

“We are fighting the same battle.” – report from the international symposium “coupling sustainable sanitation and groundwater protection”, 14.-17.10.2008, Hannover

In 2008 sanitation has been elevated on the political agenda since the United Nations declared it as the International Year of Sanitation (IYS). The Federal Institute for Geosciences and Natural Resources (BGR) aimed to highlight the immense problems of groundwater pollution due to lacking or inadequate sanitation facilities in developing countries by organising an international symposium on “Coupling Sustainable Sanitation and Groundwater Protection” from 14-17 October 2008 in Hannover, Germany. Together with international co-convenors (BMZ, UNEP and WHO) and supporting organizations (BORDA, DED, DWA, GTZ, IAH, KfW and TTZ), BGR offered this symposium as the first event dealing with both topics. About 130 participants from more than 30 countries of the world discussed the linkage between sustainable sanitation and groundwater protection. A comprehensive poster exhibition covered a vast variety of lessons learnt, mainly from developing countries.

The symposium was one of the activities of BGR realized within the framework of the Sustainable Sanitation Alliance, a network of more than 80 organizations worldwide which advocate for sustainability in sanitation and related fields (www.susana.org).

The chosen subject of “coupling sustainable sanitation and groundwater protection” reflects the fact that the 2.5 billion people on the globe without access to improved sanitation¹ pose an increasing threat to both, surface and groundwater resources. Groundwater represents not only a water source utilised by a growing number of urban dwellers, but also a resource people in arid areas completely depend on, and the most precious fresh water resource readily available to mankind. However, groundwater utilisation for drinking water supply is at stake because of the uncontrolled disposal of human excreta in informal settlements and the absence of sustainable sanitation concepts in exploding mega cities and their peri-urban surroundings. No or malfunctioning sanitary facilities allow pathogenic and chemical pollution to find their way into the underground via hydraulic shortcuts or lacking protective soil layers. Therefore timely and effective protection of groundwater is of essential importance for keeping this precious resource clean and safe for future generations. Protection measures include increasing the access to sanitary facilities, especially in developing countries, but at the same time the implemented sanitation systems need to be sustainable. Only sustainable sanitation can enhance the long term protection of groundwater.

Obviously, the two disciplines have a lot to share with each other. Consequently, this international symposium was aiming at bringing together, both professionals and decision-makers as well as hydrogeologists and sanitary engineers, discussing common issues, listening to each other and forming new partnerships. Representatives from other disciplines like water resources management, water supply engineering, planning, health, and agriculture enriched the discussions and elaborations. Discussions took place during panels with presenters of sanitation institutions like the GTZ sector programme on ecosan, KfW-partners from the Tunesian water ministry, the Swedish Environment Institute, the Bremen Overseas Research and Development Association, as well as partners from groundwater projects like SMART in Jordan, SANSED in Vietnam, and the International Water Management Institute in Ghana.

At the beginning of the event it was clear to the participants that the costs of environmental and individual damages caused by lack of sanitation outweigh by far the costs of the recent crisis of the world financial system. Therefore, action to end the sanitation crisis is urgently needed. During the discussions with keynote speakers Stephen Foster (WorldBank and IAH) and Perry McCarty (Stanford University), it was stated that the successful promotion of sanitation will often at the same time improve groundwater quality, or contribute massively to the protection of vulnerable aquifers; however, other groundwater protection measures need to be realized as well in order to reach at a holistic resource management strategy.

The failure of past sanitation approaches, as was discussed during a panel with UNEP-representative Patrick Mmayi, Susanne Herbst from WHO CC in Bonn, and Darren Saywell as representative of IWA, is often related to a mindset based on colonial urban planning

principles. Large parts of cities were and are neglected by mainstream planning. Town planning is dominated by top down technocratic approaches. Powerful elites hinder changes; procedures to amend plans remain bureaucratic; corruption skews planning approaches and blocks lasting investments for infrastructure. Supply driven planning usually benefits high and middle income families, while operation and maintenance costs are not covered. Innovative planning requires stakeholder participation. There is a set of new sanitation planning tools which help to enable sustainable sanitation, especially for the urban poor. They animate planners to understand power relations, ensure effective participation and build in the user perspective; build partnerships; be comprehensive but realistic about the complexity of sanitation; and identify the drivers of sanitation². Planning concepts need to be linked to reality, not just to text book solutions and they require serving the poor.

Participation of all stakeholders at all levels of planning, implementation and operation is considered the key issue for success of any water and sanitation project. Integrated approaches like IWRM and IWM exist which cater for the need for participation and holistic concepts.

But why does sanitation still lag behind in terms of reaching the Millennium Development Goals? Major reasons for limited activities of decision-makers in the sanitation crisis are seen in the unclear responsibilities for sanitation, the resulting difficult management structures of involved institutions, the complexity of necessary measures, as well as the lack of the awareness for immediate and responsible action. Nevertheless, the positive role of the governments in providing the enabling environment for reforms and introducing new concepts and technologies must not be neglected. It is professionals from all involved sectors and stakeholders who have to use the enabling environment and implement sustainable solutions.

One of the main messages from the event is that there is a wide range of sanitation solutions available which need to be adapted to the specific conditions of the regions of concern in order to be sustainable. To fulfil the five sustainability criteria, a sanitation system has to be not only economically viable, socially acceptable, and technically and institutionally appropriate, it should also protect the environment and the natural resources, such as groundwater. BGR underlines the latter aspect in its guideline which states that "Planet Earth is the natural basis of our lives, its resources are limited."

The aspired dialogue between the disciplines resulted in the demand of the sanitation sector, especially from the planners, for more information on groundwater vulnerability. The hydrogeologists supported the aim to cooperate closer for, as Thomas Himmelsbach, Head of the BGR-Section on groundwater quality and protection put it, "we are fighting the same battle."

The symposium was considered as very useful and a way forward to further integrate the various disciplines under the common goal of managing the limited resources in a sustainable manner for the benefit of the present and future generations.

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1: World Health Organization and United Nations Children's Fund Joint Monitoring Programme for Water Supply and Sanitation (JMP). Progress on Drinking Water and Sanitation: Special Focus on Sanitation. UNICEF, New York and WHO, Geneva, 2008.

2: SuSanA factsheet: Planning for Sustainable Sanitation. Version 1.1, October 2008. (<http://www.susana.org/images/documents/05-working-groups/wg06/final-docs/en-susana-factsheet-WG06-planning-version-1.1.pdf>)