

# WECF



Women in Europe for a Common Future

*Margriet Samwel*  
margriet.samwel@wecf.eu

Kiev, Ukraine 12.04.2012

# 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

# WECF: 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 EECA region

**Belarus**  
Our partner organisations: ECOPROJECT PARTNERSHIP  
Monitoring station in red water with hydrogels

**Ukraine**  
Our partner organisations: BSH C. JIRNA - EL VOZROVDIVYE  
1) Room with toilets in a school with urine diverting drytoilet and 2) training on missing pumps

**Uzbekistan**  
Our partner organisations: MEHRELEN  
1) 20 urine-diverting toilets for household  
2) Children from Uzbekistan

**Kazakhstan**  
Our partner organisations: YOUNG GUARDIANS OF NATURE AKHILUGAN  
In its view of urine diverting dry toilet in Kazakhstan

**Kyrgyzstan**  
Our partner organisations: SOCIAL UNION AGERKICH ALCA, BUDOM, CLUB, HETAR, ULGA, UNISON  
1) Training on sustainable sanitation  
2) and household urine diverting toilet in Kyrgyzstan

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

**Romania**  
Our partner organisations: FUNGELLE CO. S.R.L., FUMEL PENTRU IMPIERUL CENASTI S.R.L., MEDICIA ET SANITAS, SLOBOZIA, D.S.O.  
1) Dismantling of re-use of urine in a school and 2) training on how to make pumps in Romania

**Tajikistan**  
Our partner organisations: JSPDRAU, YECI, SAFO  
Urine-diverting school toilet building under construction in Tajikistan

**Afghanistan**  
Our partner organisations: CATACHEL e.V.  
A new school with urine diverting dry toilets for the children in Afghanistan

**Bulgaria**  
Our partner organisations: EARTH FOREVER, ECO-WORLD  
1) New diverting dry toilet with a soil filter in a rural area in Bulgaria  
2) Small view of Bulgarian diverting toilet

**Moldova**  
Our partner organisations: ECOFOR, ECO-SPECTRUM, ECO-TIMIS, BRUCOV  
1) Urine-diverting dry toilet and 2) water diverting water seal for a kindergarten in Moldova

**Armenia**  
Our partner organisations: ARWHE, CHARITABLE WOMEN, ECOLORE CLUB  
1) Urine-diverting dry toilet for a school and 2) water recycling from a public drinking water in Armenia

**Georgia**  
Our partner organisations: FOUNDATION CAUCASUS ENVIRONMENT, GEORGIA FUCI GREEN MOVEMENT OF GEORGIA, LDCA, PARI'S SEMA, SOCA  
1) Provision of urine-diverting toilet installation and 2) service centre for sustainable development in Georgia

Women in Europe for a Common Future

WECF receives financial support from:

- Netherlands Ministry of Foreign Affairs
- Netherlands Ministry of Environment
- European Commission
- Central Agency of the Environment
- German Federal Foundation for the Environment
- Foundation For World Future
- Private donors
- Federal Agency for the Environment

WECF is the Netherlands' Federal Government's Green Deal

Water and Sanitation projects by WECF and partner organisations:

- Construction of urine-diverting dry toilets for households, public places and schools
- Production of porcelain urine-diverting seats
- Construction of toilet houses (latrines)
- Demonstrating the effect of water filters for filters
- Building 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
- Establishment of environmental centres for sustainable development



From 2002 to 2012  
1000 individual UDDT  
52 school UDDT



# Practice in Rural Areas

## WECF 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

## Problems

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

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

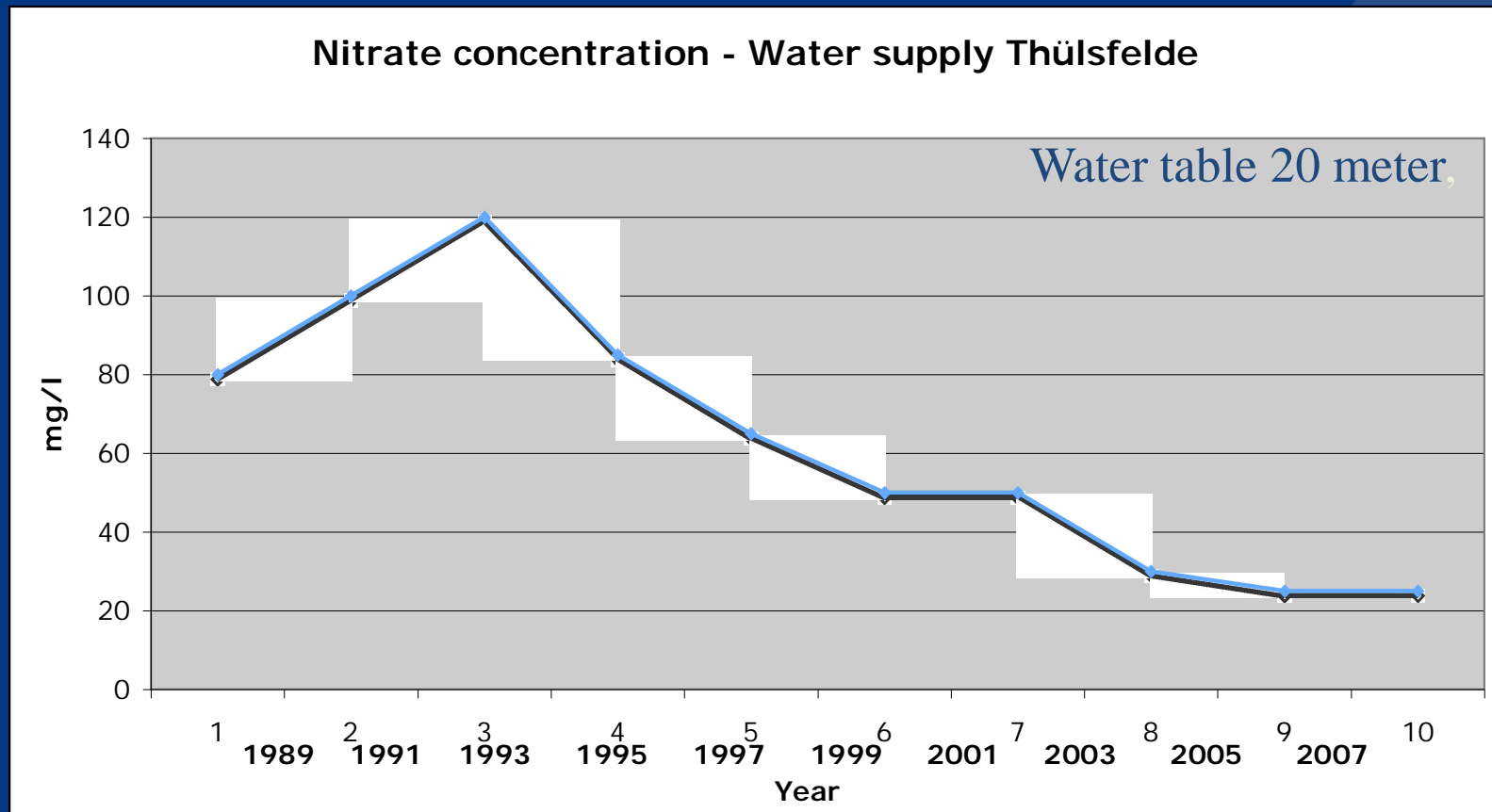
- Review of protection zones
- Cooperation with farmers through face to face consultation
- Conversion to organic farming or agreements on fertilising
- Bonus for farmers using less fertilizer or no pesticides
- Buying or renting sensible protection areas for reforestation
- Developing product (water 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<sub>3</sub> 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?

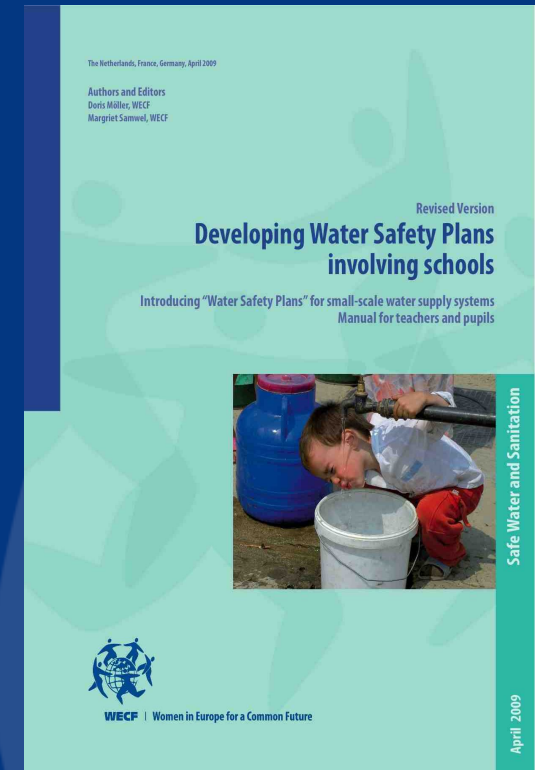
## Tasks

- 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.



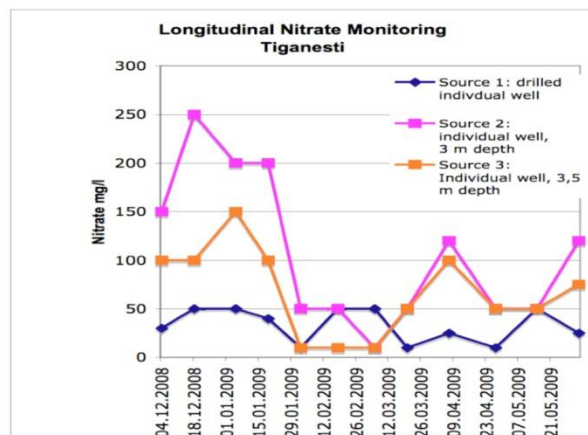
# General Experiences



- 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!

[www.wecf.eu](http://www.wecf.eu)

**WECF**



Women in Europe for a Common Future <sup>26</sup>