Water Supply and Sanitation for All

Main Issues and Recent Tendencies

In the 1990's, access to safe water experienced a substantial increase, nevertheless, nowadays, 1,100 million people still lack access to safe drinking water and 2,400 million people still lack basic sanitation.

The world population has multiplied by seven within the past two centuries, generating unprecedented human and industrial pressures on water resources and the environment. Under such conditions, the availability of clean freshwater and sanitation are among the most important issues facing humanity today - and will be increasingly critical for the future, as growing demand outstrips supplies and pollution continues to contaminate rivers, lakes and streams. In September 2000, world leaders pledged at the United Nations Millennium Summit to cut in half by 2015 the proportion of people unable to reach safe and clean drinking water, and at the 2002 World Summit on Sustainable Development in Johannesburg, a matching target was agreed to halve the proportion of people lacking adequate sanitation, also by 2015. In addition, sound water resources management and development are key to achieving all of the Millennium Development Goals.

To help the international community reach the MDGs, the UN Millennium Project was implemented, with ten Task Forces. One of them, dedicated to water and sanitation, produced a report "*Health, Dignity, and Development: What will it take?*", in which ten critical actions were identified for achieving Target 10 of MDG7 and fostering the sound management of water resources for all the goals.

Facts and Figures on Water Supply and Sanitation

Most of the population lacking access to secure water and basic sanitation are located in **Asia** (725 million and 1,920 million people respectively[1]). Asia shows the highest number of people unserved by either water supply or sanitation; yet it is important to note that proportionally, this group is bigger in Africa because of the difference of population size between the two continents.

In **Africa**, it is estimated that at least 297 million individuals lack access to safe water and 313 million people lack access to basic sanitation.

In the **Americas**, the overall average percentage of coverage for water supply and sanitation, which exceeds those for Africa and Asia, hides the challenge over ensuring supply to marginal populations. Indeed, more than 100 million urban dwellers still remain without those services and an estimated 120 million additional people require access to safe water supplies.

Only 49% of the rural population across **Latin America** and the **Caribbean** are connected to conventional sewage systems. To achieve Target 10 of MDG7, a further 83 million people in the **Arab Region** need to be supplied with safe water and an extra 96 million with sanitation services by 2015.

Even in **Europe**, an estimated 41 million people do not have access to safe drinking water and 85 million people lack access to basic sanitation[2].

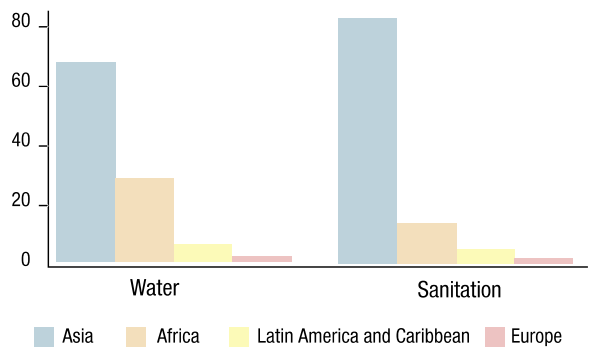
Target 10 of MDG7 is to "Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation". To achieve this target, a yearly fund of 12 billion dollars (as opposed to 3.5 billion actually) is needed in the sector, according to the French Partnership on Water.

Despite progress made in solving the world water crisis and towards the MDGs, **sanitation** remains the biggest challenge, which needs greater attention by the international community.

The gap in water use between rich and poor countries is stark: developed nations use an average of 400-500 liters a day per person for all purposes, whereas in developing countries the volume is just 20 liters. Globally, the withdrawal of water supplies is projected to increase by at least 50% by 2025[3].

Many efforts were made and progress realized, mainly in terms of water supply (in urban areas, the water coverage is 94%, and 71% in rural areas). Providing water and sanitation services in urban areas will be a particular challenge, because the population in the cities will continue to grow, especially in developing countries. In rural areas, scattered populations make providing services very difficult and costly. There is still a tremendous challenge in rural areas as well, especially considering that few projects will be financially feasible.

Illustration 4.1 Location of Population Without Water Services



The world is however not on track for achieving the sanitation goal in each of its three aspects: hygiene promotion, household sanitary arrangements, and sewage treatment[4]. The world's sanitation coverage is 86% in urban areas, but only 38% in rural settlements. In addition, half of the population in the developing world, particularly in Africa, lacks basic sanitation. On one hand, due to technological developments, human dispersion and high costs, the fulfillment of the MDG on sanitation still remains more difficult in rural areas.

Thus, the provision of safe water and sanitation remains an unsolved challenge. This situation results in the death of thousands of lives per day due to preventable water borne diseases and causes suffering to millions due to illness, prevents progress towards gender equity, and impedes economic development. Between 1,085,000 and 2,187,000 deaths due to diarrhoeal diseases can be attributed to the

1 First UN World Water Assessment Report. 2000
2 Regional documents
3 *Health, Dignity, and Development: What will it take?* UN Millennium Project Task Force on Water and Sanitation, Final Report, 2005
4 *Compendium of Actions* of the United Nations Secretary General's Advisory Board on Water and Sanitation, 2006

'water, sanitation and hygiene' risk factor, 90% of them among children under five.

The current rate of progress is not sufficient and radical change is necessary. In order to stimulate the debate and orient the reflection aiming to triggering this change, the fulfillment of Target 10 of MDG7 was the main concern of theme 3 ("Water Supply and Sanitation for All") of the 4th World Water Forum. The "*Compendium of Actions*" of the UN Secretary General's Advisory Board on Water and Sanitation, published during the Forum, fits in this sense, and provides actions to improve the current situation. These actions reinforce the ten recommended in the Final Report of the UN Millennium Project. Moreover, in the *Compendium of Actions*, specific targets and indicators were identified, and stakeholder responsibilities clearly defined for each action.

Main Messages, Lessons Learnt, and Key Recommendations

Strengthening local authorities is needed for local water governance

Reaching Target 10 of the MDGs depends strongly on the governments' capacity to overcome their financial, institutional and governance challenges. Consequently, it is necessary that governments give greater priority to the water crisis in their agendas. Innovation, financial mechanisms, dissemination of information and awareness raising, capacity building and institutional responsibilities are also needed if this challenge is to be overcome (session FT1.04 *"Linking Poverty Reduction and Water Managment - Reaching the MDGs trough Investing in Water"*).

Additionally, there is a need for commitment of national, state and local authorities to promote transparency and public control on water services management, and to formulate gender-sensitive strategies and policies that cut across water, social, health, and education Ministries.

To ensure good local water management, it is indispensable to:

- Implement a monitoring system, which is an instrument for planning, development and corrective action, and to promote the use of performance indicators and the benchmarking approach to evaluate services; and
- Provide technical assistance and capacity building to local authorities and communities regarding planning, water utilities management, low-cost appropriate and environment-friendly technologies, so they may increase their overall performance.

The improvement of local water governance should also be made through regulation, empowerment, decentralization, defining and securing water rights, and enhancing institutional capacities that bring decision-making within the reach of the poor.

Sanitation: A key issue for achieving MDGs and for human dignity

The world community will not sustainably or equitably reach Target 10 of MDG7 without paying reinforced attention to the global challenge of sanitation. For many countries there is little prospect of reaching the sanitation target without major changes in their approach and allocation of resources.

Rethinking sanitation in terms of understanding the motivations and constraints of households and the delivery and marketing of sanitation as consumer products and services that households must want and pay for, is an important paradigm shift for changing the way business has been done in sanitation.

In this context, governments and other stakeholders must move the sanitation crisis to the top of the agenda[5].

[5] *Health, Dignity, and Development: What will it take?* UN Millennium Project Task Force on Water and Sanitation, Final Report, 2005

Acting for sanitation is a big challenge in terms of improving health conditions of households and protection of natural resources as well as poverty reduction. To realize this challenge, more awareness and capacity are needed. While advocacy is key at the global level, regional and sub-regional organizations should undertake concerted campaigns to support the provision of financing, marketing, technology and organizational assistance and guidance.

Efforts to reach the sanitation target must focus on sustainable service delivery, rather than construction of facilities alone. In this sense, institutional, financial, and technological innovation must be promoted.

Eco-sanitation: An innovative approach to be supported

Water and waste management must be linked to wider processes of poverty reduction and sustainable development at the national and local levels. This is one of the main principles of the eco-sanitation approach.

Despite legal constraints and some cultural non-acceptance, new technologies of eco-sanitation have been successfully implemented by many organizations such as WASTE (The Netherlands), GTZ-ecosan (Germany), EcoSanRes (Sweden), Sarar Transformación (Mexico) and CREPA (Africa). Several sessions at the Forum on this topic showed that, for further development and large dissemination, it is necessary to provide technical assistance to local authorities and communities regarding low-cost, appropriate and environment-friendly technologies. Reducing pollution at the source and decentralized treatment should be privileged in all suitable cases. These sessions also showed that the eco-sanitation approach provides sustainable solutions, with regard to user demand, and environmental and social contexts (rural, urban, poor and rich areas).

Additionally, a suitable combination of sound operation, maintenance and management is essential for the sustainable use of water supply and sanitation facilities, which would not work well otherwise and, consequently, would cause the waste of investments even if they are properly designed. This is why high attention must be paid to the operation and maintenance of water supply and sanitation facilities and involving the right stakeholders.

Women and children should be considered as key actors in capacity building programs

Community mobilization requires the development of specific communication (advocacy and awareness) programs to improve the public perception of the benefits of treating pollution, to focus on 'triggering' behavior change for collective action, and not simply for individuals. In this context, facilities or, better yet, services must respond to preferences, beliefs and practices; supporting a broad range of technological choices allows communities to install the water supply and sanitation infrastructure they want, and ensures the sustainability of operation and maintenance processes due to the total commitment of the communities.

Session FT3.12 *"Safe, Accessible, Private and Nearby: Making Services Work for Women - The Key to Meeting the MDG Water and Sanitation Target"*, pointed out that equitable

ACTS Ecosan Pilot Project in Bangalore, India

Before 2001 the majority of households in Rajendra Nagar Slum, did not have their own toilets and residents had access to only one functioning communal toilet. Open defecating was a common option. Sexual harassment had been an associated problem as women were forced to defecate in open field before dawn or after dusk. Soon a large housing complex came up in the open area used for defecation and women were put into a difficult situation for toilet use. In 2001, the local NGO ACTS established an eco-friendly public toilet center (source separation of urine, faeces and wash-water) and a co-composting site for faecal matter at ACTS Rayasandra Campus. Not just wanting to provide toilets, ACTS being an educational NGO, identified this as an ideal situation for experimenting with a scientifically based eco-toilet. Urine and faecal matter were separately collected in 120-litre plastic drums. Once a day the full drums were picked up and conveyed to the ACTS Rayasandra Campus where faecal matter was co-composted with waste paper from nearby IT companies and biodegradable waste in composting trenches, and urine was applied to a banana plantation after storage. Wash-water produced at the toilet center was drained to an infiltration bed in front of the toilet block. Water that did not trickle away was collected in a subsurface collection tank, which was emptied when full.

From Local Action LA1263, by ACTS, India

Closed Loop Sanitation in Syria: Pilot Implementation of a Constructed Wetland

The pilot plant serves the village of Haran Al-Awamied, in the Governorate of Rif Damascus, Syria. The village is located 40 km. south east of Damascus. It has a semiarid climate, with 185 mm. rainfall per year, falling within a four month period. This place fulfilled all the criteria such as disposal channels, wastewater quantity and enough room for building and expanding the project. Before the installation of the constructed wetland, wastewater was collected by a network of gravity sewers and used untreated for irrigation. The concerns of local authorities about introducing a new technology represented an initial difficulty, as did protests from local farmers who believed they would be deprived of the untreated wastewater for irrigation. The treated water is collected in a tank and pumped to irrigate the agriculture near the plant. Thus the effluent from the wetlands is still used by the farmers. To avoid salinisation of the soil the use of mineral fertilizers is strictly controlled. The farmers were instructed to use fresh water and treated wastewater alternately for irrigation.

From Local Action LA0648 by Abir Mohamed, Damascus, Syria - Ministry of Housing and Utilities

access to water and sanitation is vital to women, as in most cultures they are primarily responsible for the provision, use and managment of water and sanitation fixtures and spaces and health care in the household. Over the years, women have accumulated an impressive store of environmental wisdom, being the ones in charge of finding water, educating children in hygiene matters and understanding the impact of poor sanitation on health. However women's voices are often unheard, and they end up with no choice about the type and location of services they receive. Thus, fixtures, appliances, dedicated water use spaces and water delivery services are often unavailable or inappropriate to meet their needs. It is an impediment to girls' education, especially in schools where no provisions are made for them (session FT3.08 *"Scaling up Water, Sanitation and Hygiene Education for Schools"*). Having access to sanitation at school improves health and enables girls to attend school.

It is critically important to improve access to water and sanitation in schools, accompanied by hygiene education in school curricula. Cultural contexts must be considered, in particular for sanitation projects, since girls and boys must have separate and adequate facilities in schools, especially to enable adolescent girls to continue to attend school. Education programs can also be promoted by channeling efforts through women's organizations.

While it is necessary to encourage equal participation among men and women, targeting women for training and capacity building is therefore critical to the sustainability of water and sanitation initiatives, particularly in technical and managerial roles aimed at planning, designing and operating water delivery services.

Children have to be involved as **agents of change** and **not just beneficiaries.** Targeting children benefits schools, families and communities and they can actively participate in social change movements. Water, Sanitation and Hygiene (WASH) clubs and education in schools should be supported since they have a multiplying effect on families and communities.

Research and development of suitable (new) technological alternatives

Over the last few years, many interdisciplinary research teams have developed a variety of innovative integrated water and wastewater management approaches, based on participatory processes, which have demonstrated considerable potential towards addressing local as well as global challenges in water resources and sanitation management. Moreover, these research activities have developed a large set of innovative environmental technologies in various fields of use. Their application in real case studies has demonstrated that, under suitable framework conditions, successful diffusion of knowledge and innovation could take place with significant improvements in current practices. It is crucial to promote a new generation of public private collaborative research on water technologies, based on the common view of their necessity for achieving future growth, competitiveness and sustainability. There is also a need to carefully assess and disseminate the wealth of knowledge generated by research projects through education, demonstration and links to innovation and knowledge management platforms.

In arid and semiarid countries, developing new water sources will be increasingly difficult and costly. During the Forum, desalination was presented as one realistic alternative. The International Desalination Association noted that there are 17,000 desalination facilities worldwide, with a capacity of 37.75 million cubic meters.

Civil society should play a key role in water governance and in achieving the MDGs, and their action must be supported

Good practices need to be scaled up and successful examples should be replicated. In this context, civil society (Non-Governmental Organizations [NGOs], Community Based Organizations [CBOs], etc.) has to be involved at all levels of decision making, from planning to implementation and evaluation (session FT3.10 *"Voicing People's Interests- Civil Society Innovating Change in Water and Sanitation Policy"*). NGOs and CBOs have many successful examples to share that will demonstrate the value of an organized and informed local civil society. The collaboration between NGOs, CBOs and government therefore has to be effective; both need to share common goals. On this subject, governments and civil society must focus their efforts on the implementation of technologies and services, which should be technically, socially, environmentally, and financially appropriate.

Progress towards the water and sanitation targets and improved water governance requires community mobilization and involvement in policy-making and advocacy as well as implementation where organized NGOs, CBOs and networks, can perform a great role. Their action has to be reinforced because a strong and continued Government-NGO-Community partnership is a way to attain continued success.

One of the most optimistic results demonstrated at the Forum is the worldwide successful experience and growing importance of the communities as providers of their own water services (for instance, the case of southwestern Bangladesh, presented in session FT3.09 *"Asian Civil Society Innovating Change"*). CBOs must be empowered and supported by appropriate financing resources (the case of Local Action LA0115, Winner of the Kyoto World Water Grand Prize).

Financing is one of the key issues for accomplishment of Target 10 of the MDGs

On the subject of achieving the MDG targets for water and sanitation, many sessions addressed the financial aspects, and launched a series of orientations for action mainly focused on increasing national and international financial support, with a particular emphasis on the sanitation sector. Nevertheless, the global economy has never dedicated more than 0.3% of world GDP to the whole sanitation sector. Innovation in the financing of the water sector is essential if the potential of water and sanitation in poverty reduction is to be realized. This includes both increased financial flows from the international community and, more importantly, actions to enhance levels of internal capital generation in

Total Sanitation: A Community Stake

The NGO Forum for Drinking Water Supply & Sanitation is the apex networking and service delivery agency of 665 NGOs & CBOs, and 640 private sector actors who implement water and sanitation programs to disadvantaged communities in collaboration with civil society. NGO Forum initiated the Total Sanitation Campaign to advance the 2015 sanitation target in Bangladesh. It is a locally implemented initiative that conducts community awareness building activities and provides appropriate low cost infrastructure support elements to meet the increased demand for sanitation facilities. By December 2005, they had covered 2,550 villages with 100% sanitation facilities and 56 unions. There is high coverage of hygiene practices in the covered communities and civil society and local government representatives monitor the progress.

The NGO Forum has built alliances with Government and conducted lobbying, which has resulted in political commitment towards Total Sanitation and the Government of Bangladesh now has a national sanitation strategy 2005 and is on the way to achieving the national goal "100% Sanitation for All" by 2010.

From Local Action LA0965, by NGO Forum for Drinking Water Supply & Sanitation, Bangladesh

developing countries, including the private sector and the communities.

The participation of the private sector was a controversial issue during the Forum, but the consensus was that the decision and manner of private participation depends only on the local actors. A pre-requisite for that is that they are well and timely informed, there is a sound legal basis for quality and quantity of services and communities are supported to get readable and fair contracts. Several public-private partnership models are available and could be used as an important financial source.

Focused investment is needed in the sector so that scaling up with quality can take place. The knowledge and experience exist and adjustments can be made along the way.

Sub-sovereign financing arrangements need to be implemented to ensure optimal allocation of funds to local actions with potential to be scaled up and replicated. This can facilitate the establishment of funding mechanisms for local governments and organizations to prepare credit projects, as well as the implementation of a stable and effective regulatory system, including the creation of local financiers to encourage investments by small local private sector enterprises.

At the same time, favorable macroeconomic and fiscal environments, institutional strengthening and legal reforms, ensuring stable regulations, are needed to improve the performance and affordability of the water utilities, local governments and institutions. Decentralization and empowerment of local initiatives are of special importance. The governments and utilities must also ensure that users who can pay do so in order to fund the maintenance and expansion of services, taking into account the needs of the poor households, which are to be met.

International support is critically needed

The water-related MDGs remain a major task that requires the development of international initiatives and solidarity actions. In this context, Official Development Assistance facilities and national programs specifically dedicated to financing water and sanitation infrastructures and services should be developed. This means that concerted efforts should be made by national governments, and supported as necessary by the UN and donors to monitor the delivery of services in the sector. The UN agencies and their Member

Rural Water Supply and Sanitation Initiative (RWSSI)

This is a major regional initiative on RWSS to meet the MDG targets. In response to the Africa Water Vision and the MDGs, the African Development Bank Group conceived the Rural Water Supply and Sanitation Initiative (RWSSI) in 2002 and officially launched it in July 2004 at the first AfDB Water Week, with a view to accelerating access to water supply and sanitation services in rural Africa where the majority of Africa's populations live under conditions of extreme poverty. The objective of the Initiative is to ensure that 80% of rural populations in Africa have access to water supply and sanitation by 2015. It is estimated that USD $14.2 billion (or USD $1.3 billion per annum) are required to achieve the rural water supply and sanitation MDGs in Africa.

RWSSI has already made significant achievements in terms of recognition, commitments received by both African and donor States, and programs launched and planned. The anticipated impact of RWSSI will include the following:

- Per capita water consumption figures will improve from less than 10 l/c/d to about 20 l/c/d;
- Distances to water points will be reduced to less that 0.5 km and water collection times to about ½ an hour;
- The number of people per water point will be reduced to between 250 and 300;
- The number of broken down water points will be reduced by half (from about 30% to 15%);
- Improve the health situation in rural areas of RMCs, reduce the incidence of water related diseases, and the associated mortality and morbidity;
- Build capacity of central and local government institutions as well as communities as a contribution to enhancing the decentralization process;
- Improve poor school attendance and high school drop out rates for girls; and
- Improve the quality of life by decreasing healthcare costs and increasing the availability of more disposable income as well as creating employment opportunities through water service providers.

From Local Action LA0655, by the African Development Bank (AfDB)

States must ensure the provision of a strong and effective support for the achievement of Target 10, and for water resources management and development.

The importance of donor support for local actions has been verified during the Forum. Some examples are the experiences of USAID in Indonesia and in Bangalore, India; SPFA Aquasistance in Armenia, WaterAid in several countries, or Syndicat d'Ile de France in Laos. The total amount of Official Development Assistance (ODA) has risen from 2.6 to 3.4 billion dollars from 1990 to 2002. However, ODA for large water infrastructure halved from $3 billion US dollars in 1991 to $1.5 millions US dollars in 2002. ODA is awarded mainly to 20 countries, most of them in the Middle East[6]. ODA must be increased and distributed more equitably among developing countries.

Initiatives Announced at the Forum

To designate the year 2008 as **"International Year of Sanitation"**[7]

WSPortal – Health Through Water. As part of the partnership to health through water, WSPortal aims to contribute to improving and maintaining the safety of piped drinking water supplies through the effective implementation of WSPs. This is achieved through collecting and disseminating case studies, reference and tools, which provide practical guidance and evidence-based material of relevance that can be applied appropriately for a range of circumstances.

UNICEF/WSSCC "WASH Partnership": New bid to accelerate efforts in meeting Millenium Development Goals for water and sanitation by 2015.

Smart Sanitation Solutions, a publication of the Netherlands Water Partnership describing approved household and community based sanitation solutions. This publication is in the context of the commitment of the Netherlands government to provide at least 50 million people with access to water and sanitation services by 2015.

Interactive Global database on EcoSan by EcoSan Res and its partners. This program aims to monitor implemented EcoSan projects around the world, and to assess the contribution of the EcoSan approach to reaching the MDG Target on sanitation by 2015.

Reminder by French President Jacques Chirac in his declaration of the **commitment of the French government to double its public aid in order to reach 9 million of people in Africa by 2015.**

An **urgent appeal** launched by Nelly Olin, French Minister of Ecology and Sustainable Development, and others ministers for **improved water and sanitation facilities at schools, taking into account girl's needs,** and for increased integration of water sanitation and hygiene in school programs.

Proposal for the creation of **Task Force on Sanitation** for the World Water Forum (at the World Water Council).

6 Clermont F. *Official Development Assistance for Water*, World Water Council, 2006

7 *Compendium of Actions* of the United Nations Secretary General's Advisory Board on Water and Sanitation, 2006