

The Protocol on Water and Health: where health, environment, and development policies meet

**Are there still water related diseases in the UNECE
region?**

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Swedish Institute for Infectious Disease Control

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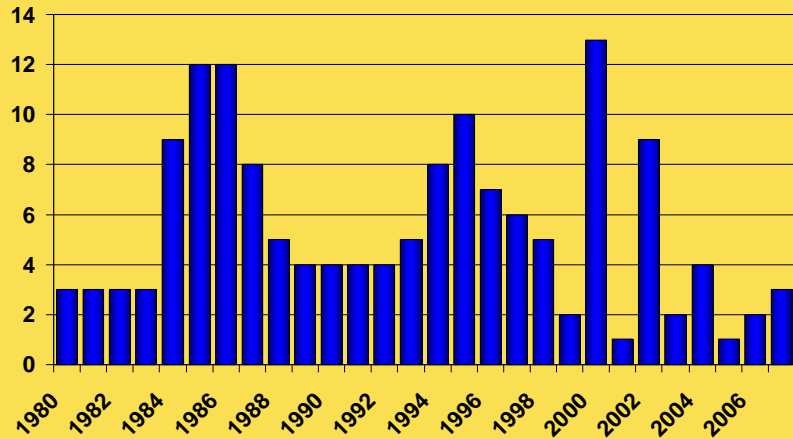
- 120 million Europeans still do not have access to safe drinking water. (170 000 cases estimated by WHO in 2006)
- The incidence of infectious disease caused by poor drinking water is the highest among children
- BUT!!
- Additionally bathing and recreational water is affected.
- Seafood like mussels, clams and oysters concentrate microorganisms from sewage contaminated water
- Irrigation with contaminated water create risk for foodborne transmission

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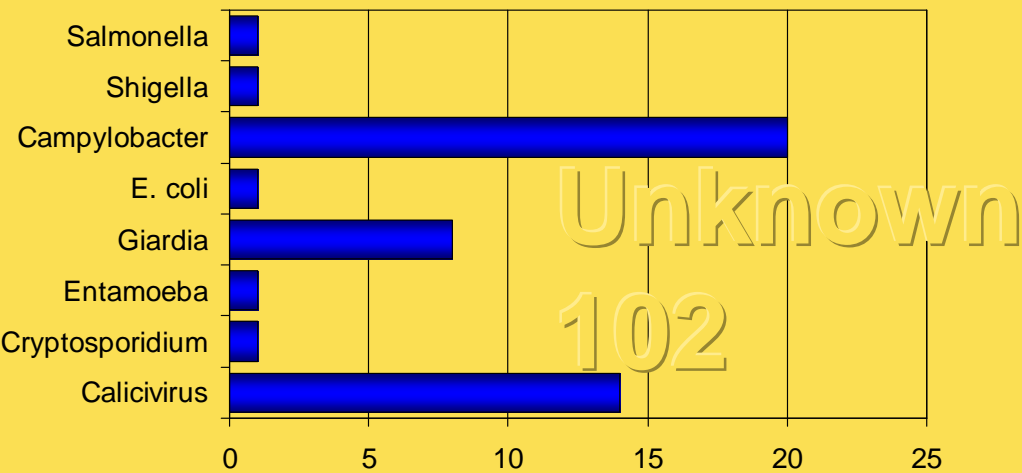
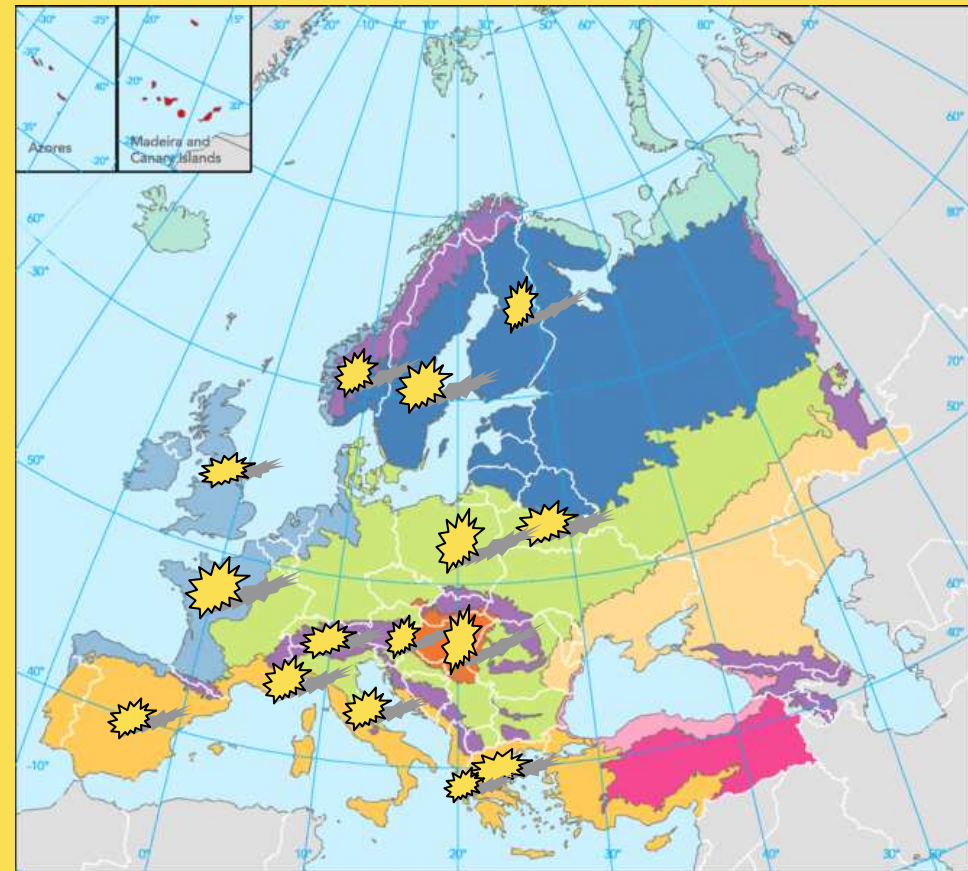
- New and emerging pathogens, such as *Giardia*, *Cryptosporidium* and some chemicals, pose additional challenges in the short term. Extreme weather events, such as floods and increased water scarcity, pose challenges for the mid-term future.
- **Situation:** At least 325 water-associated outbreaks of parasitic protozoan disease have been reported. North American and European outbreaks accounted for 93% of all reports and nearly two-thirds of outbreaks occurred in North America. Over 30% of all outbreaks were documented from Europe, with the UK accounting for 24% of outbreaks, worldwide. **Karansis et al J Water Health 2007**

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- **Hepatitis A case**
- The people of the village of Milavcic in central Serbia do not have a water supply or sanitation system. They drink and use unchlorinated water from wells. Most of the 620 households have their own wells, and their toilets are often too close to the wells and located above them. Disposal of waste water in the village is an urgent problem, and all household waste is just thrown away, usually on the river bank, or near the road. Some families are living in very unhygienic conditions.
- **Source:** http://www.euro.who.int/features/2006/featurecehape06/20061121_6



● Outbreaks reported in Pub Med during the last 10 years



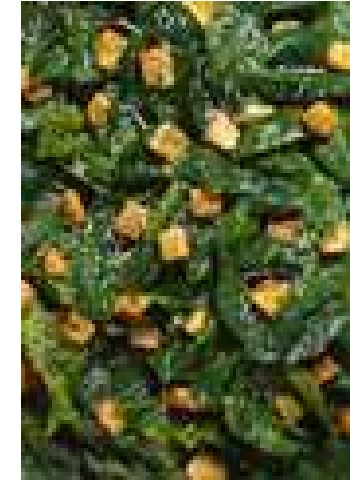
Other routes



Outbreak of EHEC in Sweden



Irrigation of lettuce (no requirements for analysis of the water)



Run-off from agricultural land where grazing cattle were infected with EHEC (a zoonoses, i.e. transmission animal-human)

Transport from manure to river water



The lettuce was consumed by a large number of individuals – resulted in 100 cases (approx. 10 hospitalised)

At SMI: samples from patients (typing of isolates), water samples

Prerequisite for Environmental Disease Surveillance.

- Understanding the demographic composition and the characteristic of the area
- Understanding and assessment of the present water situation
- Understanding and assessment of the present sanitation situation
- Understanding and assessment of the present disease prevalence and variability

Aims of the Protocol in relation to Water and Health

- **Strengthening Health System**
- **Improving Planning of Water Resources. Health through Integrated Water Resources Management**
- **Improving the quality of water supply and sanitation service**
 1. **Water Supply**
 2. **Sewerage and wastewater treatment – (Impact in receiving water bodies)**
 3. **Efficient Reporting**
- **Addressing future health risks (water scarcity, flooding and effects related to emerging water related disease)**
- **Ensuring Safe Recreational Water Environment**