for both systems are placed at the same time, and strong communication channels between staff

Addressing drinking-water and sanitation together: municipal associations for water supply and sewerage in the Czech Republic

- Since 1993: municipalities responsible for water supply and sanitation → more than 1200 small operators.
- Small villages realized advantages of joining forces with neighbouring municipalities → establishment of municipal associations to manage drinking-water & sewerage systems

Protection of drinking-water sources: example case study /2

Main advantages for protecting sources of drinking-water:

- first step in the **multibarrier approach** → reduces requirements and costs for later steps in treatment and disinfection
- particularly relevant for **small-scale systems**, as
 - treatment is often lacking or limited in scope and availability, and
 - potentially contaminating activities are often in close proximity to the source of drinking-water

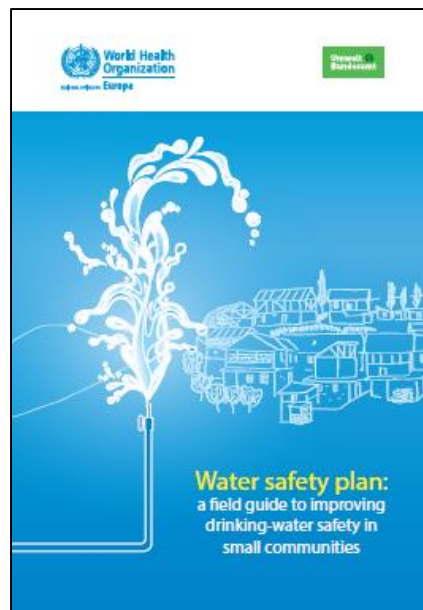
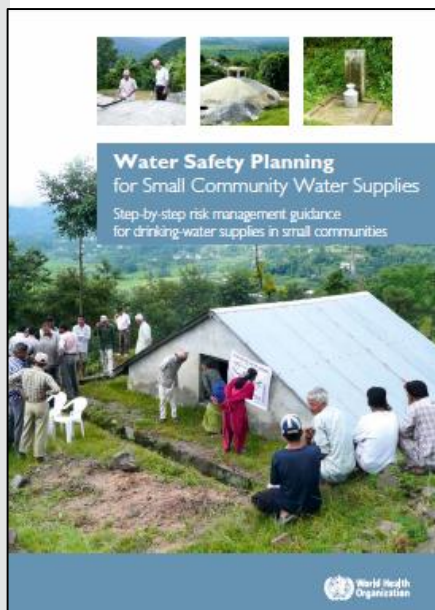
Collaboration between drinking-water supply and agriculture: Cooperative agreements with farmers in Germany

- Federal states may establish “**drinking-water protection areas**” to protect catchments of public drinking-water supplies; in addition, **voluntary cooperative agreements** between water suppliers and farmers are an important instrument in some federal states
- May include e.g. advice for farmers from specially trained advisors, and providing financial aid for implementing the terms of the agreements

Safe management of small-scale systems

The **Water Safety Plan (WSP) approach** is recommended by the WHO as the most effective means of ensuring the safety of water supplies, addressing the entire supply chain from catchment to the point of consumption. The WSP approach is suitable for all sizes of system and levels of development.

Sanitation Safety Plans (SSPs) are, like WSPs, based on preventive risk assessment and management principles, and apply the approach from the point of sanitation waste generation to the waste's release to the environment through final use and/or disposal.



Thank you very much for your attention

Bettina Rickert

bettina.rickert@uba.de

www.umweltbundesamt.de/en/protocol-on-water-health