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“European Sanitation Policies and Practices in the International Year of Sanitation 2008”

Finding solutions for more than 20 million citizens of the European Union who lack safe and affordable sanitation



WECF | Women in Europe for a Common Future

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“European Sanitation Policies and Practices in the International Year of Sanitation 2008”

Finding solutions for more than 20 million
citizens of the European Union
who lack safe and affordable sanitation



Women in Europe for a Common Future | **WECF**

in cooperation with

Global Water Partnership, European Water Partnership,
KIWA, Coalition Clean Baltic

In cooperation with



The European Water Partnership is an action-oriented open forum for all stakeholders including governmental agencies (local, national and European), knowledge institutes, private companies, non-governmental organisations, the public and private financial sector, end-users and civil society groups to exchange views, to find solutions for the water challenges in wider Europe and to stimulate partnerships.



Kiwa is an independent highly qualified organization having certification as its core business. This is being supported by inspection, testing, technology, training and consultancy. Clients are manufacturing and process industries, (business) service companies, utilities, (local) of market sectors.



Coalition Clean Baltic (CCB) unites 27 non-governmental environmental organizations from the countries of the Baltic Sea Region. The main goal of CCB is to promote the protection and improvement of the Baltic Sea environment and natural resources. CCB is a politically independent, non-profit association.



The Global Water Partnership is a working partnership among all those involved in water management: government agencies, public institutions, private companies, professional organizations, multilateral development agencies and others committed to the Dublin-Rio principles. The mission of the Global Water Partnership is to *"support countries in the sustainable management of their water resources."*

Organised by:



WECF strives for a Healthy Environment for All. WECF enhances women's potential to balance environment, health and economy. WECF works in the PAN-European and Central Asian region and our activities are based on our partners' visions and needs. Therefore WECF implements solutions locally and influences policy internationally.

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Preface

This report gives you an overview of the presentations and discussions held at the 29th of January, at the first European event in the Year of Sanitation.

WECF (Women in Europe for a Common Future) organised this event in cooperation with Global Water Partnership, European Water Partnership, KIWA and the Coalition Clean Baltic. We were very happy with the high level participation of many important players in the field, and the excellent presentations from a wide range of experts.

We all have learnt a lot from this very useful exchange of experiences, insights and knowledge and have been inspired to continue working on this important topic.

We thank the European Commission for their contribution to the WECF work programme, which enabled us to organise this event.

We thank all the participants for their valuable contribution and look forward to further cooperation.

*Sascha Gabizon,
for
WECF
European Water Partnership
Global Water Partnership
Coalition Clean Baltic
KIWA
WECF*

Summary

As the official European opening of the International Year of Sanitation, **120 participants** met in Brussels on the 29th of January 2008 to address the problem of more than 20 million European citizens who do not have access to safe sanitation. The women's network "Women in Europe for a Common Future" initiated the conference to draw attention to the fact that in European member states **children are at risk of blue baby disease, hepatitis-A and gastrointestinal diseases due to unsafe sanitation.**

The conference brought together decision makers from all sectors in this high-level policy dialogue "**European Sanitation Policies and Practices**" to identify opportunities for improved regulations and efficient programmes for solutions. The conference identified that the greatest number of people who do not have access to safe sanitation **live in rural areas in the new member states.**

The conference also identified that the current **EU directive on urban wastewater treatment does not give an incentive** to member states to make rural sanitation a priority, as it focuses on larger municipalities. Furthermore, the sanitation problem is very much a health problem, but DG Sanco is not responsible for this issue, it is a responsibility of DG Environment. On the other hand, the EU funds which could be used to find rapid solutions are managed by DG Region, and at national level by the member state governments.

The conference showed that the new member states focus on achieving the *acquis communautaire*, and since rural sanitation is not specifically identified in the EU directives, often new **MS have no resources left to allocate to this issue.** On the other hand, the Commission sees this as a **problem which needs to be solved at national level.** Participants proposed that the Commission could **publish guidelines** on best practices for solving Europe's sanitation problem. The World Health Organisation sees the need for implementation of the "**Water and Health Protocol**" to allow integration of actions from all ministries and directorate generals. The Finnish minister of environment **promoted a regulation** like in Finland on the treatment of **waste water from individual households**, currently not covered by EU directives, and gave the example of **modern dry toilets** as one of many solutions. Various experts gave examples of a number of technical solutions for safe, sustainable, affordable and decentralized sanitation and waste water systems. Some also gave examples of **barriers in national and local legislation and codes.** For example some German households which invested in an efficient, ecological waste water system, are forced by the regional utility to connect to the sewerage system.

Examples from Slovakia and Bulgaria showed that well functioning **decentralised systems cost less than centralized** ones and **provide good quality** sanitation and waste water treatment.

Members of the European Parliament from Romania and Finland committed to address the European Sanitation Problem at national and European level. WECF calculated that based on sustainable dry sanitation systems demonstrated in Romania and Bulgaria, comfortable indoor bathrooms with toilets for households would cost 600 euro per household. Therefore, if all households without access to safe sanitation obtained such systems, **less than 480 million Euro would be needed for an immediate solution.** Compared to the total budget of more than 3 billion euro of EU structural funds, the financial aspect should and can not be a barrier.



Sascha Gabizon

WECF executive director

Welcome and introduction

Sascha Gabizon welcomed all participants and introduced the co-organisers: European Water Partnership, Global Water Partnership, Coalition Clean Baltic and Kiwa Water Research. She thanked the European Commission for their financial support of the WECF work programme, which enabled WECF to organise this conference.

WECF – Women in Europe for a Common Future – is a network of 100 organisations in 30 countries in the EU and Eastern Europe, working on environment and health. Some of them work with poor communities in new EU member states on improving sanitation and waste water treatment. WECF initiated this conference as in the EU too little is done to address these key issues of environment and public health. In some cases this is a matter of life and death.

The United Nations have declared 2008 the International Year of Sanitation.

The organisers want to use this opportunity to bring the problems of bad sanitation in the EU under the attention of a broader audience. In the old EU member states most people are connected to a central sewerage system.

But there are remaining problems in remote rural communities. The number of people in the EU without proper facilities has dramatically increased with recent enlargements of the Union. Currently an estimated 20 million people in the EU lack safe sanitation.

The audience then saw the premiere of the 7 minute documentary “Access to safe sanitation – a right for EU citizens”, produced by WECF with Earth Forever Bulgaria and Rapsode France. This film shows current sanitation problems as well as low cost solutions in rural areas in the EU. The film was distributed on DVD and through the internet.



The film can be downloaded from www.wecf.eu

Sascha Gabizon:

Safe sanitation is also an issue of dignity and human rights. In 1999 we visited a village in Romania with a high number of blue baby disease cases, which is linked to high levels of nitrates in drinking water. Also people suffer from chronic diarrhoea, hepatitis and respiratory diseases in such situations. Even the local doctor had no water supply, no hand washing facility and a dirty pit latrine. The pit latrines in the local school were so dirty that several children went into the school yard instead. All 78 water wells exceeded the maximum of 50 mg nitrates with several over 500 mg per litre. High levels of faecal bacteria and the short distance to latrines indicated that the pollution came from human excreta. We found similar circumstances in many other villages in Romania and Bulgaria. After we had installed clean toilets and put signs on the wells indicating their level of pollution, there were no blue baby cases anymore in this village.

For the coming 8-10 years, Romania and Bulgaria will spend some 23 billion euros for large scale waste water treatment and sewerage systems, meeting EU standards. But these will not improve sanitation in smaller rural communities – still leaving some 20 million people without access to safe sanitation.

The EU should fulfil the UN obligation to reduce at least by half the number of people without access to safe sanitation by 2015. The aim of this conference is to make this a political priority. 600 euro per household are sufficient as a first step. For 20 million people, we need 428 million Euro per year until 2015. That should be feasible in the EU.

Sascha Gabizon introduced the two chairs of the day: Uschi Eid, one of the main forces behind the United Nations international year of sanitation, and Friedrich Barth, who played a key role in the European water directives previously at the European Commission.



Co-chair Dr. Uschi Eid speaking at the opening of the high level meeting

Uschi Eid

Co-Chair UNSGAB

Introduction

Kofi Annan, on the occasion of the world water day 2004, declared 2005 – 2015 to be the water decade and established UNSGAB to personally advise him on how to achieve progress.

This is the first event in Europe to kick off the year of sanitation. Lack of good sanitation is very much a women's problem. Girls do not go to school anymore when they are at menstruation age. It is a neglected problem and a taboo like first with AIDS.

People think solutions are too costly: yes, if you have large infrastructures; but we need fantasy for new developments. One dollar invested will pay back nine-fold in economic development: sick people cannot work and women have to care for the sick and for water. With good sanitation there is increased school attendance and environmental improvement. With 6,5 billion euro this is achievable according to one cost estimate.

We have good examples in Asia and Africa. According to the Millennium declaration, also Europe has to halve the number of people without access to safe sanitation.



Peter Gammeltoft

Head of Unit, Water and Marine Environment, DG Environment,
European Commission

“Solutions and enabling factors for rural areas in the EU in the field of water and sanitation”

The recognition that lack of separation of drinking water and excreta causes serious health risks and problems comes from the 19th century.

EU legislation in the area of drinking water and sanitation started in 1980 with the **Drinking Water Directive**, revised in 1998. The basic requirement is to provide clean water without health risks. Member states do not have an obligation to supply drinking water, but where they do they must satisfy the minimum requirements of the Directive. Small supplies (supply systems for less than 50 people) can be exempted from the Directive.

The **Urban Waste Water Directive** is from 1991 and there are no plans to revise it. It contains detailed requirements for discharges to fresh waters from agglomerations of more than 2000 person equivalents (p.e.) while smaller discharges are required to have ‘appropriate treatment’. Satisfying the detailed requirements necessitates biological treatment and for discharges of over 10,000 p.e. to sensitive areas removal of phosphates and nitrates is required. There are several deadlines for compliance for the EU 15 members: 1998 – 2000 – 2005. But not all these Member States have complied yet. For the new EU 12 deadlines range from 2007 (Malta) to 2015 for most member states.

The **Water Framework Directive**, adopted in 2000, require that all waters have a good environmental status which in some cases puts additional constraints on urban waste water discharges. River basin management plans should be adopted in 2009 and implemented by 2015. This Directive covers all human impacts and all pressures on the environment. There is a daughter directive on priority substances currently under negotiation.

The **Nitrates Directive** has a legally binding objective for nitrates in groundwater and surface waters. The protection of water resources and water ecosystems is a question of proper implementation of all these Directives.

In all member states there is a significant number of small scale supplies, probably 20% of the total water supply. Member States may fear that regulation of these at EU level will be difficult for them to manage. We are currently looking at a review of the drinking water directive: the key question is whether EU action in this respect would bring additional benefit and whether the EU should introduce a clean water supply

obligation. The urban waste water directive is probably the most expensive directive ever adopted, with investment costs of the order of 30 billion euros in the 12 new Member States. Significant EU funds will go to the new member states, with 4-5 billion for the drinking water directive and 10 billion for the waste water directive in the period up to 2013. Total funds for these Member States in this period amount to 174 billion, with 30 billion going to road transport and 15 billion for water. Priorities are set by the Member States themselves and not by the Commission or other EU institutions: Therefore, if more funds are to be allocated to sanitation this will have to start with a change of heart in the capitals of the Member states concerned. Also the question of reaching the Millennium Development Goals for water and sanitation is their responsibility.



Eddy Hartog

**Head of Unit, Thematic coordination and innovation,
DG Regional Policy, European Commission**

“Cohesion policy and wastewater management”

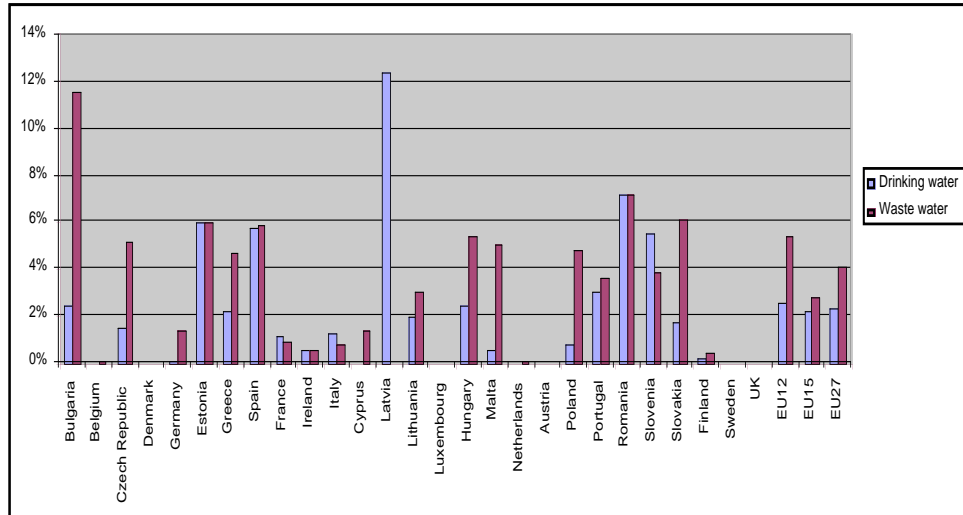
Commissioner Huebner asked me to replace her. There are 3 pillars for our approach: legislation, funding and organisation

We held an important water conference in March 2007. It became clear that the issue is connected to hard line economic benefits. It is connected to the Lisbon Strategy and the Sustainable Development Strategy: if you do not have a healthy population, you will not have economic development.

There is a variety of EU legislation, but the enforcement is mainly the responsibility of national courts. There are several funding options, such as the 7th Framework Programme, LIFE, Rural Development, the EIB and Cohesion Policy. The main criteria are that projects should be in line with legislation.

Cohesion Policy is aimed at reducing disparities, especially related to employment and GDP. A strategic approach should be outlined in member state plans. In the period 2007-2013, 350 billion Euro is available – about 30% of the total EU budget. European Commission, member states and the regions have a programming partnership and shared management.

The bulk of the money goes to Eastern and Southern Europe. Water and waste water falls under Priority axis 1 (out of 5) of the environmental objectives of Cohesion Policy. 8 billion (2.3%) of the budget is spent on drinking water and 14 billion (4%) on waste water. The slide shows these percentages per country.



Source: European Commission, DG Regional Policy

The case of Romania, where pre-accession projects started from 2000, shows that many regional actions were required. Cohesion policy needs both a small and a large scale approach. Management requirements were important as money was not always used properly. Implementation and management capacity are more of a problem than the funding. We insisted that women's groups would be involved in planning the strategy. Where were you when the goals were set? You need to discuss the strategic plans with the member states, the Commission cannot do all that.



Carel de Villeneuve

Senior Policy Adviser Global Water Issues, Netherlands Ministry of Transport, Public Works and Water Management

“Small-scale sanitation: Dutch experiences at home and abroad”

The Netherlands introduced the Surface Water Pollution act with the principle that any discharge without a licence is forbidden, and that the polluter pays for the operation of sewage plants, the restoration of waters and the administration. The number of inhabitants and their distance to a sewer system defines the obligation to connect or to have an individual treatment system. The type of system depends on the situation, the sensitivity of the surroundings, discharge in soil or surface water. Several systems such as septic tanks, compact systems, sand infiltration and constructed wetland are being used. Their construction needs to be supervised and certified.

Another activity of our Ministry is the support for www.akvo.org. This is an open source for water and sanitation. The Netherlands government gave 50 million euro to help meeting the Millennium development Goals nr 7. The development sector lacks information, funds and sharing project results. Akvo is an answer to these problems. It will be ready in August 2008 and provide three products: – an open knowledge source – online connection of funds to projects – a simple and transparent reporting system. The Akvopedia open knowledge system for easy to implement, inexpensive and sustainable solutions for water and sanitation is already running and can be found at www.akvo.org. You are invited to join Akvo.



Night soil being collected in the Netherlands in the 19th century

Discussion 1

Peter Gammeltoft was challenged by questions on solving the sanitation problem of 20 million EU inhabitants. He underlined that the Commission receives many complaints from member states on too much EU interventions: small scale sanitation should be done by the member states themselves, political pressure inside the member states should be increased. The EU contribution is mainly through supporting the water framework directive and co-funding projects that meet the directive and as Eddy Hartog explained this has to be done in partnership. The Chair **Friedrich Barth** reminded the Commission of a guidance document on small scale wastewater treatment¹ published by them, this could be done again. **Eddy Hartog** added that all government levels have responsibilities and should not dive away. When there are no sewerage and wastewater treatment yet, there is a unique opportunity to introduce new separating systems. There will be a new project in 6 regions together with the European Commission. We will have a guidance document and learn from it. **Sascha Gabizon** said that member states are under pressure to first do the binding EU obligations and they have not much experience with small scale alternatives. She suggested to have additional aid programmes. Peter Gammeltoft said that the relative influence of Ministries/Ministers inside governments influence how priorities are set, so often transport comes before environment. To increase the share organisations have to get actively involved in the national political debates. They should use the opportunity provided by the river basin management plans which have to be published by the end of 2008. Chair **Uschi Eid**: The problem is often that no one feels responsible: our board is lobbying for a focal point for sanitation in each government.

Ralf Otterpohl: This is a crisis situation, such as an earthquake. That means that we need funds for the people who want to do something now, in addition to the normal slow ways.

Another participant raised the issue that people use 140 liters of water per day, but only use 1 – 2 litres as drinking water. **Peter Gammeltoft** agreed that this was a good question, also related to climate change and droughts, and that we are far behind countries and regions such as California, Israel and Australia in this respect. But we have a mechanism for raising these issues in the implementation of the Water Framework Directive.

The re-use of excreta in agriculture is an important issue. **Peter Gammeltoft** said the Commission is promoting re-use of waste water and is looking at how this can be done without reproducing the kind of health problems which initially gave rise to the separation of excreta from drinking water sources. There are some reports on the Commission's website, for example on separating different waste waters. One should look at the economic viability.

From **Galia Badarska**, Bulgarian Academy of Sciences, came the remark that newly built conventional wastewater treatment plants do not always work well due to different circumstances. Thus EU financed plants will become 'monuments'. Overcapacity leads to bad operation of the system and high costs which people cannot afford. **Eddy Hartog**: Beware for a paternalistic approach and work with people on the ground: in Romania and Bulgaria we see more innovative approaches than in many other member states.

¹ Guide: Extensive wastewater treatment process adapted to small and medium sized communities (500 – 5,000 population equivalent) implementation of Council Directive 91/271 of 21 May 1991 concerning urban waste water treatment, this document can be downloaded from http://www.wecf.eu/english/publications/2005/eu_pubs.php



Roger Aertgeerts

Regional Adviser, Water and Sanitation, WHO

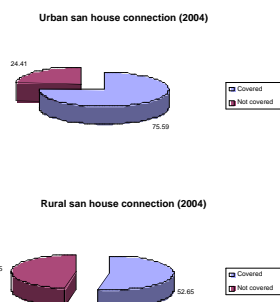
“WHO and the International Year of Sanitation 2008”

The definition of sanitation has changed over the past centuries, from the promotion of hygiene, the transport and treatment of wastewater to the provision of clean drinking water and the disposal of sewage nowadays. Sanitation is important for human dignity, disease prevention and environmental protection. Water related diseases include for example diarrhoeal and non-diarrhoeal diseases, intestinal helminth infections and skin and eye infections.

Already in 1977 the UN Water Conference in Mar del Plata was held, and other events followed. We had the Millennium Development Goal nr 7, Target 10 and the Water for Life Decade. Did it work? The sanitation situation in the EU:



Sanitation in European Union (2004)



- ✍ Total pop: 487 m
- ✍ Urban pop: 364 m
 - House connection: 276 m (75.59%)
 - No house connection: 88 m (24.41%)
- ✍ Rural pop: 122 m
 - House connection: 64 m (53%)
 - No house connection: 58 m (47%)

Brussels 29 jan 2008

WECF IYS 2008

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In Europe, several programmes apply: the Barcelona Convention, the Protocol on Water and Health and the CEHAPE (Children’s Environment and Health Action Plan for Europe). The situation in the Mediterranean is of special concern as a large part of the coastal cities (> 2000 inhabitants) has no wastewater treatment and, in addition to the resident population, needs to cope with over 300 million tourist arrivals each year. Contaminated sea food, recreational water and sand result from uncontrolled dumping of untreated or partially treated wastewater in the marine recipient environment. With climate change causing increasing temperature and decreasing rainfall, combined with increasing water demand, problems will grow. It will become unavoidable to reuse wastewater and sanitation end products after treatment. This is possible with due management of health and environment risks. Future plans have to include this.

The Protocol on Water and Health is a flexible soft law instrument which bridges environment and health and has a holistic approach. It should soon be ratified by all parties. More funding is needed for sanitation, especially in rural areas. Split payments can be applied so that local people only pay for the operational costs and not for the investment.



Thor Axel Stenström

Professor, Swedish Institute for Infectious Disease Control

“EU regulations related to water and sanitation and the hygienic risks related to poor sanitation practices.”

Environmental policy and legislation has to address three aspects: health, environment and resources. Health protection is aimed at reducing transfer of hygiene risks in the environment and human exposure. Environmental protection is aimed at protection lakes, seas, groundwater, soils from eutrophication and degradation. Resource recovery is aimed at the recycling of nutrients.

Current legislation applying in the EU:

- The Rome Treaty
- The Water Framework Directive
- The Drinking Water Directive
- The Bathing Water Directive
- WHO Drinking Water and Recreational Water Guidelines – Water Safety Planning

- EU Directive 91/271/EEC on urban wastewater treatment. This directive could have been used more for health protection.
- The Landfill Directive; 1999/31/EC.
- Directive 86/278/EEC on the protection of the environment, and in particular of the soil, when sewage is used in agriculture. This forthcoming sludge directive needs more focus on preventing diseases, thus opening up more perspectives for re-use.
- The Groundwater Directive
- The Guidelines for the Safe Use of Wastewater, Excreta and Greywater – WHO 2006.

These new WHO guidelines are very good. They focus on both health aspects and the reuse and resource recovery, and were developed around the Risk Assessment and Risk Management concept. It is a system approach with Risk Reduction Targets.

Communicable diseases are addressed in the following:

- The Amsterdam Treaty, Article 152 of the EC Treaty.
- Community Health Strategy. European Community [COM(2000) 285 final].
- The Public Health Framework
- Several obligations for member states are included, such as the prevention and monitoring of communicable diseases, through the network of epidemiological surveillance and control of communicable diseases, set up in 1999. (Decision No 2119/98/EC of the European Parliament)

The ECE Protocol on Water and Health is the first international agreement of its kind adopted specifically to attain an adequate supply of safe drinking water and adequate sanitation for everyone, and effectively protect water used as a source of drinking water.

It amalgamates the disease surveillance mechanisms as well as the general regulations within the EU Directives. It opens up for a more transparent process in the Caucasian and Central Asian countries. It includes protection of the most vulnerable individuals to water-related diseases accounting for both a pro-poor approach and follows the general objectives stated by WHO as well as in the Millennium Development Goals. Parties have to set targets and target dates. Ratification of this Protocol is important.



Ana Drapa with Sascha Gabizon

Ana Drapa

Senior Counsellor, Ministry of Environment and Sustainable development, Romania

“Water/wastewater infrastructure in the Romanian rural area”

Romania has 21.6 million inhabitants, 11.9 of them living in urban areas. The other 9.7 million live in rural areas – 45% of the population. 98% of Romania is part of the Danube River Basin. 54% of the population is connected to both drinking water plants and waste water treatment. 16% only benefits from public water services and the remaining 30% is not connected at all. They get their water from wells. Large investments will be needed to fulfil EU Directives:

EU Directive	Transition period	Associated costs (billions EURO)
Drinking water 98/83	2015 compliance for quality parameters for drinking water	5.6
Urban Wastewater 91/271	2018 By 2015 – 263 agglomerations with more than 10.000 p.e. By 2018 – 2346 agglomerations between 2000 – 10.000 p.e.	9.5
Nitrates 91/676	2007	3.1

10% of the rural population is connected to a sewerage network and 30% has access to a drinking water network. Development of waste water infrastructure is based on the environmental impact which means that larger communities and cities will be connected. Rural areas fall under the National Rural Development

Programme 2007-2013, which is financed with 8 billion euro by the European Agricultural Fund for Rural Development. Part of this Programme is the investment in infrastructure such as roads and energy supply, and it includes more than 6000 km water pipes and more than 5000 km sewage pipes, mostly new constructions. There are various other large projects up and running, such as a 100 million \$ project on rural development, financed by the World bank.

These investments have a direct positive impact on quality of life and economic development. Huge investments are needed for a large amount of civil works. The different regions and conditions require different solutions. Small agglomerations require larger investments as specific technical solutions are needed. The money comes from a variety of financial sources: state and local budget, EU funds, credit, PPP and others.



Daciana Octavia Sarbu

Member European Parliament, PSE, Romania.

“Sanitation problems in Romania – an overview”

First of all, let me congratulate Women in Europe for a Common Future and the other NGOs for organising this seminar which addresses serious health problems in rural areas, especially in Romania and Bulgaria. I will briefly describe you the seriousness of this issue in my country by providing you with some statistical data: Around 45% of Romania’s population of 21.7 million people live in rural areas. Of these, 10.4 million people live without proper sanitation and only 11% of rural people have access to safe sanitation at home.

A significant concern is the lack of resources to ensure adequate sanitation, as there are no substantial information and awareness campaigns on the protection of health and environment in the rural areas. Resources to implement such campaigns are scarce, and not adapted to the regional conditions in the counties concerned. In villages, the local authority is represented by Communa which lacks the means to promote water and sanitation awareness. Given the impact that these latrines can have on public health, like the blue baby disease or hepatitis, there is a need for action on preventive campaigns. However, these campaigns at Communa level are limited to vaccination and to some mother and child care services. No systematic monitoring takes place of the household wells and water samples are being taken only at the occurrence of “blue babies” disease or other illnesses. The Communa clinics do not have their own basic water quality measurement equipment and samples are usually analysed at the county level.

Another problem that poses serious concern is the financial aspect of ensuring proper sanitation facilities for people living in small communal areas. In rural areas the population is relatively old. The average age is 55 years or older, so most of the villagers are pensioners, with household incomes of around \$60/month. In other words, the low incomes do not allow for efficient water supply schemes to be implemented. The European Union must provide financial support for these areas that lack safe sanitation by allowing a considerable amount of the cohesion funds to be used to address this health problem. The European Commission should extend the Water Framework Directive to pollution caused by smaller settlements and include binding obligations on it, so that additional funding will be provided. Moreover, low cost facilities that can provide protection of environmental and public health must be encouraged, so that affordability will not represent an impediment in securing safe sanitation for low income villagers living in rural areas.

I hope this health problem will become an important topic on the European Union agenda as soon as possible and I thank again the organisers for trying to raise awareness on the need to provide adequate sanitation which is a fundamental requirement for basic human well-being.



Satu Hassi

Member European Parliament, Greens, Finland

“Dry toilets can be a solution”

This topic is close to my heart. I am a big fan of dry toilets. Lack of good sanitation is a problem for health and for the environment but it is also a gender problem. In many countries girls cannot go to school because of a lack of toilets. Where toilets lack, women and girls have to hold all day. They are possible victims of rape when they have to find a place in the dark.

I am delighted to see the posters from the Baltic here. The Baltic Sea is one of the most polluted sea areas in the world. It is not mainly due to chemicals but the main problem is eutrophication where the biggest source is agriculture.

Even in wealthier parts of Europe dry toilets can be a solution, at least for less densely populated areas. They also enable the reuse of valuable raw materials as energy and fertiliser. The attitude towards these solutions should develop in a more rational direction. Spreading these technologies in richer areas will help as an example for poorer countries.



Hans Blokland

Member European Parliament, ID, The Netherlands

We cannot speak about sanitation without speaking about water. Both issues are intertwined. Water is both the source of and a solution for poor sanitation. Poor sanitation is a serious problem faced worldwide, mostly in underdeveloped countries. In Europe, according to the World Health Organization and UNICEF, most sanitation problems can be found in the Eastern Part of Europe. These countries are characterized by a land climate. This means: hot and dry summers and cold winters. This causes severe problems in water supply. Often this water scarcity leads to a policy focus on how to improve the water supply. Of course this is a logical way to cope with the problem, however, this is not enough. You have to ensure a *safe* water supply. Mainly in underdeveloped countries surface water is severely polluted by human faeces (due to a lack of sanitation infrastructure) and by industrial hazardous substances. This causes several diseases, for example diarrhoeal diseases, typhoid fever, different kinds of hepatitis and different kinds of infections. Without sufficient medical care this can lead to death. Therefore it is of big importance that we try to stop these unnecessary sufferings.

– Firstly by improving sanitation infrastructure, and, important, maintaining it when having improved it. Everyone has to gain access to a sufficient sanitation infrastructure.

– Secondly by raising public awareness. You have to raise awareness about the risks the people are facing currently. And you have to raise awareness about the utility of sanitation infrastructure. Why should you improve sanitation infrastructure when the people who have to use it don't know how to use it?

– Thirdly, by improving overall water quality. People use water for everything in their life, for cooking and washing, for bathing and drinking and so on. In this way water can be part of a solution for the problem.

The mentioned priorities can be covered by several kinds of institutions. Not only governments are an important actor, but in my opinion NGO's can play a huge role as well, especially in the first two priority areas mentioned. NGO's can play an important role in enhancing sanitation infrastructure, especially when they transfer knowledge and technology from well-developed countries. NGO's can also play an important role in raising awareness in affected countries. They can set up local projects to improve the bad sanitation situation. They also can campaign in well-developed countries in order to show the poor situation with regard to sanitation in underdeveloped countries. By doing this they can collect money to fulfill their mission. But nevertheless, besides the NGO's, the governments (both national and regional as well as local governments) have to focus attention on the problem.

The World Health Organization can play an important steering role in it. Governments have to raise funds for improving sanitation infrastructure and awareness campaigns. Furthermore they have to restrict hazardous emissions in surface water and groundwater. This can be done by proposing emission restrictions to industrial emitters. It can also be done by improving water treatment, especially waste water treatment. In the light of this I can mention the waste water directive which is in force in the European Union and which obliges member states to take care of sufficient waste water treatment installations in every local community. Although at the moment not every member state performs very well, there are a few member states in which one fulfilled the obligations with regard to treatment of waste water. Examples are Austria and The Netherlands. Those governments could exchange their experiences with governments which are not able to manage the sanitation problems in a right way. Both inside the EU and outside the EU. The city of Brussels is still building a waste water treatment – the European Parliament had to ask the Commission to start an infringement procedure. In my eyes working together among NGO's, governments and the World Health Organization is the key for success in finding a solution for the sanitation problems. The 2008 International Year of Sanitation is an incentive to make the way clear for an even more tough cooperation among those parties to manage it.

Discussion 2

Kimmo Tiilikainen: clean water is indeed crucial. I remember that my grandmother had a dry toilet. About 20 to 30 years ago water flushed toilets were introduced and caused environmental problems. In Finland we are now trying to repair this. We need to balance human needs and the environment.

Satu Hassi added that modern dry toilets are a cheaper solution for areas where there are not yet waste water pipelines, so that countries will be less dependent on EU funds. There might be a conflict between national and EU legislation.

Hans Blokland said that to change legislation is not a problem for the EU as they are doing it all the time, but the solution has to be good both for health and environment and he had still some doubts on the health aspects.

Friedrich Barth: The EU is not in the forefront of new technologies, not just with respect to dry toilets. We need a change in mindsets and the right financial structures.

Carola Bjorklund of the Ministry of Environment and Foreign Affairs Norway said the European Commission should play a more active role in the Protocol on Water and Health.

Peter Gammeltoft reacted to **Daciana Sarbu** that the Water Framework Directive already applies to all waters and all pollution: if local pollution from latrines is a problem, then there is a requirement in the WFD for Member states to make sure that it is resolved. Draft plans should be ready by the end of 2008. The issue should be raised with competent authorities in the Member States. It is one of the priority objectives of the Cohesion funds. Raising additional funds for these problems depends on priority setting at the national level; the European Commission cannot interfere here.

Finally the members of the European Parliament were asked what they planned to do.

Daciana Sarbu wanted to organise discussions in Romania on the short term.

Satu Hassi would like to have a discussion with Commission people either in the European Parliament or informal, to explore to what extent we have barriers in legislation.

Hans Blokland wanted more cooperation between local communities in different member states, for example with those in Romania.



Kimmo Tiilikainen

Minister of Environment, Finland

“An example of Finland’s approach to wastewater treatment for households in rural areas”

With 20 million people in the EU with unsafe sanitation, the EU should be a forerunner in reaching the Millennium Development Goals. In many countries efforts are still needed to implement the Urban Waste Water Directive.

In Finland, long term goals setting and four National Water Protection Programs since the early seventies have been successful in reducing pollution. Finnish waters are very sensitive to eutrophication. The 1961 Water Act was not effective enough in decreasing the load from non-point sources. The 1998 National Water Protection Programme included targets for rural wastewaters. The 2000 Environmental Protection Act included provisions for controlling small discharges. The Finnish Government’s Program for the Protection of the Baltic Sea in 2002 included water protection actions in rural areas.

More strict regulation was needed for small on site treatment systems.

The Government Decree on Treating Domestic Wastewater in Areas Outside Sewerage Networks was approved in June 2003. It will affect one fifth of the population (one million people), as well as hundreds of thousands of holiday houses. The Decree covers onsite wastewater systems that receive domestic or similar wastewater from individual homes, small businesses, and communities with a population equivalent of less than 100.

Untreated wastewater should generally be treated to remove 90% of the organic material (BOD₇), 85% of the phosphorous content and 40% of the nitrogen content. All new buildings should comply with the new law. Old systems have until 2014 to meet the new requirements.

The municipality may accept lower rates of treatment on less sensitive and vulnerable areas. However, the pollution load must also be reduced in these areas by at least 80% for organic matter (BOD₇), 70% for total phosphorus and 30% for total nitrogen. The municipalities are encouraged to define different zones based on how vulnerable these are to pollution.

Proper plans for a wastewater system must be included in the application for a building permit, with up-to-date operational and maintenance instructions for each wastewater system. There is a growing interest among the Finnish manufacturers to bring new products to the market. It is a challenging task to introduce technology which is user-friendly, affordable and easy to maintain and operate. The Finnish Environment Institute collects independent, reliable and up-to date information on commonly used treatment methods and performance of such methods, to help

home owners with information. The new decree encourages the use of dry toilets, which save water and prevent disease spreading. For the user it should not be less comfortable, rather more comfortable.

The costs vary according to local conditions. In some cases, less expensive systems such as septic tanks with a soil adsorption system can be used. In many cases, more expensive prefabricated systems are needed. The investments can amount to between 1000 to 8000 euros per property. Subsidies are available for rural residents with low income and tax deductions can be claimed.

The decree is in line with the Helcom recommendation to end untreated disposal and reduce BOD by 90%, phosphorus by 70% and nitrogen by 30%. As a result, Phosphorus loads will reduce by around 300 tonnes a year by 2014. This amounts to an overall reduction of 6–8% in total anthropogenic phosphorus discharges in Finland.

Reactions

Participants raised questions on the products produced by on site systems: what to do with the compost, urine and filter beds? **Kimmo Tiilikainen:** Many systems should work 20 years or so. I cannot say where the products will go, it is still a problem which also exists for urban sludge. We have to use waste as a resource. My grandmother's dry toilet meant total recycling.

Another remark: demand for good equipment will be generated by the Finnish initiative. Current equipment could be a lot better: start a think tank on this. **Kimmo Tiilikainen:** an independent body needs to test equipment so that the consumer can trust it. For the forerunners there will be a market in many countries.



Miroslava Georgieva

Director Rural Development, Ministry of Agriculture and Food Supply, Bulgaria

“Rural Development Programme 2007-2013 in Bulgaria – opportunities for rural areas in the fields of water supply and waste water treatment”

In Bulgaria, the water supply system covers above 5000 settlements and 98.8% of the population, with a total length of the water-supply network of about 71 000 km. The larger part of the network (88%) was built in the 1960-1980's. Asbestos cement pipes account for 70% of the network. They are in poor condition and need to be replaced. Water shortages occur in some of the regions, leading to rationing of water. The water quality is good, except in specific regions which are facing specific local problems.

The sewerage system, including waste water treatment, is a serious problem for the environment as well as for human health. The share of the population with access to sewage infrastructure is 69% while only 41% of the population have access to waste water treatment facilities. By the end of 2010 agglomerations with a population equivalent (PE) above 10 000 and by the end of 2014 agglomerations between 2000 and 10 000 PE will have to comply with the urban waste water directive. This requires extension, reconstruction and modernization of sewerage systems.

A special problem is the high share of rural population living in small settlements. Nearly half of the rural population lives in 3850 settlements with a population below 2000 people. About 15 % lives in very small settlements below 500. The underdevelopment of the sewerage system is a significant problem in rural areas. Only 2.1% of the villages have a sewerage system.

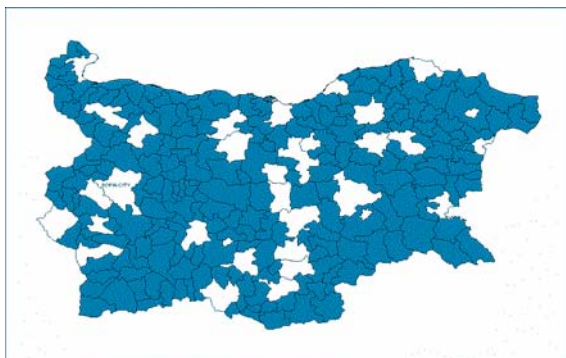


Figure: Rural areas in Bulgaria

231 municipalities out of 264, 81% of the territory and 42% of the population

Rural Municipalities put priority to water and sewage infrastructure in their strategies for the period 2007-2013. Their strategies include 580 projects for the rehabilitation of water supply (255 million Euro) and 550 projects for sewage systems (635 million Euro). 1284 Million Euro (71%) from the OP 'Environment 2007 – 2013' will go to sewage and waste water treatment urban areas and larger communities. The Rural Development Programme 2007-2013 will spend 300 million Euro from Axis 3 budget (30% of the budget) for water supply, waste water treatment and waste management within the settlements with population below 2 000 PE in the 231 rural municipalities.

This conference is very important, presenting sustainable solutions for rural areas. We have options for decentralized systems, also under the LEADER program, and we are launching a study to offer different models to the Ministry and the Mayors.

The Mayor of Stara Zagora adds: this is extremely important for us, we have to use the experiences of others. Diana Iskрева will present an example from our municipality.



Igor Bodik

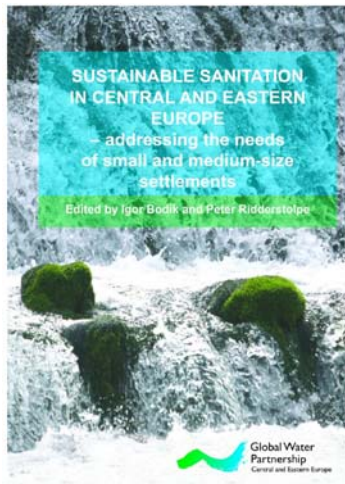
Professor, Slovak University of technology; Global Water Partnership, CEE Sustainable Sanitation Task Force

“Sustainable Sanitation in Central and Eastern Europe”

In 1998 Global Water Partnership CEE was founded to manage water resources in a sustainable way in the CEE region. It helps to implement EU water legislation on the national level. In 2005, a GWP CEE experts study on the state of sanitation in agglomerations with less than 2000 inhabitants reveals that 20-40% of the population in the CEE region is not connected to central sewerage and treatment systems, while solutions are not envisaged before 2015.

In 2006 GWP CEE established the Task Force for Sustainable Sanitation. In 2007 we published the book „Sustainable Sanitation in Central and Eastern Europe – addressing the needs of small and medium-size settlements“.

Countries in Central and Eastern Europe actually belong to the most developing part of the World. Investments into sanitation systems are oriented on agglomerations with more than 2000 inhabitants, but 30 million inhabitants live in settlements with less than 2000 people. Generally there is a lack of information about sustainable sanitation systems for small settlements. This book, available in 13 languages, aims to fill this gap.



The book offers:

- a comprehensive overview of water and sanitation state in the CEE countries
- sustainable sanitation principles
- case studies of successful implementation of sustainable sanitation in the CEE
- overview of EU water legislation related to possible application of alternative and decentralized solutions of sanitation
- a methodological guidance to an „Open Wastewater Planning Process for Sanitation“

The book describes a planning tool helping stakeholders to have a creative communication on aims and options with a simple and flexible method for the macro- and micro level. It looks for an optimal relation between economic, technical and environmental solutions and recommends a holistic approach to the water use loop. It changes preconceived thinking, creates a deeper understanding of the objectives for treatment and forces decision makers/other stakeholders to consider the whole system.

We will organise dissemination seminars in all CEE countries to promote ideas and principles of sustainable sanitation. We are preparing a GWP regional EU-project to implement sustainable sanitation principles with national demonstration projects in each CEE country.

More information and downloads of the book: www.gwpceeforum.org

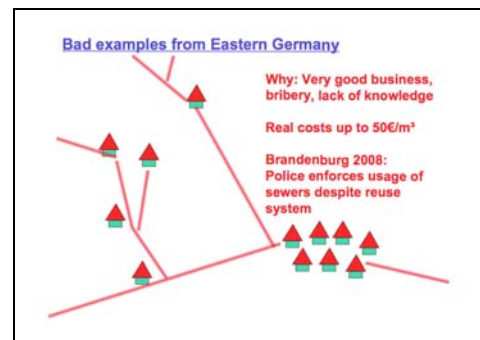
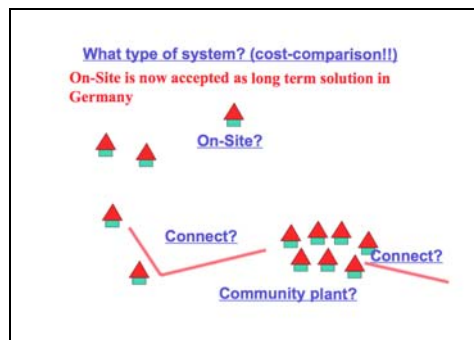


Ralf Otterpohl

Professor, Hamburg University of Technology, Institute of Wastewater Management and Water Protection, Germany

“Decentralised sanitation for rural areas”

Safe sanitation in rural areas is a neglected subject. Many regions do not comply with legislation. Connecting rural and remote areas to the centralised sewerage of a city does often not make sense. In Germany, on site treatment has finally been accepted. First it was only accepted as an interim solution until connection. After the re-unification Eastern Germany had many problems with mismanagement and bribery around the construction of sewerage. This could lead to real costs of treatment up to € 50 per m³.



Well designed equipment for on site systems is now available. The Biomembrane reactor can be more effective than a centralised system, especially when reuse is an option.



Biomembrane reactor for high-tech decentralised wastewater treatment

Septic tanks and soakaways cannot solve the problems of nutrients leaching and hygiene. Connecting toilets to the wastewater system is an historic error, which has cost millions of lives. Even centralised systems overflow in case of heavy rainfalls and pollute the surface waters. Keeping faecal matter out of water and wastewater is crucial for hygiene.

Ecological sanitation or Ecosan is not a technology, but the application of 3 principles: containment – sanitation – reuse. Several systems are already usable, but not very well designed yet. In Sneek, the Netherlands, 32 new houses have been built with a vacuum-biogas system, which produces energy and fertiliser from toilet wastewater.

A compromise system is a urine diverting flush toilet, which is acceptable for 99% of the population.

Dry toilets are flushed with for example saw dust, ashes, lime or soil. Simple urine diversion (UD) solves the problem of nitrogen emissions to water. They can be built inside houses but then ventilation should be organised. After some time, people are happy with the new system, but proper operation and maintenance are crucial. There will be interest in the urine as fertiliser when the quantities are high enough.

The production of one person can fertilise 100 – 200 m³.

Development of innovative sanitation can go together with local employment (production and operation). Ecosan is maturing very fast; better systems are now being produced.

Conclusions:

- On-Site sanitation is a proven, cost efficient and accepted solution
- Conventional systems are usually not resource efficient and still spread nitrogen and pathogens
- Innovative systems are proven, reuse and low emissions go together with local employment
- Awareness campaigns on all levels are crucial
- Cheapest solution is often dry UD-toilets with added value and water efficiency

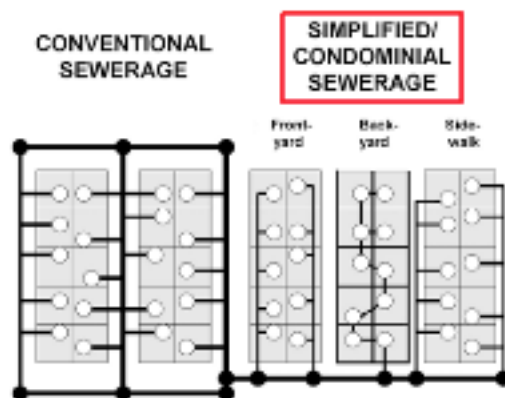
www.tu-harburg.de/aww/index.html



Duncan Mara
Professor, University of Leeds, United Kingdom

“High-level low-cost sanitation services in small towns and large villages”

Coming from 30 years of experience in developing countries, I have a slightly different view. You can have on-site systems if people want them and are prepared to put quite a lot of time in maintaining them. But an alternative cheap option is the combination of low-volume flush toilets with simplified sewerage and low-cost wastewater treatment (e.g., waste stabilization ponds). A Swedish toilet model uses only 3 litres per flush. We applied a simplified sewerage system which is cheaper and works fine. It is a condominal system which means first several houses are connected and then feed in a large system:



Design: Comparison of conventional and simplified sewerage system

The hydraulic design is based on a minimum sewer diameter of 100 mm, a minimum tractive tension of 1 N/m² and a minimum value for peak wastewater flow of 1.5 litre/second. This results in a minimum gradient of 1 in 200, being able to serve 234 households of 5 people with a water consumption of 100 litres/ person day.

The costs for a project in Brazil were 56 \$ per connection in stead of 94 \$.
Should we ever use conventional sewerage in urban housing areas?

Waste stabilisation ponds (WSP) are widely used in France (>2500 systems) and Germany (>3000). In France this system consists of a facultative pond (6 m²/p.e) with two maturation ponds (each 2.5 m²/p.e). Research in the UK showed that a facultative pond (as in France) with aerated rock filter (1 m²/p.e) produces a very high quality effluent. Algae grow of the products from the bacteria. WSP work also well in a cold climate. Capital costs are between one third and half of traditional systems, operational costs are about half. Traditional systems use large amounts of electricity for pumping.



Hotel in Scotland with WSP (waste stabilisation pond)

You can use biogas from ponds or use the effluent for crop irrigation. The effluents comply with the Urban Waste Water Directive. It is basically a choice between land and electricity: money spent on land is an investment, but money spent on electricity is money gone for ever.

Failures can be caused by limited local knowledge. Avoid that the blind lead the blind when local municipalities cooperate in such projects: improve local knowledge.



Robert Zvara

NGO Creative, Slovakia

“Wastewater Treatment Alternatives for villages and small communities”

NGO CREATIVE is a non-profit organisation focused on development of alternative forms of tourism and alternative environmental projects. We work on wastewater and rainwater management projects: alternative forms of waste water treatment plants (WWTP) for small communities, on-site systems, recycling of grey water and composting.

More than 30% of the population in Slovakia lives in villages with less than 2000 people.

More than 2,400 small villages with less than 2000 citizens have no treatment system, only old septic or holding tanks which usually leak. A regulation from the 1980-ties allowed only holding tanks and conventional systems. This caused problems with the permission procedure for on-site technologies. In 2004 a new water law was approved. Usually permission procedures for onsite systems take twice as much time as for a conventional system.

Because of the EU regulation, priority is for funding waste water treatment in villages over 2,000 people. Small villages have problems to gain funds for collection and treatment systems. It leads to a centralized approach, connecting more villages to one WWTP.

60-70 % of the funding comes from EU sources. Small villages can obtain limited funding for collection systems, WWTP or water supply from the Slovak Environmental Fund from the Ministry of Environment (possible budget for selected village 40,000-150,000 Euro/year).

The privatised water and wastewater companies are only interested in conventional systems and usually all the money flows to them. Examples of projects from NGO Creative are:



*Nizné Repase (25 PE) 3 steps on site WWTP for 5 houses
(septic tank, biofilter wetland for summer time and sand filter for winter time)*



*IchyPotok – (150 EO) – reconstruction of septic tank + underground sand filter,
3 water cascades with fish. System works without electricity*



*Krásna Lúka – 2007 (700 PE) Whole village connected with treatment plant Technology – 2x Imhoff tank,
biofilter a 3 x 550 m2 wetlands. Village owns and takes care of WWTP – simple and low cost maintenance,
system works with 2 pumps only*



*Nálepkovo – Zadny Hámor – 2007 (5 houses)
Constructed wetland as a second step of treatment, first time approved in Slovakia
3-compartment septic tank and wetland, system works without electricity*



Daniel Villessot

President of EUREAU

“EU Sanitation Policies and Practices in the 2008 International Year of Sanitation”

Eureau is the European federation of national associations of water suppliers and waste water services, serving around 405 million people in the EU and EFTA countries. Eureau is the Brussels’ lobbying office, making sure that new directives are effective. Eureau members organise activities and several partnerships also outside of Europe. Rural areas are traditionally not the main area of activity.

There are several challenges for the International Year of Sanitation. For Europe and the newer Member States the estimated total spending required, including maintenance and replacements is US\$ 360 billion, of which 59% relates to urban areas. The 20 million in the EU not having safe sanitation is quite a problem. Two concepts are being used: “basic sanitation” and “improved sanitation”. Today I saw many examples of “Improved sanitation”. When developing sanitation technology, one should not forget to include the drainage of storm water and the treatment, disposal, reuse or recycling of effluents.

Eureau members exchange information with the “newer Member States”. Eureau has a commission on sanitation where we discuss amongst others regulation. We consider a workshop in May, under the Slovenian Presidency, also addressing sanitation. Through our Members and direct partnerships or international associations, we provide European support for sustainable sanitation in Africa, Asia, South East Asia, and Latin America.

In Europe funding ranges from ISPA to the new Cohesion Funds. We are mainly addressing the urban population. We need more cohesion funds on wastewater, but projects are still under development and should also address the rural areas.

In Romania, from 2004 to 2006 a subsidy of a member ran the SAMTID programme (Small And Medium Town Infrastructure Development), aimed at developing an example for future SAMTID projects, giving management support to the Project Coordination Unit and strengthening the Associations of Municipalities. We assisted the regionally operating companies in the development of Water and Wastewater Master Plans. This was PHARE (EU) funded.

Our Polish Board member has the experience that large agglomerations provide better ecological effects in waste treatment. In Poland they did an Operational

Program for Infrastructure and Environment, including small projects in Natura 2000 areas. Polish waste management is planning an upgrade of 1734 waste water treatment plants, including small ones, as well as 37000 km sewers; costs are 10 M€. They are moving from urban into rural areas.

Several partnerships have been signed up between Eureau members and newer member states. Nowadays they are called WOPs (Water Operators Partnerships). PPP's with private operators in CZ, HU, RO, BU are covering urban areas, but after some years extended to rural areas. Involving local governance, financial issues, management of facilities, operation & maintenance practices and local staff training are all important.

To conclude: capital expenditure is essential to start dealing with sanitation in rural areas, but local governance is crucial to ensure appropriate operation and management of the systems. Even in France, for a few million of individual systems their performance is unknown, this is a big problem. Operational expenditure for maintenance and monitoring should be included. Regulation needs to ensure that good maintenance is being done.



Diana Iskrevva-Idigo

Earth Forever, Bulgaria

“Sustainable sanitation for rural Bulgaria”

In Bulgaria, 96% of the villages now have centralised water supply. When people have tap water, they produce more wastewater. But 98 % of the villages have no sewer and no working mechanism for wastewater management. 70% of the villages also lack solid waste collection. Usually people have dry pit latrines with soakaway. The problem is to empty them. In the villages live many pensioners who went back after retirement. It costs them one month pension to have the soakaway emptied in a proper way, so they put the material in their garden, in other green areas or in the street. 2% of the villages have some sewage system but as nobody pays for its use and maintenance, it gets blocked and nobody cares about it.

We involve media, all stakeholders and especially elder women and young people. In Bulgaria traditionally elder women define the rules on housekeeping and hygiene. The role of our pilot projects is to make it more popular, with people visiting it and learning more about it. We organized summer schools with children and grannies, who enjoyed it.



Earth Forever festive opening of the new dry urine diverting toilet building for the community center of Sulitsa village, Bulgaria, involving local citizens and the media

We construct the infrastructure applying the Ecosan idea. We use urine diverting dry toilets as well as waterless urinals, as Bulgarian men do not want to urinate sitting.

The greywater treatment facility is a vertical planted soil filter and mulch filter. We sanitise the Ecosan products by composting, and we are introducing vermicomposting.

We promote the reuse of sanitized products for the gardens around the houses.



Urine Diverting Toilet instruction posters and technical explanation by Earth Forever, Bulgaria

The toilets were installed in the Cultural House, with on average 10-15 visitors per day. As a side-effect, the garden of the Cultural House was turned into a nice playing ground. People have no problems to have such toilets, but hesitate to use part of their yard for a filter. This changes when they see that flowers or even berries can be grown there. Composting is done in combination with organic waste, which people produce in large amounts as they grow their own vegetables. We teach them how to make compost. This is attractive for them as the containers for waste collection are small. We also started using the urine, and showed that tomatoes grow faster and ripen two weeks earlier. We hope to build an information centre in which the toilets are shown and explained and how to build them.

Final discussion (3)

Daniel Villessot, was asked whether the new decree in France for on-site systems would recommend Ecosan type solutions. He answered that these would be included, but that the debate focuses on how public bodies can go on private property and how they can check the performance of such facilities.

Duncan Mara said that also in the UK and the US this has been regulated – 25% of the US population has an individual system.

Thor Axel Stenström mentioned that Sweden, in relation to implementing the groundwater directive, has defined certain sets of systems, accounting for health and environment aspects. It is then up to the local community to make a master plan. A good management system is crucial.

Peter Gammeltoft: This conference draws attention to the many small communities where we also need to consider other, less traditional solutions when implementing the Water Framework Directive. Traditional systems do important work for the cities, but many people are on individual systems. Member States have to look at the whole spectrum of solutions, taking the different local circumstances into account. I will bring this message when discussing these issues with water directors of the member states.

Björn Guterstam: Decision making levels should understand the management, the requirements and the different solutions. More guidance from the European Commission is needed for the communities with less than 2000 persons, also on the recycling of nutrients for which the WHO has made guidelines.



Björn Guterstam (GWP)

Daniel Villessot: Today I discovered these 20 million people without safe sanitation, I thought this was something from developing countries, but it is here in Europe! Why should the Commission make a best practices guide, the companies can also do this. We need a comprehensive overview of the problem, chose the right solutions and invest the money in the right way, including the operational aspects. When we reuse, we need research on endocrine disruptors etc. in the waste water.

Miroslava Georgiva: I learnt a lot today. We have allocated a considerable budget for rural areas. Partnerships and a bottom up approach are most important.

Ana Drapa: It was very interesting to know more about the technical solutions. In our Ministry we have to think if we have the proper legislation to grant permission for these. I embrace the idea of local governance and having an integrated approach to rural problems. The lesson learnt in Romania is that implementation capacity and not funding is the problem. We need an awareness campaign for the people who are not used to paying for the services.

Thor Axel Stenström: All systems can be safe, the question is organising the management system for operating and maintenance. Funding should also be based on a good management system.

Peter Gammeltoft: The technical aspects and management are interlinked issues. How can a local director choose between 20 different systems? We need technical assessments of the risks related to the unwanted recycling of chemicals together with the water. Management and governance issues are part of the assessment of projects funded by the European Commission.

Ushi Eid: At the end of this international year of sanitation, we must show that things have changed: will we have raised awareness and given access to sanitation and water to more people on the ground?

Erik van Dijk: I work for the Province of Overijssel in The Netherlands. We have a twinning project with the Southern Romanian county Teleorman on the improvement of drinking water supply and sanitation. In 230 villages live 300,000 people in poor circumstances. Only 10% have access to a communal drinking water system, but most of these are in poor condition or out of use. Sanitation is for almost 99% with pit latrines polluting groundwater. In 2007 3 universities compared various sanitation systems with a simulation model. They concluded that it would take 25 – 40 years to realise a centralised sanitation system, even with EU funding. With decentralised systems, already in the next 5 years more progress would be achieved with lower costs. 4 decentralised systems were studied for costs, health and environment. Ecosan was the best option. Stabilisation ponds and reed beds were regarded as useful for grey water treatment. Now we want to convince local politicians with a demonstration project with schools and households in a whole village. On World water Day, the 19th of March, schoolchildren will walk 5 kilometres carrying water, to raise funds. The money will be doubled by two foundations. This shall be the start of large scale implementation of Ecosan in Teleorman.

Roger Aertgeerts: Under the Protocol for Water and Health, countries should set their own sub targets and monitor and report on these. The last speaker showed that national cost-benefit analyses showing the net benefits of disease averted against the cost of a sanitation system are too much at the macro-economic side. They are not very relevant to rural village conditions where people with a 60\$ pension have to pay 60\$ for maintaining their sanitation system.

Björn Guterstam: This year should be a take off for long term commitments. GWP wants to combine forces to establish dialogues with stakeholders. Our book provides a lot of experiences, some already cover 20 years. Please contact GWP partners in your country for cooperation.

Participant from Finland: Relating to concern about chemicals, quite some research has been done. For example a Japanese study showed an exponential decrease in most medicines when compost is made well. This also applies to pathogens.

Anna Richert-Stintzing, Sweden: Putting urine with pharmaceuticals not in water courses but bringing it on land will prevent their spreading. We are exploring if the farming sector can run and maintain on-site systems and take care of the end products. Swedish farmers are interested.

Björn Guterstam: In Stockholm hormones from waste water treatment plants already ended up in the drinking water.

Peter Gammeltoft: We need certainty about impurities not ending up in food; we should not repeat mistakes of the past.

Daniel Villessot: We can meet again at the end of this year. Let us agree on simple performance indicators, 5 or 6, to measure the progress we are making – and I do not mean the number of conferences held. I am ready to cooperate with you on that.

Concluding remarks

Fritz Barth: I have a few observations:

- It is time for a paradigm shift in the EU, towards a water saving culture and see waste water as a resource.
- We have to rethink old solutions and look at other options, carefully examining the problems we have.
- Solutions have to be developed locally, bottom up, in dialogue and respecting local circumstances.
- We need more local knowledge and local implementation capacity. In rural development programs, there is room for more action on water and sanitation.

Sascha Gabizon: I am very happy with today's conference. We have attracted a lot of attention for the right to safe sanitation. A large group of stakeholders was here, and there is agreement that we need to do something. DG Region suggested more involvement of NGO's and women's groups. We should go to the capitals to discuss the priorities for the EU funds, and we got a commitment from the MEP of Romania to do this in Romania.

We saw many examples of best practices and guides, and plans for new ones. We need larger demonstration projects to reach the poorest groups. In Bulgaria for 600€ a household toilet with greywater filter can provide basic sanitation. We received suggestions to look at the legislation barriers, also with the European Parliament (EP), and there might be a report on water in the EP soon. We got reports from the field, for example in Slovakia legislation barriers had to be addressed first of all.

The Finnish legislation example with performance targets for households is leaving the technology open. Can this approach be spread in the EU? Sanitation organisations should get involved in the 2008 draft river basin management plans of the water framework directive. The federation of the large water companies wants to be involved as well.

In the coming 5 years Cohesion funds will spend €336 billion: there is a good chance to have included the 420-470 million per year for safe sanitation. I'd like to thank all of you for your participation and contribution!

Annex 1: Participant list

No.	Name	Organization	Country
1.	Roger Aertgeerts	WHO – European Centre for Environment and Health	Belgium
2.	François André	Federal Administration (FPS) – DG Environment	Belgium
3.	Liouba Assayag	Mouvement Vraiment Durable	France
4.	Anne Barre	WECF	France
5.	Adriana Berbec	Parliamentary Assistant Committee on the Environment, Public Health and Food Safety	Romania
6.	Agnes Biesiekierska	European Water Partnership	Belgium
7.	Maria Buitenkamp	Ecostrategy	The Netherlands
8.	Anja Brüll	IEES	Germany
9.	Dr. Friedrich Barth	European Water Partnership	Belgium
10.	Sophie Breul-Busson	European Commission – DG Environment	Belgium
11.	Galia Bardarska	Bulgarian Academy of Sciences	Bulgaria
12.	Carola Bjørklund	Ministry of Foreign Affairs	Norway
13.	Igor Bodik	CEE Global Water Partnership	Slovakia
14.	Chantal van Den Bossche	WECF	The Netherlands
15.	Pawel Blaszczyk	CEE Global Water Partnership	Poland
16.	Johannes Blokland	European Parliament Committee on the Environment, Public Health and Food Safety	The Netherlands
17.	Enrique Buatas	COM	Belgium
18.	Peng Cheng Yao	Public Utilities Board	Singapore
19.	Ana Drapa	Ministry of Environment and Sustainable Development	Romania
20.	Erik van Dijk	Province of Overijssel	the Netherlands
21.	Stefan Deegener	TUHH WECF	Germany
22.	Barber Dordregter	Unie van Waterschappen/Union of Water Boards	the Netherlands
23.	Dumitru Drumea	CEE Global Water Partnership	Moldova
24.	Dr. Uschi Eid	German Bundestag UNSGAB	Germany
25.	Alexander Fedorov	Centre for Environmental Initiatives	Russia
26.	Dr. Miroslava Georgieva	Ministry of Agriculture and Food Supply	Bulgaria
27.	Sascha Gabizon	WECF	Netherlands
28.	Peter Gammeltoft	DG Environment Unit Protection of Water & Marine Environment	Belgium
29.	Monica Guarinoni	Health & Environment Alliance	Belgium
30.	Björn Guterstam	Global Water Partnership	Sweden
31.	Peter van Luttervelt	Coram International	The Netherlands
32.	Johanna Hausmann	WECF	Germany

No.	Name	Organization	Country
33.	Dr. Ir. Adriana Hulsmann	Kiwa Water Research	The Netherlands
34.	Raimond L.L.J. Hafkenscheid	Netherlands Water Partnership	The Netherlands
35.	Satu Hassi	European Parliament Committee on the Environment, Public Health and Food Safety	Finland
36.	Eddy Hartog	DG Regional Policy Unit Thematic development, Lisbon Strategy, Impact	Belgium
37.	Diana Iskрева-Idigo	Earth Forever Foundation	Bulgaria
38.	Fedde Jorritsma	WECF	The Netherlands
39.	Marie Kranendonk	WECF	The Netherlands
40.	Kristo Karmas	Ministry of Environment Estonia	Estonia
41.	Michael Kropac	SEECON	Switzerland
42.	Sanna-Mari Kuisma	The Hague University of Professional Education	Finland
43.	Bas Moonen	FACET INDUSTRIAL BV	the Netherlands
44.	Bistra Mihaylova	WECF	Germany
45.	Milan Matuska	CEE Global Water Partnership	Slovak Republic
46.	Viktoria Marczişak	CEE Global Water Partnership	Hungary
47.	Bogdan Macarol	CEE Global Water Partnership	Slovenia
48.	Prof. Duncan Mara	University of Leeds	UK
49.	Gunnar Noren	Coalition Clean Baltic	Sweden
50.	Hannele Nyroos	Ministry of the Environment, Environmental Protection Department	Finland
51.	Prof. Dr. Ing. Ralf Otterpohl	Hamburg University of Technology	Germany
52.	Adriaan Oudeman	Ministry of Housing, Spatial Planning and Environment	The Netherlands
53.	Toos Van Oers	WECF	The Netherlands
54.	Dennis van Peppen	EVD	The Netherlands
55.	Maryna Peter	Swiss Federal Institute of Aquatic Science and Technology – Eawag	Switzerland
56.	Liviu Nicolae Popescu	CEE Global Water Partnership	Romania
57.	Olga Plekhanova	WECF	The Netherlands
58.	Olivia Radu	WECF	The Netherlands
59.	Anna Richert Stintzing	EcoSanRes Programme, Stockholm Environment Institute	Sweden
60.	Mariska Ronteltap	Unesco-IHE	The Netherlands
61.	Anna Samwel	WECF	The Netherlands
62.	Olga Senova	Friends of the Baltic NGO	Russia
63.	Farida Shoroukova	WECF	Germany
64.	Georgi Simeonov	Stara Zagora Municipality	Bulgaria
65.	Prof. Thor Axel Stenström	Swedish Institute for Infectious Disease Control	Sweden
66.	Margriet Samwel	WECF	Germany
67.	Daciana Octavia Sarbu	EUROPEAN PARLIAMENT Committee on the Environment, Public Health and Food Safety	Romania
68.	Vadim Sokolov	CEE Global Water Partnership	Uzbekistan

No.	Name	Organization	Country
69.	Minister Kimmo Tiilikainen	The Ministry of Environment	Finland
70.	Anna Tsvietkova	MAMA-86 CEE Global Water Partnership	Ukraine
71.	Svetlin Tanchev	Mayor Stara Zagora	Bulgaria
72.	Silvana Velten	Swiss Federal Institute of Aquatic Science and Technology – Eawag	Switzerland
73.	Carel de Villeneuve	Ministry VENW Water	The Netherlands
74.	Eeva-Liisa Viskari	TAMK University of Applied Sciences	Finland
75.	Daniel Villesot	EUREAU	Belgium
76.	Agnes Vaillier	EWP	Belgium
77.	Tom Vereyken	EWP	Belgium
78.	Robert Zvara	NGO Creative	Slovakia
79.	Krasimir Zhivkov	Mayor Pravets	Bulgaria
80.	Claudia Wendland	Hamburg University of Technology	Germany
81.	Daniela Skoda	Seas At Risk	Germany
82.	Robert Scrimppff	Foreign Affairs TVM Capital	Germany
83.	Dennis Swann	Facet	The Netherlands

Annex 2: Programme

High-Level Policy Dialogue on
"EU Sanitation Policies and Practices
in the 2008 International Year of Sanitation"
Brussels, 29th January 2008
Venue "Caritas Center"
Rue De Pascale 4-6

Agenda

09.00 – 09.30

Registration

09.30 – 10.00

Welcome by the organisers, Sascha Gabizon, WECF

Presentation of a short film on sanitation conditions in Eastern Europe

10.00 – 12.30 Session 1:

Overview of the situation on water and sanitation in EU; EU policy and operational programmes in new member states – do they solve the sanitation problems?

**Moderators: Dr. Uschi Eid, German Bundestag, Vice-Chair UNSGAB and
Dr. Friedrich Barth – Vice Chairman EWP**

10.0 – 10.15

Cabinet member of Commissioner Markos Kyprianou/Meglana Kuneva, Health and Consumer Protection – protecting public health in the EU, progress on sanitation (to be confirmed)

10.15 – 10.30

Peter Gammeltoft, Head of Unit, Water and Marine Environment – DG Environment, European Commission

10.30 – 10.45

Eddy Hartog, Head of unit, EC DG Regional Policy – relationship between cohesion policy and (waste)-water management

10.45-11.00

Comments and questions from the floor

11.00 – 11.15

Coffee Break

11.15 – 11.30

Roger Aertgeerts, WHO – The present state of water and sanitation in East of Europe

11.30 – 11.45

Prof. Thor Axel Stenstrom, Swedish Institute for Infection Disease Control – EU regulations related to water and sanitation and the hygienic risks related to poor sanitation practices

11.45 – 12.00

Karin Shepardson, World Bank, Washington DC – Study on the infiltration from latrines and its contribution to nitrate pollution of ground and surface waters

12.00 – 12.15

Ana Drapa, Consilier superior Directorate of Water Resources Management, Ministry of Environment and Sustainable Development Romania – Overview on the cohesion and structural funds for wastewater treatment and sanitation for the rural areas in Romania

12.15 – 12.30

Lyubka Kachakova, Deputy Minister Ministry of Environment and Water Bulgaria – Overview on the cohesion and structural funds for wastewater treatment and sanitation for the rural areas in Bulgaria

12.30 – 14.00

Lunch event with Members of the European Parliament (Ms. Satu Hassi – Finland, Ms. Kartika Liotard – Netherlands, Mr. Johannes Blokland – Netherlands, Ms. Daciana Sarbu – Romania) and responses from the Environmental Ministries Finland, Romania and Bulgaria

14.00 – 16.00 Session 2:

Solutions and enabling factors and sectors needed to get involved

Moderators: Dr Uschi Eid, German Bundestag, Co-Chair UNSGAB and Friedrich Barth – Vice Chairman EWP

14.00 – 14.15

Kimmo Tiilikainen, Minister of Environment, Finland – Example of the Finnish code on wastewater for households in rural areas

14.15 – 14.25

Dr. Miroslava Georgieva, Director Rural Development Directorate, Ministry of Agriculture and Food Supply, Bulgaria

14.16 – 14.35

Bettina Laville, State Council France – Possibilities on initiatives and support from France for sustainable solutions in the area of Water and Sanitation in the CEE countries

14.35 – 14.45

Questions and discussion

14.45 – 15.00

Prof Ralf Otterpohl, TUHH Germany – Decentralized sanitation for rural areas

14.46 – 15.15

Prof Duncan Mara, Leeds University UK – Affordable low tech sanitation systems

15.15 – 15.30

Robert Zvara – Small industry: soil filters/constructed wetlands in Slovakia

15.30 – 15.45

Daniel Villessot, President of EUREAU – EUREAU activities on improving the sanitation situation in small rural communities of the new EU Member States

15.45 – 16.00

Diana Iskrea, Director Earth Forever, Bulgaria – Sanitation improvements in rural areas

16.00 – 16.15

Coffee Break

16.15 – 17.00

Panel discussion with the contribution of the Ministers, European Commission and Parliamentarians commenting on the EU sanitation position paper.

17.00

Conclusions by the chairs

17.30

Reception (wine & cheese)



WECF

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

Discussion Paper Prepared by:

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EWP - European Water Partnership
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Global Water Partnership
www.gwpforum.org



KIWA
www.kiwa.nl

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 treatment 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*²).

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

[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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