SIWI

WORLD WATER WEEK 2008

OVERARCHING SUMMARY OF WORKSHOP CONTRIBUTIONS AND PERSONAL REFLECTIONS

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INTRODUCTION

This year, the theme of the World Water Week has been "Progress and prospects on water: for a clean and healthy world". Core of the program has been eight workshops where participants reported real-world advancements in the theme areas specified in the Purpose and scope. These inputs are collected in the Abstract volume. Here is a short overview of the core messages followed by some personal reflections.

The eight workshops had two parallel directions. One set were *sanitation-related* and referred to safe handling of human excreta; the other *related to water-carried pollutants* and how to address water pollution abatement.

Sanitation

In terms of sanitation-related messages, there are four issues to bring up: on the one hand the scale of the problematique; on the other three questions: WHY is sanitation so fundamental, WHAT are the actions involved, and HOW can a successful sanitation in fact be achieved.

1. SCALE: the scale is in fact unbelievable: out of a world population of 6.7 bln, only 1.1 bln have access to conventional sewage. 3 bln have other types of toilets from pit latrines to poor flush/cess pits, while the remaining 2.6 bln are still referred to open defecation.

2. WHY is sanittion so fundamental? Beyond human dignity and defecation security, the main reason is that human health critically depends on safe handling of human excreta - the origin of pathogen-related diseases. The disease link makes sanitation and hygiene nothing less than an imperative for any society to function properly. A comparative impact study in slum areas between two villages in Kenya, showed that sanitation and hygiene, combined with provision of safe water, had tremendous benefits in terms of reduced diseases.

WHAT ACTIONS are involved: sanitation is not the same thing as what is being referred to as latrinisation. It has three components – toilets, waste handling and reuse, and hygiene through hand washing. Numerous cases were presented. The handling of human faeces, includes a toilet service chain with dislodging and cleansing, vehicles for transport; access to a disposal site for composting, and finally waste reuse. For reuse, the waste may be separated, into urine used as fertiliser, and faeces for soil improvement or biogas production. In the ECOSAN approach excreta is being used for fertilisation, grey water for garden irrigation.

HOW can it be achieved: to be sustainable, safe sanitation has evidently to include also a whole chain of governance activities in terms of management system, safe financing, and human behavioral change and waste reuse. From an organisational perspective condominial sewerage and community-managed sanitation blocks were possible approaches. Hygiene behaviour can be induced by community health clubs. For education of local sanitation personnel, franchising arrangements were relied on where back up skill is available at a distance. A sanitation revolving fund is one way to achieve financing sustainability. To generate user acceptance, the role of faeces as taboo may be overcome by switching focus for instance to a way to avoid bad smell. For change of hygiene behaviour and human waste reuse, schools are useful as entry points.

Water pollution abatement

Water pollution may originate from human excreta, from industry and agriculture. As water gets increasingly scarce, pollution abatement and waste water reuse strategies increase in importance. There is for instance a new attention to upstream/downstream linkages and of seeking the pollution source. A paper from Pakistan highlighted differences in vulnerability and problematique between different hydronomic zones in a river basin.

1.WHY do we need water pollution abatement? Since human right to safe water is difficult to meet whereever potential raw water sources are severely polluted, polluters upstream tend ti counteract fulfillment downstream. Furthermore, once that groundwater has been polluted, it may take decades, even centuries, to flush the aquifer clean. Waste water also represents a value of its own as a largely untapped source of both water, nutrients and organic matter. It may have a future potential also in urban agriculture, contributing to food security, not the least in Africa.

2.WHAT can be done more specifically? Since disease agents are carried by water,well water will not be safe unless there is a minimum distance between latrines and wells. In terms of household water, purification devices for point of use disinfection are now coming in use. In terms of waste water reuse, systems do already exist in many regions, including the extremely water short MENA region. Both natural and constructed wetlands are being benefitted from for waste water treatment and the aquatic plants produced used for various purposes.

3.HOW can pollution abatement and restoration be secured? Awareness is a first condition: Brazil reported water safety plans, involving identification of multiple barriers and critical control points. Efforts to remediate 300 small industries in Hyderabad, India, revealed the importance of taking remedials in the right time order. For nutrient pollution abatement in a large inland sea, a permit system including tradability of permits is now considered. In Australia, diffuse pollution from agriculture is being abated through motivation campaigns and partnership approaches. In a transnational river**,** the river protection convention is being benefitted from. Finally, strategies are needed for sustainable financing, such as a users pay system.

Lessons learnt and personal reflection

To SUMMARISE: *when it somes to safe sanitation*, the many reports from the field clearly reflect a shift in thinking on sanitation. From an activity of sewerge, closely linked to water suppy as inherited from the approach in well-watered rich countries. To an activity of dry sanitation and waste reuse, more realistic in poor, water-limited environments, and particularly valuable in terms of opportunity for nutrient reuse in agriculture. *When it comes*

to water pollution abatement it is clear that increasing water shortage acts as a driving force to make waste water reuse possible. There is a growing attention both to the impact on downstreamers, to vulnerability to upstream activities in transnational river basins, and to identification of pollution sources upstream.

Allow me now some PERSONAL REFLECTIONS: First of all, there is nothing really new with the sanitation or the water pollution issue. When reading the abstracts, I got a strong feeling of déjà vue – I read much of all this already in the 1970's and 80's. Both sanitation and water pollution abatement have been on the international agenda since the time of the UN Water Conference in Mar del Plata in 1977. Still after 30 years, the core problem still remains: lack of implementation of the promise of safe drinking water and sanitation to everyone. Still after 30 years, more than one third of the world population is referred to open defecation – this corresponds to the added population of India and China!

What are the key barriers? One barrier may in fact be conceptual. The past merging of water supply and sanitation into one concept may in fact have been a major mistake. Sanitation is NOT a water issue as has been shown from the reported cases but basically an issue of safe handling and reuse of pathogenic waste bringin also human dignity. This turns water professionals into beneficiaries in terms of water pollution avoidance, rather than doers of latrinisation.

Human capacity to achieve the task cannot possibly be a barrier – just compare to what can be achieved in the satellite sector. What are then the central barriers that have to be overcome? One challenge is probably the scale and the time it will therefore take. My sense of repetition maybe signifies that there is now a new generation out there who are reinventing the wheel, and have once agsin to convince skeptical politicians that transfer of diseases through infected water effectively hinders durable socio-economic development, but can be stopped by safe sanitation and hygiene. This enters a component of transgenerational transfer of knowledge.

This leaves us with a final question? , Is there nothing new? There is indeed some quite encouraging information in the reports from the field. The first one is the use of schools as entry point by demonstration projects. This may in fact be a quite effective way of general awareness-raising by reaching their parents too.

The second one is the nutrient reuse of human waste as agricultural fertiliser that is now taking form under the concept "productive sanitation" After more than 10 years, the Stockholm Water Symposium call for nutrient recycling is indeed starting to come true. This represents an opportunity of global significance in a time of rising peak oil, of rising costs of fertilisers, and of dwindling phosphorus-mineral sources.

Thank you!