



# **UN Protocol on Water and Health -Regional Challenges**

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# Outline of Presentation

- Burden of water-related diseases in EECCA region
- Progress towards MDGs
- Recent surveys of water and sanitation in Ukraine
- UN Protocol on Water and Health
- WHO Guidelines, WSPs and examples from Asia



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# Water related diseases

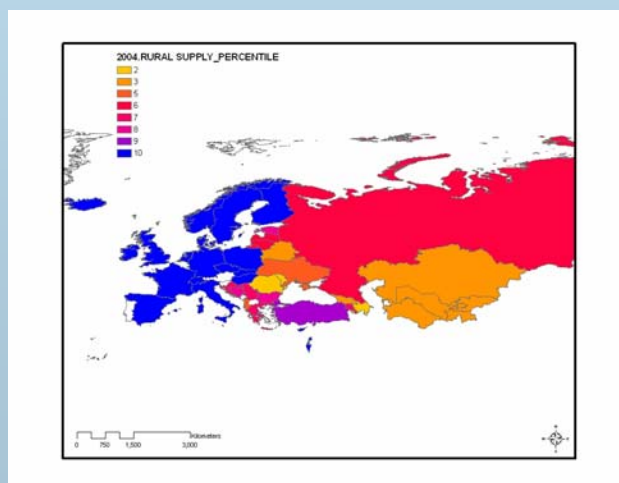
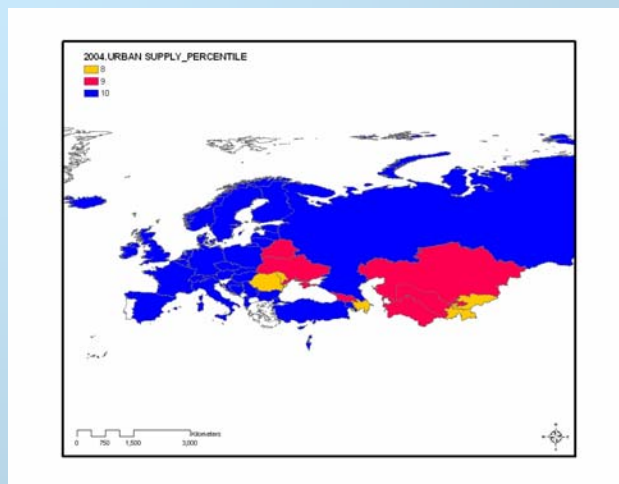
- **Estimated 120 million people do not have access to safe water in UNECE region<sup>1</sup>**  
Согласно подсчетам, 120 миллионов человек в регионе ЕЭК ООН не имеют доступа к безопасной для здоровья воде
- **170,000 cases of disease each year<sup>1</sup>** 170,000 случаев заболеваний ежегодно
- **Microbial contamination is the prime concern** Основной проблемой является микробное загрязнение
- **Chemical contamination (As, Pb, nitrites and nitrates) are a concern in many European countries**

1. [http://www.euro.who.int/watsan/waterprotocol/20030523\\_1](http://www.euro.who.int/watsan/waterprotocol/20030523_1)



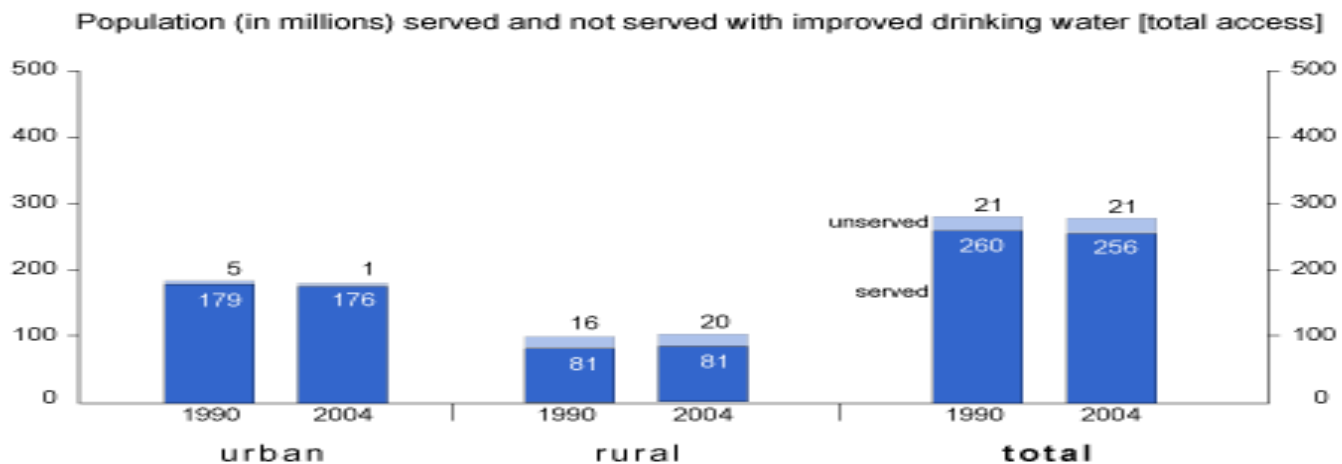
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# Access to water



- **EUR-A:**
  - Universal house connection
- **EUR-B:**
  - 84% have house connection, 95% of urban and 66% of rural areas
- **EUR-C:**
  - 83% have house connection, 92% of urban and 56% of rural areas

# Access to improved water supply: CIS Countries



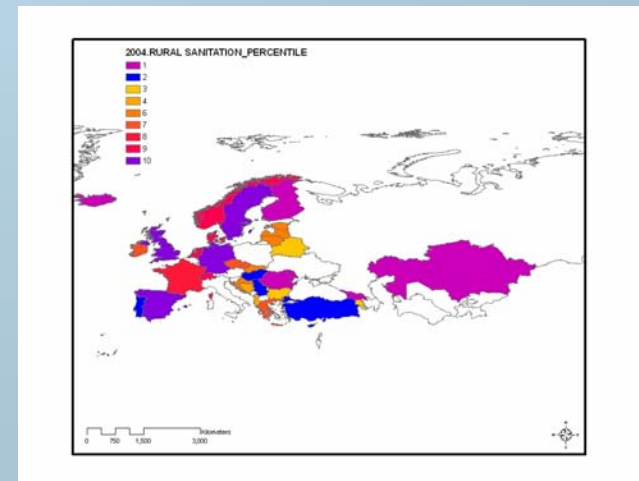
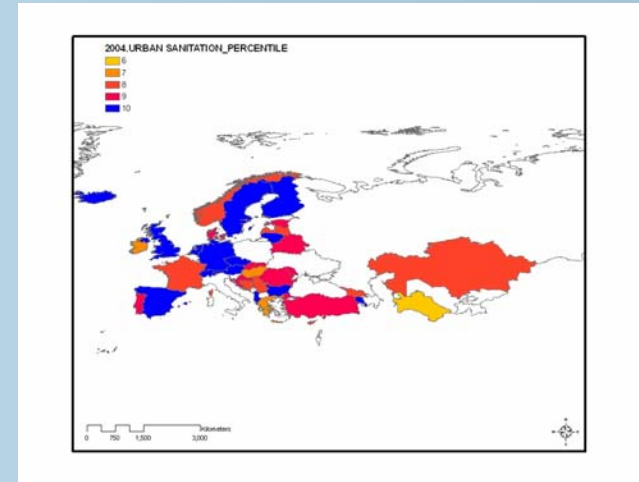
1st Regional Women for Water Working Conference, 4-7 November 2007, Kyiv, Ukraine



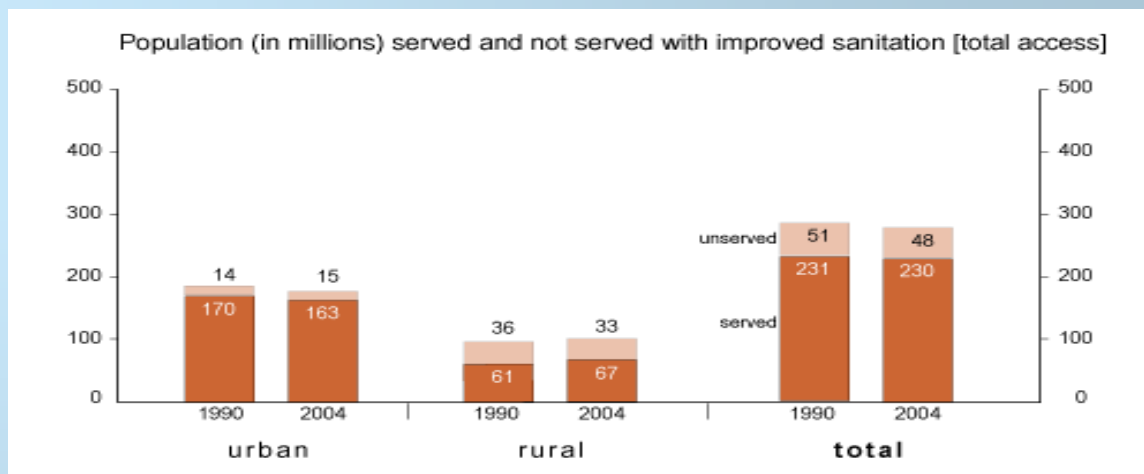
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# Access to sanitation

- **EUR-A**
  - 62 % have house connection, 61% of urban and 44% of rural areas
- **EUR-B**
  - 71% have house connection, 88% of urban and 27% of rural areas
- **EUR-C**
  - 67% have house connection, 85% in urban and 24% in rural areas



## Access to improved sanitation: CIS countries





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# MDG indicators

- Over-optimistic view of situation
- Measure only people who have access to “improved” water source
- Do not address quality, availability, maintenance of existing infrastructure





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# OECD data<sup>1</sup>

- Data collected from 400 utilities in EECCA
- Infrastructure has been continuously deteriorating
- Leakage, continuity, quality
- Much worse in rural areas
- Disposal of waste water is a major problem

<sup>1</sup>Keeping Water Safe to Drink, OECD Policy Brief, March 2006



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# Surveys carried out in Ukraine<sup>1</sup>

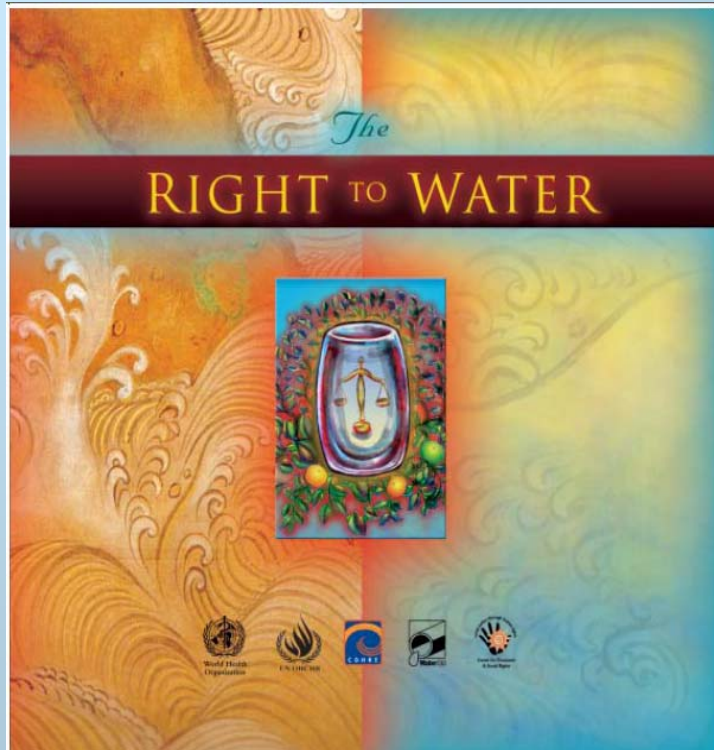
- Wide urban –rural differences in access to water and sanitation
  - Only 30% of the rural population as cold water on tap in the home
  - Only 17% of the rural population have hot water on tap
  - Over 80% of rural dwellers do not have an inside toilet
- Over one third of urban dwellers rated the quality of water as “Bad”.
- Need for investment, monitoring and surveillance

Mc Kee *et al.* Access to water in the countries of the former Soviet Union. *Public Health* (2006) 120, 364-372



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# Water is a basic human right



Three components:

- **Quantity**: sufficient and continuous for personal and domestic use
- **Accessible**: physically, economically, and non-discriminatory access
- **Quality**: microbiologically, chemically and radiologically **safe**

# Protocol on Water and Health

- Aim is to reduce water-related disease and promote sustainable water development
- Parties are required to establish and report national and local targets, reduce outbreaks and incidence of water-related disease
- Ratified by the Ukraine



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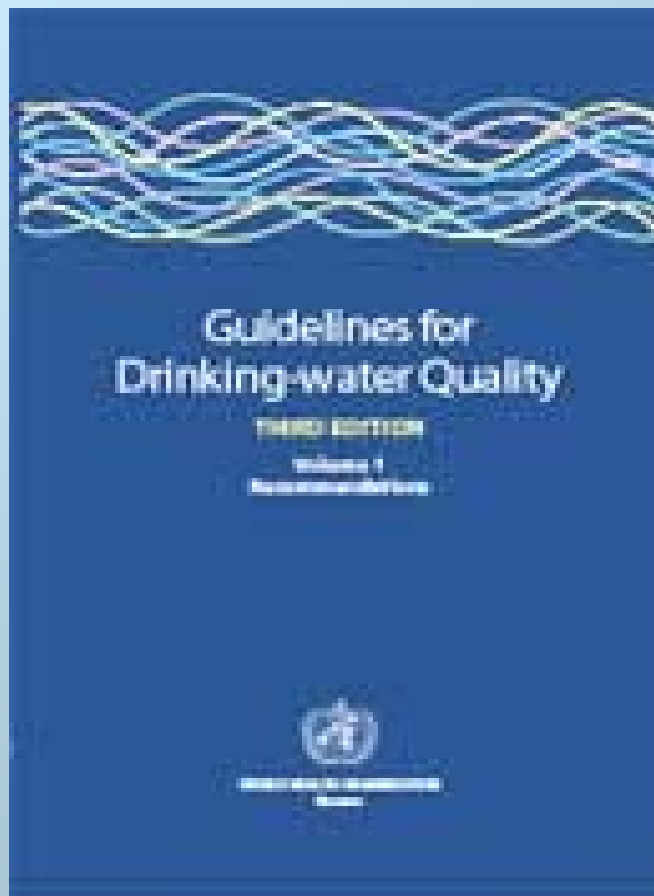
# Protocol on water and health

- The surveillance of waterborne diseases
- The establishment of early warning and response systems..
- A commitment is made to ensure public involvement,
- Establishment of national and local targets for the quality of drinking water and the quality of discharges
- Non discrimination and equity aspects.



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# Third Edition of the WHO Guidelines on Drinking-water quality



- **Departure from previous editions**
- **Place emphasis on risk assessment and risk management (WSPs)**
- **Less emphasis on analysis of water quality**

# Water safety plans

- Developed by the water industry, international experts and WHO
- Designed to assess risks and identify ways in which risks can be managed
- Based on Hazard Analysis Critical Control Point (HACCP) model

# Traditional approach - limitations

- Relies heavily on end product testing
- Wide range of parameters that could be monitored
- Not technically feasible
- Indicator organisms e.g. *E coli*, *coliforms*, provide a common measure of potential risk – do not correlate well with risks from protozoa and viruses



# Basis of a Water Safety Plan

- Document and describe system
- Undertake hazard assessment
- Identify control measures
- Define monitoring for control measures
- Implement corrective actions – normal and incident conditions
- Verification
- Documentation

# Example of implementation



- **Maldives**
- **Water quality deteriorated after tsunami**
- **Rainwater harvesting kits provided**




**यूनिसेफ प्रायोजित**  
**जल सुरक्षा परियोजना** 12005  
**हेल्थ - चेकअप केन्द्र**  
**शिकारपुरा**  
 कार्यक्रम  
 24-01-06


**Water Safety Plan, School Sanitation  
 Hygiene Education & ECOSAN Project**
  
**WELCOME**  
**Chief Guest** Special guest Program President  
 E.N.C. PHED Bhopal  
 Dr. Samuel Godfrey  
 & Mr. Pawan Kumar  
 Secretary:  
 M.P. State  
 Bhopal.  
**GRAM BHARATI MANDLA MANDAL & VILLAGE - SHIKAR PURA**  
 Date: 24-01-06

**नक्षत्रा**  
**ग्राम भा**  
 प्रायोजक  
**जिला प्रशासन**  
 लि. पार



A man in a brown jacket is standing and speaking into a microphone. He is gesturing with his hands while addressing the group.

A man in a white shirt is seated at the table, looking towards the speaker.

A man in a grey vest is seated at the table, resting his chin on his hand.

A man in a maroon sweater is seated at the table, looking towards the speaker.

A man in a white shirt is seated at the table, looking towards the speaker.

A man in a grey sweater is seated at the table, looking towards the speaker.







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# Conclusion

- Scale of problem enormous
- Need for sustained investment
- Need for effective systems of monitoring and surveillance, including the extent of contamination
- WHO assists Member States in implementing the Protocol