

WECF



Women in Europe for a Common Future

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Specific Challenges of WSP in Small-scale Water Supply and Sanitation Services

Outline

- Who is WECF?
- Experiences of WECF in the rural WHO European region
- Human handling and water resources
- WSP in rural settings - a multi-stakeholder process
- Examples of WSP in rural areas
- Challenges of WSP in rural settings

WECD: A Non-governmental, Nonprofit Organisation

- International Network of 100 member organisations in 40 countries
- 3 Offices: the Netherlands, Germany, France

Working on

- Safe chemicals for all
- Safe energy for all
- Safe food for all
- Safe water and sanitation for all
- Gender and human rights

Sustainable Water and Sanitation Projects

by WECF & Partner Organisations in the EU and the EECCA region

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Belarus
Our partner organisations: ECOPROJECT, FAIR NATURE
1) Monitoring nitrate in well water with chlorine pupils
2) Urine diversion toilet in a cultural centre in Belarus

Ukraine
Our partner organisations: BSW C. MAMA - KI, VOOR OUDEREN
1) Room with urinal in a school with urine diverting dry toilets and 2) training on making pumps

Romania
Our partner organisations: FUR ORTELEORAN, FEMEI PENTRU UNIVELOR DE CIVILĂ, NEAMĂT ET SĂMĂTĂ, ULTRAS, O.R.O
1) Demonstration of re-use of urine at a school and 2) Training on how to make pumps in Romania

Bulgaria
Our partner organisations: EARTH FOR EVER, ECO WORLD
1) Urine diverting dry toilet with a cultural filter in a cultural centre in Bulgaria
2) Urine view of urine diverting toilet

Moldova
Our partner organisations: ECOFORUM, ECO-SPECTRUM, ECO-TIRAS, WISDOM
1) Demonstration of urine diversion
2) Rainwater harvesting for a kinder garden in Moldova

Georgia
Our partner organisations: FOUNDATION CAUCASUS ENVIRONMENT, GEMLA, FOE, GREENS MOVEMENT OF GEORGIA, ECO, PARTIS, SEMA, SOCA
1) Rainwater harvesting system
2) Rainwater harvesting toilet production and 3) Resource centre for sustainable development in Georgia

Armenia
Our partner organisations: AWINE, CHARITABLE WOMEN, ECOCLUB
1) Rainwater harvesting dry toilet for a school and 2) vector sampling from agricultural drinking water in Armenia

Azerbaijan
Our partner organisations: EKOT
Introduction to sustainable sanitation in Azerbaijan

Uzbekistan
Our partner organisations: MURIBUZ
1) Urine diversion toilet for household
2) Children from Uzbekistan

Kazakhstan
Our partner organisations: YOUNG GUARDS OF NATURE, MCHMUGAN
1) Urine view of urine diverting toilet in Kazakhstan
2) Inside view of urine diverting toilet in Kazakhstan

Kyrgyzstan
Our partner organisations: SOCIAL UNION AGAHRU ALCA, BISHKEK, CAJUL HET, ULGALUNISCH
1) Training on sustainable sanitation
2) Rainwater harvesting urine diverting toilet in Kyrgyzstan

Tajikistan
Our partner organisations: JASPD MAU, YECT, SAFO
1) Urinediverting school toilet building under construction in Tajikistan

Afghanistan
Our partner organisation: KATA'CHI e.v.
A new school with urine diverting dry toilets for the children in Afghanistan

Women in Europe for a Common Future

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From 2002 to 2012
1000 individual UDDT
52 school UDDT

WECF receives financial support from:
- Nordic Council of Ministers, European Union,
- Environment Agency of Europe, Allianz,
- European Commission, German Ministry of the Environment,
- German Federal Foundation for the Environment,
- European Environmental Bureau,
- Private donors, United Nations Environment

Water and Sanitation projects by
WECF and partner organisations:

- Construction of urine diverting dry toilets for households, public places and schools
- Construction of urine diverting dry toilets
- Construction of urine diverting dry toilets for schools
- Demonstrating the effects of urine in a fertilizer
- Constructing soil filters and constructed wetlands for treatment of wastewater
- Monitoring of drinking water quality
- Cleaning and construction of drinking water wells
- Developing Water Safety Plans with involvement of schools
- Rehabilitation of wastewater systems for sustainable development



Practice in Rural Areas

WECEF Experiences:



- Majority of rural villagers lack:
 - Awareness of the impact of individual human activities on water quality. Legislation might be present, but is not implemented in practice (e.g. sanitary zones).
 - Participation in decision-making processes
 - Access to information
- In general, identifying the problem in itself does not lead to action from local citizens or governments, much less from national authorities

Negative Practices

Man-made Pollution of Water Resources

1. Agriculture: non-point (diffuse) sources

Inadequate application of synthetic fertilisers, pesticides, and manure.

2. Communities: point sources

Infiltration / Runoff from:
pit-latrines, septic tanks, livestock, illegal dumping sites,
inadequate sewage systems, gardening, etc.

Benefits of WSP

- Communities understand the ecological interactions impacting water quality
- Communities realise their ownership for water quality

Positive aspect

Ground water quality can be improved by adequate individual behaviour through WSP

The Basics of a WSP in Rural Settings

1. Monitoring Water Quality and Investigation

- water tests on all stages of the water system
- collecting information/interviews from all stakeholders
- sanitary inspections of wells and public taps
- review of water protection zones

2. Local Capacity Building/Mobilisation of the Community

- providing background information on water and possible hazards
- understanding the water supply system and related issues
- sharing results and engaging in discussions

3. Involving Community in Decision-making Processes

- identifying and formulating water and sanitation related problems
- action-planning to improve the situation
- accountability: *Who is responsible for what?*

Responsibilities

Stakeholders

*water quality,
protection zones,
operation and
maintenance,
monitoring, financing,
public health, defining
policies and
strategies*

Problems

*leakages, illegal
dumping of waste and
wastewater,
outstanding payments,
nitrate, pesticide
microbiological and
industrial pollution,
unintended usage of
water, etc.*

**Ministries,
Local and
regional water and
health authorities and
institutions, mayor,
citizens, farmers,
industry, schools,
NGO's**

Example

In spite of protection zones
unsafe levels of nitrate and pesticides values are
often found in ground water in agricultural areas

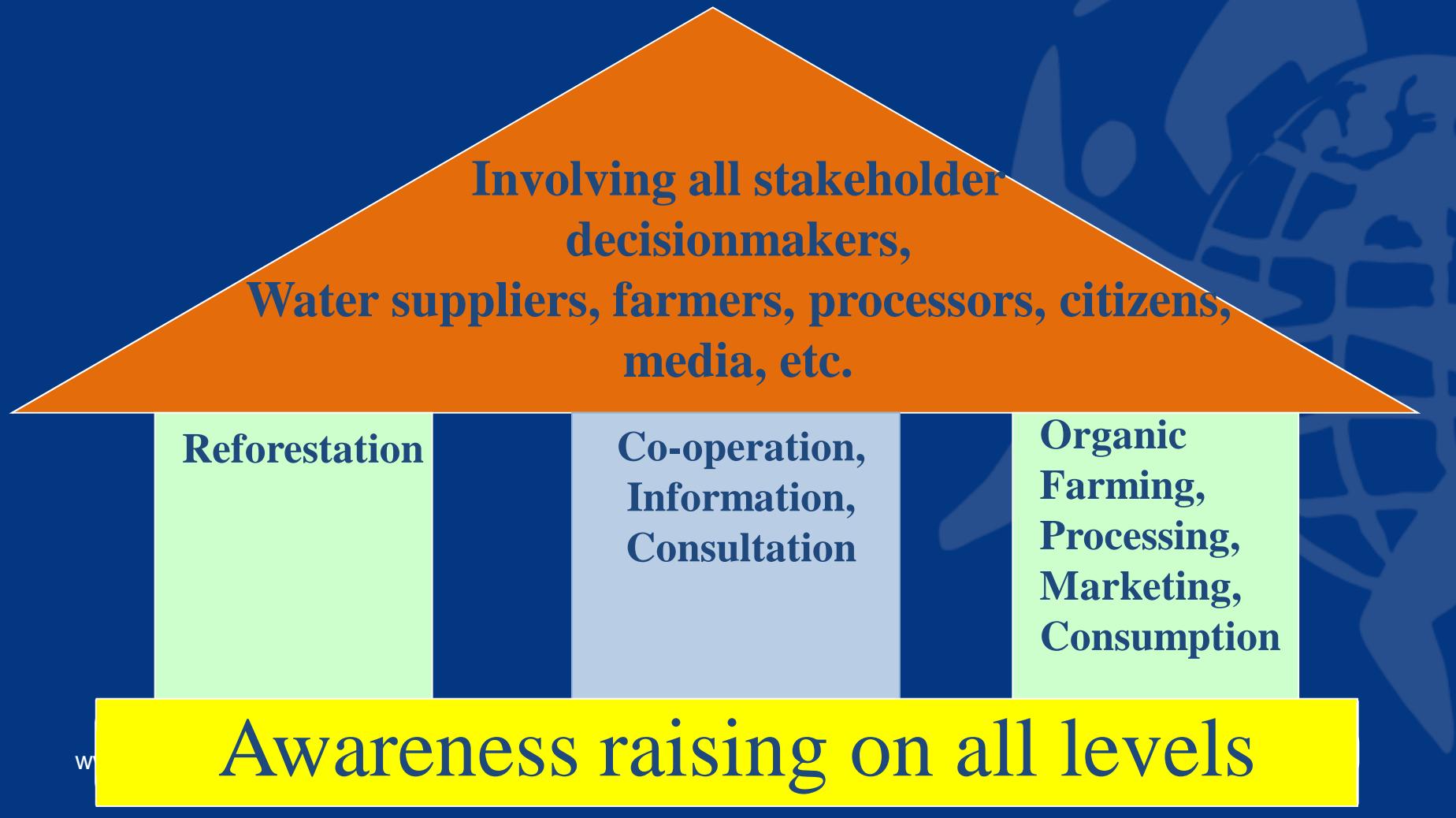


Groundwater protection zones



Example

Strategy for restoring water quality in German region with groundwater polluted with nitrate



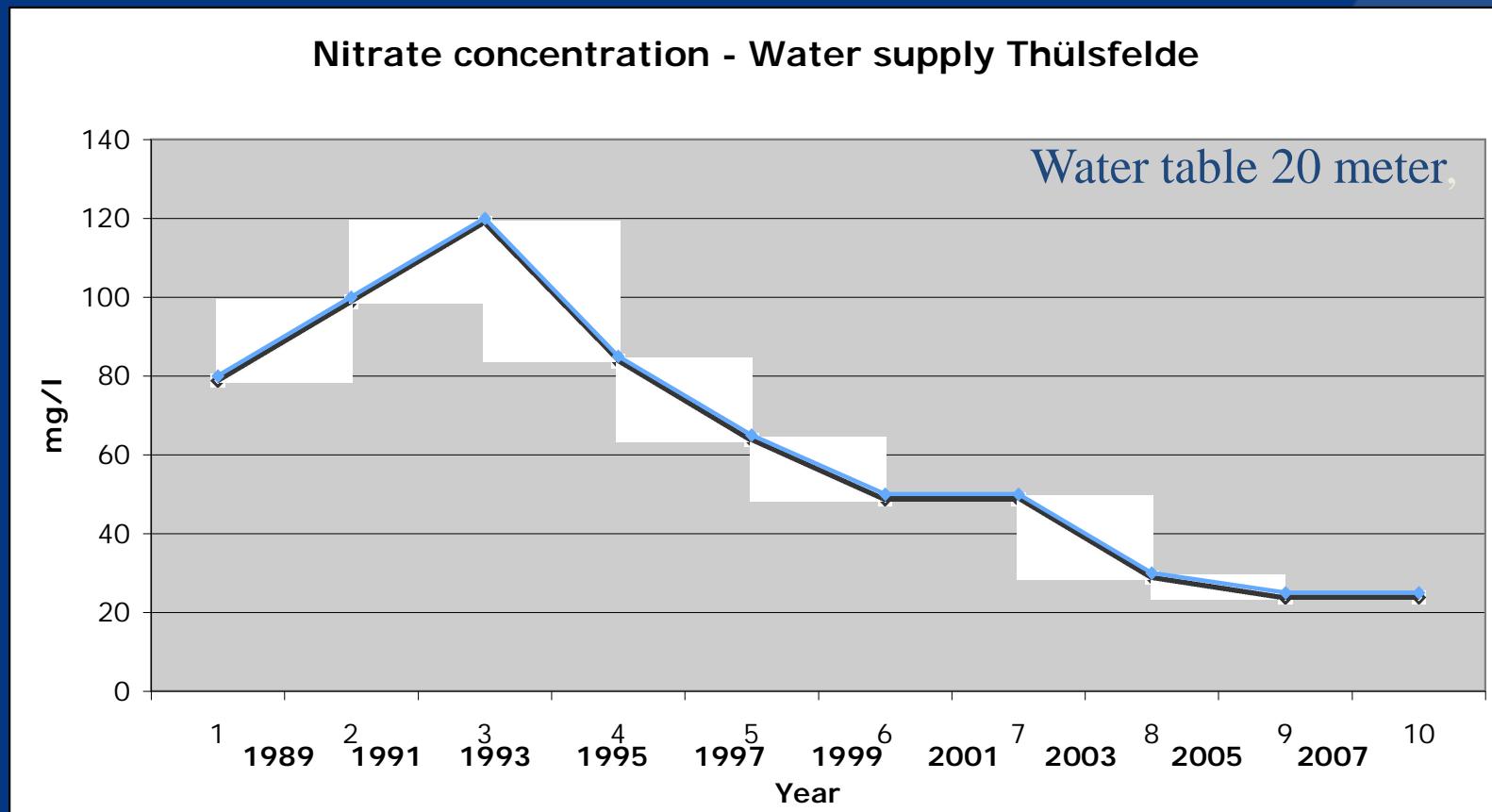
A Packet of Measures

- Review of protection zones
- Cooperation with farmers through face to face consultation
- Conversion to organic farming or agreements on fertilising
- Bonus for farmers using less fertilizer or no pesticides
- Buying or renting sensible protection areas for reforestation
- Developing product (water and food) marketing strategies
- Cooperation with local meat processors and super markets
- Awareness raising among the citizens (e.g. Logo for products from sanitary zones and involving local media)
- Transparency about problems, solutions and finances
- Covering of costs: introduction of additional water-cent/increased food prices

Case study: Thülsfelde, Germany

NO_3 concentration in groundwater

Before and After Measures on Sustainable Farming Strategies



Challenges on Implementing WSP for (Very) Small-scale Water Supplies

The WHO publications on WSP are excellent, but:

- the focus is mainly on organised water supply utilities
- the WSP team should have adequate experiences and expertise

The following problems exist in many villages:

- Low knowledge of water and sanitation issues
- Low human and financial capacity
- Little to no awareness of the benefits of communication and transparency for citizens



Schools as Facilitators for Safe Water and Sanitation for Developing WSP?

Tasks

- Cooperation with all stakeholders
- Monitoring water quality
- Surveying perceptions, problems and views
- Risk assessments
- Awareness raising and community mobilisation
- Increasing transparency within the communities
- Identifying and formulating action plans
- Working towards and lobbying for access to safe water and sanitation

What we did

Adaptation of the WSP approach for small-scale water supplies to schools

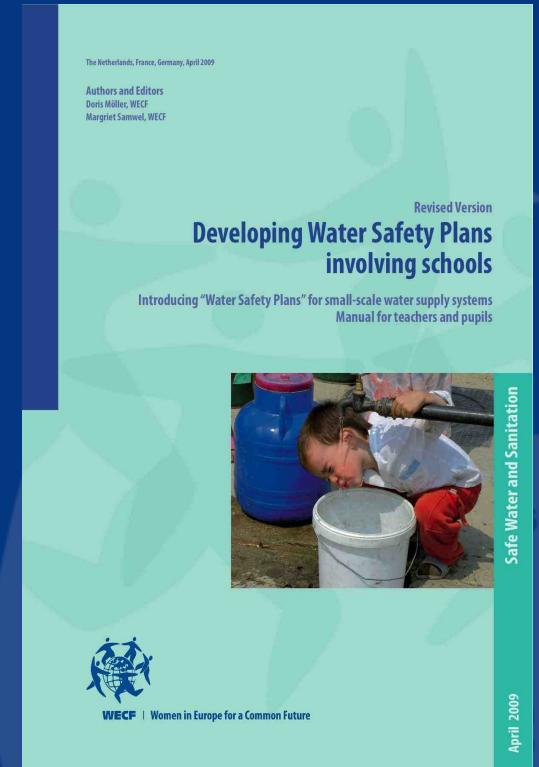
► WSP - Toolbox for schools includes

- Manuals in the local language, including:
 - Background information
 - Activity suggestions
 - Questionnaires for various stakeholders
 - Checklists for sanitary inspections of wells and public taps
 - Forms and examples for reporting results

- Materials for quick water tests, such as nitrate, pH, colour, and turbidity

► Training of teachers and local NGOs

- Teachers develop an 8-month program for WSP activities



List of WSP Projects in Cooperation With Local NGOs and Schools Since 2008

- Armenia
- Azerbaijan
- Bulgaria
- Georgia
- Moldova
- Romania
- Ukraine

Local costs per school: 500 Euros

Includes: toolbox, tests, materials, awards, meetings, exhibition information, etc.

General Experiences

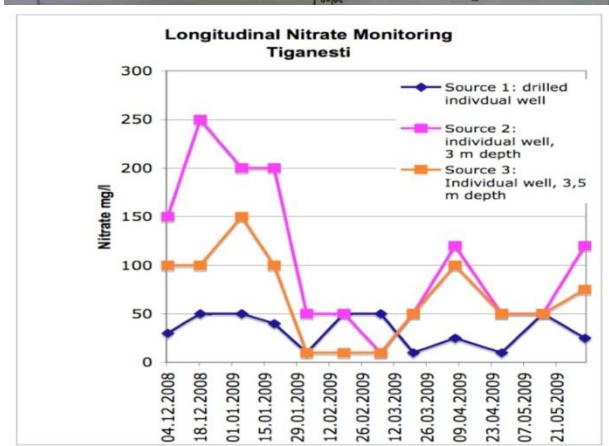


- Teachers and pupils are motivated and enthusiastic about activities
- Activities are practical, educational and relevant for the local environment (e.g. The Nitrate test has been well appreciated)
- Results depend considerably on the motivation and availability of the teachers and on support of the local NGOs
- One school year is a time frame suitable for identifying problems and formulating suggestions for improvements



Schools and Pupils as Water Experts

(30 schools in 7 countries)



- Testing water quality for nitrate, turbidity, and pH levels
- Assessing the environment and water sources
- Carrying out interviews
- Reporting
- Sharing information
- Cooperation with authorities
- Communication and dissemination
- Planning and taking actions

Most Commonly Identified Sources of Water Pollution

- Unsealed latrines and/or nonexistent wastewater management
- Livestock raised within the households causing manure infiltration in soil
- Agricultural chemicals, in particular nitrogen
- Randomly throwing garbage and household refuse
- Flooding affecting groundwater
- Dust accumulating in uncovered wells
- Missing or damaged apron around the water source

Results of WSP With Schools

- Increased awareness among pupils and citizens about water quality and sources of pollution
- Increased cooperation with authorities and other stakeholders, while some authorities even undertook local action
- Most schools and communities developed action plans
- Many communities are now ready to improve their situations; however, financial resources are still lacking

Challenges



- Level of knowledge of the teachers differs (e.g. some teachers need more structured information and guidance for implementation of a WSP)
- Integration of the WSP program within the curriculum is not always possible
- WSP activities cannot begin without external funding and outside initiative

How Do We Continue?

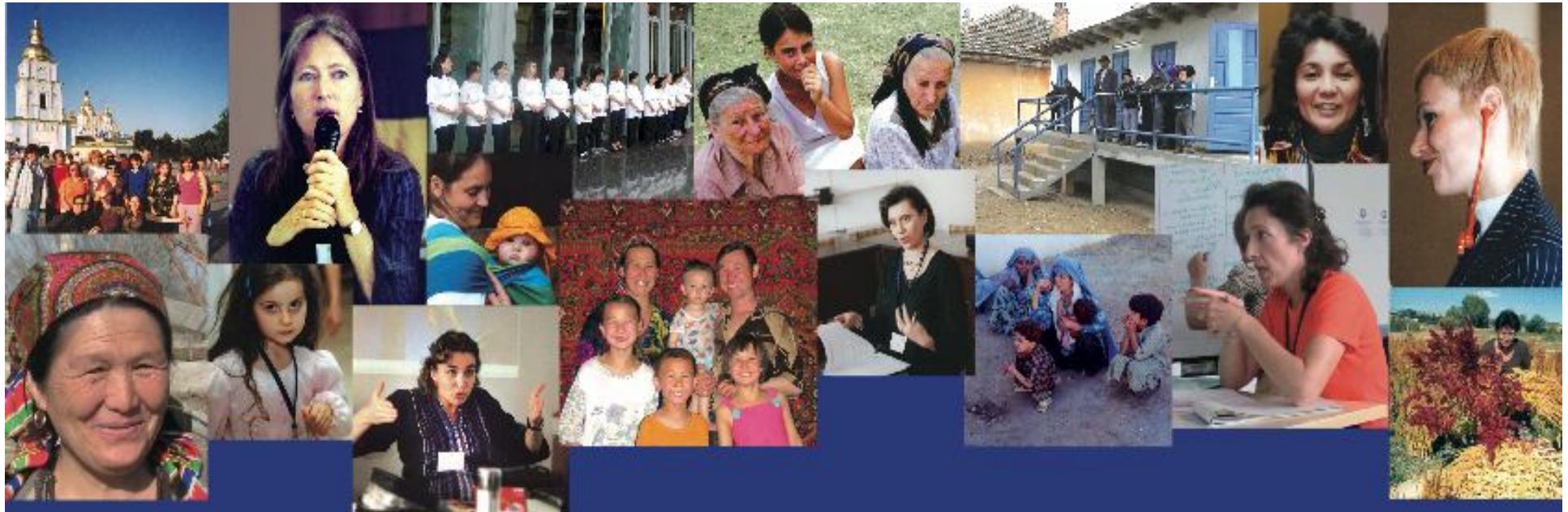
- Writing a structured package of information and working materials (i.e. modules) for developing WSP for small scale water supplies, including centralised piped water. This is ongoing.
- Targeting groups, such as teachers and the NSA
- Adopting the materials to local authorities and other interested stakeholders in rural communities
- Publication in autumn 2012

The Biggest Challenges?

- How do we reach the small communities?
- How do we move the focus of the decision-makers from the urban and semi urban areas to the rural areas? (human and financial resources)
- How do we develop sustainable financial structures for the implementation of WSP?

*84% of people without an improved water source
live in rural areas!*

(UNICEF/WHO 2011)



Thank you
for your attention!

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