



# EU Sanitation Policies and Practices in the International Year of Sanitation - Brussels, 29 January 2008

## Safe and affordable management of wastewater and excreta is a challenge in the European Union

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### Current EU directives do not sufficiently address sanitation of 20 million EU citizens

In many countries of the European Union the improvement of access to safe drinking water and safe sanitation is still a challenge.

At least 20 million European citizens do not have access to a safe wastewater or sanitation system, impacting on the water quality in their region.

Many surface and ground waters in the European countries are contaminated with pathogens and nutrients, where treated and untreated wastewater from single households and municipalities are identified as polluters.

In order to meet the standards of drinking water quality and safe sanitation, there are several EU regulations related to wastewater management and the prevention of water pollution: the EU directive 271/91/EEC on urban wastewater treatment, the EU directive 98/83/EC on water intended for human consumption, the Water Framework Directive 2000/60/EC and the 91/676/EEC Nitrate directive.

In the 10 new EU member states of the Central Eastern European (CEE) region there are 102.3 million people, of which 27.6 million live in settlements with less than 2000 inhabitants (GWP, 2006). Approximately 16% of those settlements are connected to a wastewater system.

The wastewater management of the remaining 23 million people in the EU regulation is currently not covered by binding

obligations from EU regulations, and is not being addressed as a priority in EU cohesion funds.

This is because the European Directive 271/91/EEC on Urban Wastewater Treatment obliges the member states to build up and operate a basic waste water treatment only in agglomerations with over 2000 inhabitants by 2015, not those with less inhabitants.

The Water Framework Directive has important general objectives for the protection of inland surface waters, transitional waters, coastal waters and groundwater. Its aim is to prevent and reduce pollution, promote sustainable water use, protect the aquatic environment, improve the status of aquatic ecosystems and mitigate the effects of floods and droughts.

But this directive has no specific obligations, which govern water pollution – such as nitrates and faecal bacteria – from smaller settlements.

The Nitrate directive concerns the protection of waters against pollution caused by nitrates from agricultural sources, but not from other sources such as household latrines.

### Infiltration from latrines into drinking water wells

Some of the new EU Member States have great difficulties complying with the European Water Framework Directive. Providing safe drinking water to all citizens in, for example Romania, is currently not possible, with an estimated 8 million mostly rural inhabitants relying on unprotected wells. In Romania, also more than 10 million inhabitants are not connected to any centralised

sewer system. The World Bank Romania estimates that a significant share of ground-water nitrate pollution originates from pit latrines and badly functioning septic tanks.

Romania counts 1.310 wastewater treatment plants and wastewater storage installations (municipal and industrial). In 2005 only 492 plants were functioning adequately, the others are also sources of pollution.

Problems in Bulgaria's water sector include an insufficient number of wastewater treatment plants. Of the existing sewage network, 17 percent needs to be replaced either due to age or outdated technology, and 98 percent of villages have no sewage system at all. [1].

### Health impacts of lack of safe sanitation

People who do not have access to safe wastewater systems, can suffer from a number of health impacts, including blue baby syndrome, hepatitis outbreaks and diarrhoeal diseases, especially among children.

The WHO and government of Romania recognizes that Blue Baby Disease, mainly caused by too high nitrate levels in drinking water, remains a health concern. In period 1990-2000 some 3000 babies are recorded to have suffered from Blue Baby Disease (methemoglobinemia).

Viral hepatitis cases in Bulgaria increased (4793 in 2006 vs 3295 cases 2005) mainly due to two hepatitis A outbreaks in the regions of Sofia and Plovdiv. The first outbreak occurred in Svoge municipality (Sofia region) in July – August 2006, and was probably associated with contamination of the drinking water supply. In Romania, 2485 cases of hepatitis-A occurred in 2006, that might be associated with water consumption (but not confirmed to be the only cause).

In the European Union at least 20 million citizens are exposed to these health risks.

### The need for affordable, resource-efficient solutions

Central sewage systems are in the first place intended for the transport and the treat-

ment of human excreta. Large amounts of drinking water are currently required to transport the human excreta from the toilet to the wastewater treatment plant, followed by disposal to a water body. On average, sewage systems use at least 15,000 litres of drinking water per person per year, for the transport of only 550 litres of excreta. In drought-prone countries, like Bulgaria and the Mediterranean countries, water saving systems would have an important advantage, also in the light of climate change which is likely to increase droughts.

In many areas of the European Union, adequate centralised water supply and sewage systems are unaffordable, particularly in the case of small rural communities where low population density causes high investment costs per household connection. In most cases these regions are poor and lack financial and technical capacity. Low cost, safe alternatives, which save water, exist.

If Romania and Bulgaria only fulfil the minimum requirements by the EU urban wastewater directive, more than 23 billion Euro are needed till 2018. But these investments do not yet improve the situation for the 13 million people in small rural settlements currently not connected to central sewage systems.

In order to overcome the financial obstacles and to mitigate water scarcity and degradation of freshwater bodies and wells, new affordable, innovative and sustainable approaches to sanitation are needed. Affordable solutions exist, which are safe, water-efficient and allow reuse of wastewater and nutrients. At the same time, these solutions contribute to the improvement of public health especially in the rural areas of the new EU member states. In addition, these solutions can generate local employment.

### The need for EU regulation for the safe treatment and reuse of wastewater and human excreta

Especially in the case of decentralised treatment, additional regulations are needed at EU and at national levels, to stimulate a safe treatment and reuse of wastewater and human excreta. Such additional regulations could be based on the *WHO guidelines for the safe use of wastewater, excreta and grey-*

*water, (World Health Organisation 2006<sup>2</sup>).*

According to this WHO report, important reasons for an increased use of excreta and wastewater in agriculture are:

- Increasing water scarcity and degradation of freshwater resources resulting from the improper disposal of wastewater and excreta.
- A growing recognition of the resource value of excreta and the nutrients it contains (roughly speaking, the annual urine production of 30 persons is sufficient to fertilize 1 ha. land)

Safe reuse of these nutrients is easy by using systems that separate faeces and urine at source.

### Good examples

A number of new EU Member States have already engaged themselves to go beyond the Urban Waste Water Directive, and to reduce wastewater pollution from settlements smaller than 2000 inhabitants.

These countries around the Baltic Sea, including the new EU Member States Poland, Latvia, Lithuania and Estonia, have introduced a nutrient load reduction strategy from small settlements. In November 2007, they adopted a recommendation on "On-site wastewater treatment of single family-homes, small business and settlements up to 300 persons (p.e.)" [3]

Another example is Finland, which adopted in 2004 a new – binding – regulation for wastewater treatment for households outside municipal sewer networks, with high standards for removal of organic matter and nutrients. The Finish regulation does not prescribe treatment technology, but only the maximum level of nutrients emitted per household. Finland leaves it open to the individual to choose either more expensive solutions, or cheaper options.

### Recommendations: achieving safe and affordable sanitation for all by 2015

WECF and its partners believe that it should be a priority for the European Commission to urgently address the lack of access to safe sanitation. Every citizen in the European

Union should have the right to safe sanitation to live in decency and good health.

We recommend that extensions of current water and wastewater directives are developed, to address wastewater and sanitation for single family households and small settlements, following the examples of the Baltic Sea countries and more specifically Finland.

We call for a promotion of wastewater and human excreta management processes with closed nutrient and water cycles.

We recommend incentives for safe management of large and small-scale source-separating wastewater streams, enabling:

- On site decentralised source separating sanitation systems
- Safe reuse of wastewater and human excreta in agriculture

Finally, we propose as a concrete EU target that all its citizens have access to safe and affordable sanitation by 2015. In this year, according to the Millennium Goals, the global communities should have reached a 50% reduction of populations without access to sanitation.

[1][http://trade.gov/doctm/environ\\_tech\\_1007.html](http://trade.gov/doctm/environ_tech_1007.html)

[2] *Guidelines for the Safe use of Wastewater, Excreta and Greywater, Volume 4, World Health Organization, 2006 ISBN 92 4 154685 9*

[3] *(HELCOM Baltic Sea Action Plan, Ministerial meeting, Krakow, 15 Nov. 2007).*



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