

Sanitation as a Key to Global Health: Voices from the Field



United Nations University, Institute for Water, Environment and Health

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Sanitation is the single most neglected MDG sector – afforded low priority by donor and recipient governments alike. It is clear that without an extraordinary effort at all levels the MDG target for sanitation will be missed by one billion people. WaterAid

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Preface

It is very clear that water-related disease is responsible for a significant proportion of the global burden of illness. It is equally clear that, while there is significant progress towards the Millennium Development Goal target for drinking water, sanitation is falling woefully short of the target. Provisioning of adequate sanitation has not managed to keep up with population growth and the aggregate number of unserved people has increased over the past 2 years. Projections by the United Nations show that the world will miss the latter target by almost a billion people. The international community needs to wake up to this reality and its ramifications for human development.

Not only is sanitation critical for dignity and health, it is the most basic form of source water protection – without controlling inputs of raw sewage into water bodies, drinking water treatment processes have to be unnecessarily more effective and water-based economic activities are compromised. This realisation is nothing new – indeed, it was recognised in England at the turn of the 19th century. In addition, sanitation is a critical component in striving for global equity and poverty reduction.

What is new, however, is the realisation that a focus on drinking water alone does not necessarily result in improved access to sanitation. Indeed, given the social taboos around the subject of bodily wastes, sanitation has been sidelined, both as a topic of conversation and an investment priority. This is gradually changing; the UN International Year of Sanitation, 2008, playing a significant role. This is not to say that sanitation can be dealt with as a stand-alone issue. Indeed, disease transmission pathways demand that sanitation, hygiene and drinking water must all be dealt with to have impacts upon water-related diseases. However, each needs to be accorded adequate investment in terms of education, capacity and financing.

Access to sanitation does not automatically equate to use and change in behaviour. Therefore, education, empowerment and community-participation are equally critical, as evidenced by the success of community-led total sanitation. When coupled with national government support and programming, this can make significant inroads as, for example, in Bangladesh.

In real terms, the commitment to provide sanitation to all does not have a huge price tag, especially when compared with the recent bailout funds mobilized to overcome the global economic crisis. Indeed, a commitment could and should be made to 100% coverage by 2025, at an annual cost of 0.002% of GDP from donor countries. However, there is a need for smart investment of these funds – initiatives that develop the market at the bottom of the pyramid and initiatives that facilitate local business development and entrepreneurship. It is not simply a question of sanitation provisioning, but strengthening the local economy.

There is a moral, civil, political and economic need to bring adequate sanitation to the global population – adequate for human health and adequate for ecosystem integrity.

Dr. Zafar Adeel

Chair UN-Water

Director UNU-INWEH

Summary for Decision Makers

Even after the International Year of Sanitation (2008), declared by the UN to shine the spotlight on the issue worldwide, the global community is far off its target to improve sanitation worldwide. 2.6 billion people lack access to improved sanitation and over one billion simply defecate in open fields. Fewer people still practice hand washing and other simple hygiene measures proven to reduce the spread of disease.

CONTEXT

In October 2008 the United Nations University Institute for Water, Environment and Health invited international representatives from NGOs, government, academia and the UN to a meeting to discuss barriers and to identify breakthroughs to providing sanitation for all. This document has been compiled to summarize our discussions, place them within the current global context, illustrate them with stories from the field and provide recommendations for addressing the global sanitation crisis. Progress is needed at all scales in order to achieve sustainable improvements in sanitation: service delivery, funding and institutional development.

INTRODUCTION

Access to adequate sanitation is a key mechanism for improving the health and well-being of the world's most vulnerable. Yet the topic of sanitation – that is, safe disposal of bodily waste – has been avoided by the global community, as have the behavioural, political and financial commitments required to make a difference. The overall process of providing adequate universal sanitation entails a high degree of integration across many disciplines, actors and scales but historically, the sanitation sector has been characterised by poor funding, fragmentation and disorganization. Improved access to sanitation continues to be a low priority for a majority of stakeholders (i.e. access to toilets, privacy, safe disposal of wastes, hand washing and basic hygiene). Even the word “sanitation” is sanitized, perpetuating ancient taboos about discussing human waste, obscuring and institutionalizing

the simple reality that evacuating waste is a natural human function that must be treated with dignity and respect.

The ongoing disparities in access to safe sanitation around the world are unjust. They are a glaring example of how poverty and inequality literally make people sick, and in so doing they impede communities from reaching their true economic, social, environmental and human potential. Additionally, the evidence base justifying investment in sanitation is beginning to gather momentum, establishing the connections between sanitation, health, environmental well-being and prosperity. Given the relatively modest investments needed to achieve adequate sanitation, a lack of attention to this issue in development planning can no longer be justified.

Why doesn't every person on earth have a toilet?

What can we do to make sure that everyone uses one?

Are the reasons (and the solutions) the same for all peoples?

The answers to these simple questions are complex, but not insurmountable. After all, the world is making progress on its commitment to provide safe drinking water to all. Yet many people around the world, regardless of economic status, do not have access to improved sanitation but do have access to other low cost (more attractive) technologies such as cellular phones. We need to bridge the gap between access to, and uptake of, these technologies. Sanitation could be as ubiquitous as cellular phone use.

BINARIES

Understanding opposing perspectives of the sanitation issues is critical to success. Addressing the immediate and long-term actions associated with global sanitation requires coming to terms with some of sanitation's "binaries". These binaries are important to consider at local, national and international scales. For example, *women's* voices have tended to go unheard, despite the fact that women's needs are materially different from those of *men*. While some argue that water-based (*wet*) sewage treatment technologies represent the pinnacle of improved sanitation, these may not be ecologically or economically feasible for some or even most regions. Urine diversion and composting toilets (*dry*) may be more appropriate solutions.

In order to facilitate sustainable uptake, communities and individuals need to be fully engaged in both the problems and solutions surrounding sanitation. There are many examples of effective and efficient *provision* of sanitation facilities, implemented without sustained *use*. While most sanitation facilities currently lack the social status of other technologies (i.e., cellular phones), some have succeeded in creating demand and stimulating community pride. It is important to document and disseminate these lessons learned.

Lack of access to sanitation is largely a rural problem. Although peri-urban slum areas lack adequate sanitation access compared to formal *urban* areas, 7 out of 10 people without improved sanitation are *rural* inhabitants (JMP, 2010); this is despite the benefits of sanitation to communities in terms of health, environment and productivity, which far outweigh the initial cost of investment.

BARRIERS

The barriers to global sustainable sanitation, including misunderstanding the cross-linkages to health, limited infrastructure and social taboos are not insurmountable. Top-down approaches to sanitation rarely work as they do not tend to foster ownership and understanding – key ingredients to the long-term sustainability of any solution. A lack of understanding of the linkages between water, environment, hygiene practices and health, along with more physical limitations, such as access to roads, electricity and water, make sustainable sanitation provisioning difficult. Even when people are aware of the connections between sanitation, hygiene, health and well-being, barriers such as land tenure rights, lack of time, and social taboos prevent individuals and communities from being empowered to adopt sustainable sanitation practices. At all scales, there is a need for training to engage people across disciplines and sectors, including engineering, water, sanitation, environment, finance and public health.

Institutional and policy shortcomings also constitute a significant barrier to sanitation provisioning. At the national and international levels, sanitation is under-prioritized by donors and recipient communities. The fragmentation of this sector, along with current monitoring indicators, make measuring progress towards the MDGs challenging. This is compounded by a lack of transparency and accountability and a lack of access to (good) data.

BREAKTHROUGHS

A number of breakthroughs have occurred since the turn of the century. The most prominent ones are defining sanitation as an MDG target and the UN designated International Year of Sanitation, 2008. Approaches that demonstrate significant progress in resolving the global sanitation crisis include: Community-Led Total Sanitation (CLTS); Participatory Hygiene and Sanitation Transformation (PHAST); social marketing and civic participation techniques; (Waste)Water Operator Part-

nerships (WOPs); and local enterprise and employment within the sanitation sector. These are supported by tools such as: the sanitation ladder; the Global Annual Assessment of Sanitation and Drinking-Water (GLAAS); social marketing; and, user-pay models that ensure sustainability by encouraging community ownership through equity, rather than money.

Numerous instruments that will help us surmount the barriers to sanitation are under development.

National governments are increasingly recognizing the need for co-ordinated strategies in terms of providing requisite policies and resources to improve access to sanitation. Innovations for harmonizing sanitation investment and action are becoming realities: the Global Sanitation Fund and the Sanitation and Water for All; Global Framework for Action at the international level; sanitation ministries and coordinating bodies at the national level in some countries; and civil society networks. Government-hosted regional sanitation meetings have further succeeded in bringing together key sanitation stakeholders in order to discuss national strategies and actions for improvement.

NEXT STEPS AND CHALLENGES

The global sanitation crisis must be placed within the context of global changes. These include changes in settlement, migration, demographics, land use and climate patterns. Currently, progress towards sustainable sanitation is contextualised by the emerging debate over sanitation as a human right.

A commitment on behalf of the G8 is needed to continue making progress towards the MDG target. This can be viewed through the lens of enlightened self-interest in the form of a significant business opportunity. The global market share for sanitation, water supply and efficiency is likely to be almost \$660 billion by 2020 (UNEP, 2009). A precedent already exists for the G8 to respond to the sanitation crisis through the Toyako Framework (2008) for action on global health. Within the global sanitation crisis, there exists an opportunity for a targeted commitment to action with finite boundaries, a clear goal, significant benefits to health and well-being, as well as a clear return on investment.

RECOMMENDATIONS

1. Sanitation must be addressed in the broader context of global poverty and in concert with the other MDGs as part of an overall strategy to increase global equity.
2. Sanitation should be a primary focus but must be situated within the broader context of water management and access to safe water.
3. Sanitation must be integrated into community life – holistic, community-based and community-driven. Empower local communities (not just households) to identify needs, change behaviour, create demand for ownership and overcome obstacles such as land tenure.
4. Investments in sanitation must be co-ordinated, long-term and focus on both “software” (usage) as well as “hardware” (facilities). To make monitoring more valuable, community-based evaluations should strive to integrate and examine failures and successes associated with sanitation delivery.
5. “Acceptable” sanitation access must be redefined within the context of gender, economic realities and environmental constraints.
6. Achievement targets should be redefined, moving from 50% coverage by 2015 to 100% coverage by 2025.
7. National NGOs need to co-ordinate their response to the sanitation crisis and enhance communication, especially regarding lessons learned, to form an effective and vocal lobby group for sanitation advocacy in order to facilitate a co-ordinated response.
8. New business models should be designed to develop markets at the bottom of the pyramid and deal with the apexes of the water-sanitation-hygiene triangle concurrently.
9. Countries need to recommit to official development assistance equal to 0.7% of GDP and, within this framework, commit 0.002% of GDP to international investments in sanitation.

WHY DID PEOPLE EVER THINK IT WAS OK TO DUMP WASTE IN WATER?

Jamie Benidickson,
University of Ottawa

One hundred and fifty years ago, a hot summer reduced London's Thames River to a "Great Stink," which flowed under the noses of legislators in the houses of Parliament and inspired MPs to legislate sanitary reform for the first time. Prior to this time, governments had left sanitation services to an unregulated private sector. The public health revolution that followed required large investments of public funds on infrastructure, and the benefits to health and well-being were immediately apparent, including an increase of 15 years in life expectancy in Britain between 1880 and 1920 that is largely attributed to sanitation (UNDP, 2006).

The nineteenth century Flushing Revolution in Europe and in the United States was closely connected to developments in medicine and science which are likely familiar to many. A medical belief that diseases might be transmitted by miasmas or "foul vapours" legitimated the effort to remove organic waste, including human excrement, from growing urban centres as a public health measure. The best scientific evidence of the day from leading chemists suggested that "running water purifies itself" and thus legitimated the water-borne removal of organic waste for discharge into rivers, lakes and streams.

The overall process entailed integration across medicine, science, law and regulation, engineering, municipal finance and government organization. New institutions, new laws and new specialists emerged to support the transformation and the outcome was, in my opinion, cultural in its depth and significance.

The domestic sanitary revolution of the nineteenth century was also cumulative. The infrastructure installed to facilitate flushing was enduring and new users took advantage of newly established systems in a process that might loosely be described in some disciplines as path dependence. Today, personal care products and pharmaceuticals flow through our bodies and other conduits following the same route. Of course, none of these discharges go "away" and today's researchers are attempting to understand the consequences.

The nineteenth century sanitary transformation was also hugely advantageous from a public health perspective to intended beneficiaries, although there were also severe downstream and distributional consequences on the water supplies and health of other communities.

The Future of Flushing and of domestic sanitation more generally has not been a "top of mind" issue for legislators, policy-makers, and the media. But it has not been entirely forgotten, however much the "out of sight, out of mind" or "flush and forget" dicta have influenced the agenda. A few recent magazines suggest at least the potential for popular understanding of the need to re-visit some comfortable assumptions. Most directly, the August 2008 edition of the *New Internationalist* had as a cover story a feature entitled: "We need to think about toilets." Maggie Smith, guest editor of that issue, and Ben Fawcett have also recently published *The Last Taboo: Opening the Door on the Global Sanitation Crisis* (Earthscan, 2008).

Sanitation, an afterthought to the Millennium Development Goals, is at least now a global agenda item - and a big challenge. To convey the size of that challenge on the basis of progress in Sub-Saharan Africa as of 2004, the prospect of achieving the MDG would involve providing basic sanitation services, each and every year as far out as 2015 to a population equivalent to the whole of Canada. And that is basic sanitation, not basic North American services.

The situation in rural communities includes adoption of free-standing small-scale systems capable of treating water, recovering wastewater for re-use, and capturing resulting gases as a source of energy for power, lighting and cooking. Women in communities with these services seemed to have some relief from the burdens of carrying water by hand and from the adverse health consequences of cooking over charcoal fires in poorly ventilated homes.

On a field trip to Lake Nakuru in East Africa local NGOs cited the significant investment that had gone into a major municipal wastewater

facility. Unfortunately, lack of co-operation between relevant levels of government meant that the connecting sewers were not being installed. Thus the infrastructure needed to transport waste from rapidly expanding developments around the city to the treatment facility was non-existent and wastes continued to flow through residential districts into a once-beautiful flamingo sanctuary and recreationally-valuable wetland. In the course of a briefing from representatives of UN Habitat in Nairobi, our informants described the enormous obstacles facing poorly-staffed and under-resourced municipal governments across the continent.

Canadians know these issues in relation to aboriginal communities through a series of studies and reports. The Walkerton Inquiry under the direction of Justice Dennis O'Connor devoted a chapter of its important report to aboriginal water supply systems and sanitation. This work coincided with studies by the Auditor General of Canada outlining the shortcomings of these services on a national basis. This framework combined with media interest around the plight of Kashechewan on James Bay gave rise to emergency measures and to an intensive task force effort under the leadership of Dr. Harry Swain. His report on the need for, governance of and financing of new arrangements has been under consideration for some time with both Indian and Northern Affairs and the Assembly of First Nations engaged in thorough consultations.

The need to provide sanitation services, new systems and replacement of existing systems which are in widespread decline, is influenced by a range of factors - institutional, financial and regulatory - in many settings. The twenty-first century puts all these efforts in a wider context which must also be noted. It involves the institutional, financial and regulatory challenges of climate change. That context presents both challenges and opportunities, but is again stimulating thought - and investment - about sanitation in numerous settings.

Two examples illustrate new transformative possibilities at least in the developed world.

Creative international financing mechanisms may be available to provide support from greenhouse gas emitters in the developing world for family-based methane capture. By contributing to greenhouse gas reductions in the developing world these organizations might become eligible for valuable credits relating to their own emissions.

First, in Gotteburg, Sweden, municipal officials have incorporated gas recovery from sewage and waste treatment into the climate change mitigation strategy of the community. Another example, the Dockside Green project in Victoria, British Columbia, treats all sewage generated on site and has a level of potable water consumption that is 65% less than in traditional developments. It is of related interest to note that some investment advisors have identified infrastructure as an opportunity for significant growth with possible contributions coming from architecture and design, from materials and supplies, or from major engineering operations (e.g. Tal, 2009). Of course all of these sub-elements and their technological components need to be mobilized on the international front as well, and the legal and institutional framework again has an important role to play.

Distinctive national circumstances will eventually dictate the details. Thus, as jurisdictions such as the European Union or Ontario, move to implement some form of full-cost pricing or polluter pay framework for municipal wastewater and sewage services, they will have to do so with particular reference to local circumstances. Ontario has taken some steps post-Walkerton to put a legislative and regulatory framework in place in the form of the Sustainable Water and Wastewater Services Act. But to make this work, a highly-detailed understanding of various components will be required. Renzetti and Kushner (2004) have developed a case study in which they begin to address such issues as:

- What rate of return should be allocated to capital invested in systems/ utilities investments in Ontario?
- What costs should be attributed to energy in Ontario which is a significant component of operations?
- How should the value of raw water be determined in Ontario?
- How do we account for the changes in Ontario water quality resulting from sewage arrangements?

More generally, one aspect of the work of the World Water Assessment Report (2006) outlined factors relevant to “Charging for Water Services” and sketched out some relevant features of arrangements that would produce “safe and affordable water for all and maximum net social benefits”(p.413). Core

criteria include financial sustainability, the user pays principle, simplicity, transparency and predictability. For many people around the world facing the immediate necessities of water and sanitation, these will appear rather abstract considerations and so it is important to contemplate instruments that might support their claims to the basic sanitation services, water-based or otherwise, that residents of my continent take for granted.

Two possible instruments include the human rights framework for promoting access to sanitation and general regulatory reform of the water supply framework.

Human Rights: The Universal Declaration of Human Rights, Article 25 states that: “[e]veryone has the right to a standard of living adequate for the health and well-being of his family, including food...”¹

This text and comparable affirmations in other international instruments have contributed to current and ongoing discussions about the existence of a right to water and means to confirm that right in new settings. Such a right would then need to be implemented in national jurisdictions and its contents determined.

The Republic of South Africa is one jurisdiction where a right to water has attained constitutional status and has been incorporated in national legislation for implementation under the authority of local or municipal governments. The general South African framework ultimately prescribed a level of service of 25 litres per person per day, and that level of service was recently tested as a result of conflict over the application of associated water metering and financing arrangements. Mazibuko is a South African High Court case in which the legal framework around water supply was challenged from the perspective of the fundamental proposition: “Water is life; sanitation is dignity.” Judicial enforcement of the implementation of the right to water in South Africa on human rights, constitutional and administrative law grounds of fairness and non-discrimination eventually resulted in an elevation of the level of legal entitlement to 50 litres per person per day in a community where the court understood that modest volume to be physically available and affordable.

Regulatory reform: The overall regulatory framework for water and wastewater services

in the developing world has the potential to contribute to conditions that may facilitate a satisfactory combination of regulatory stability, community authority and supervision, and financial security that would support ongoing investment in sanitation. Research from some World Bank advisors suggests that in this respect, too, a suitably designed regulatory framework can buttress and encourage the efforts and intentions of advocates.

In summary, these background observations concerning history, institutional development and potential contributions from law and regulation to support the financing of improved sanitation services help to underscore a few themes that may be worthy of further discussion and analysis.

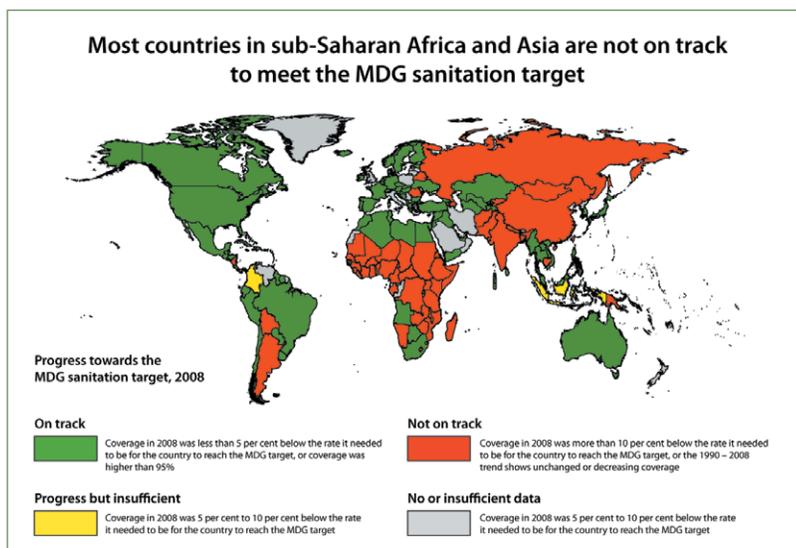
1. In closing the sanitation gap, what values are capable of driving the effort forward and preserving the necessary level of commitment? What is the contribution of “dignity”? What is the contribution of “equality”? And how can human rights’ instruments and institutions further the delivery of services?
2. To the extent that legal underpinnings associated with a human rights foundation for water and sanitation services drive that process, what measures and arrangements will be called for to mobilize and incorporate financial resources from both public and private sources?
3. What resources can be brought to bear on the challenge, particularly given the intense competition from other needs and sectors including health generally, transportation, and education, among others? And what are the legal preconditions for mobilizing those resources?
4. How, as an immediate consideration, can the potential adverse implications of the current deteriorating financial climate on investment in sanitation be mitigated?
5. To what extent can/should the legal and regulatory framework for sanitation services be free-standing, and to what extent might it benefit from integration with widespread concern around climate change? Are there synergies around the capture of greenhouse gases and Kyoto or post-Kyoto implementation mechanisms that are worth pursuing?

1 <http://www.un.org/Overview/rights.html>

Why is Access to Sanitation So Important?

Access to adequate sanitation is a key mechanism for improving the health and well-being of the most vulnerable individuals and the poorest countries in the world. Exposure to human faecal waste increases the likelihood of contracting certain diseases. Those living without improved sanitation live in cities, peri-urban slums, and rural and remote areas. They live in a range of countries, from low- to middle- to high-income. They tend to be the most marginalized communities within any country or region – living in material poverty; lacking essential economic, social and political resources; and often facing multiple vulnerabilities related to gender, age, ethnicity, health and social status. A recent report by the WHO (2008) estimates that almost 10% of the global burden of illness is related to water, through contaminated drinking water, inadequate or non-existent sanitation and hygiene, and poor water management. Globally, 1.5 million children die annually as a result (UNICEF, 2006). It is estimated that nearly 1.2 billion people (or almost 1 in 5) practice open defecation, either by necessity or by preference. The transition to improved sanitation is accompanied by more than a 30% reduction in child mortality (e.g. Esrey et al, 2001) while sanitation reduces morbidity by almost 37% (Bartram et al., 2007).

Most countries in sub-Saharan Africa and Asia are not on track to meet the MDG sanitation target



Progress towards the MGD sanitation target, by country, 2008.
© WHO-UNICEF Joint Monitoring Programme 2010

IMPROVING ACCESS TO AND USE OF SANITATION FACILITIES CAN HELP THE WORLD ATTAIN THE MILLENNIUM DEVELOPMENT GOALS

Despite its underlying relationship with all MDGs, sanitation was not acknowledged until 2002, when it was included under Goal 7: Ensuring environmental sustainability. Unfortunately, improved sanitation remains the “poor cousin” of the other Millennium Development Goals, including its sister target, improved drinking water. While the world is on track to meet the drinking water target, progress on sanitation has been uneven at best. The International Year of Sanitation (IYS) (2008) was launched in response to a call for improved access to sanitation, drawing attention to the needs of populations by highlighting five key messages (UN Water, 2008):

- Sanitation is vital for health;
- Sanitation contributes to social development;
- Sanitation is a good economic investment;
- Sanitation helps the environment; and
- Sanitation is achievable.

With the active engagement of key stakeholders (policy makers, industry, and high-level decision makers), progress is being made to improve the availability and use of basic toilets and laundry, rates of personal hygiene, and access to solid waste management and drainage infrastructure. This has implications for all MDGs:



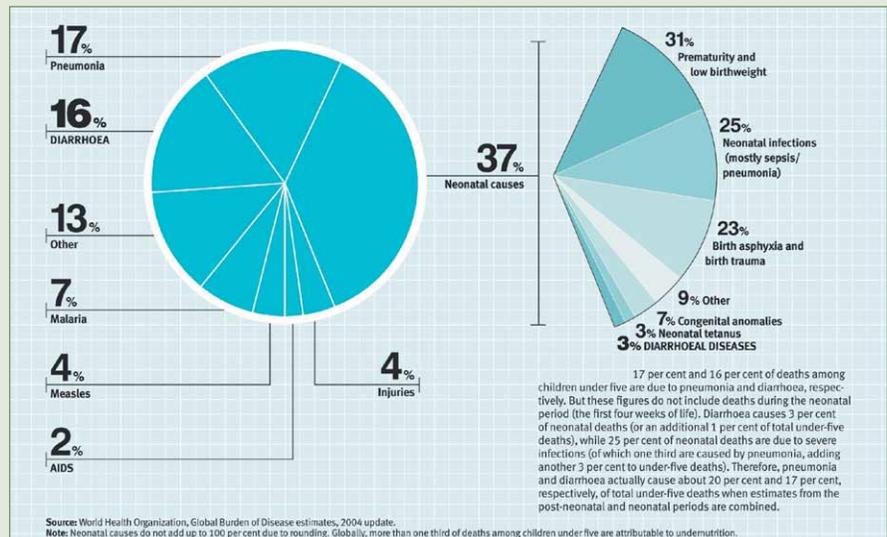
Separate latrines for boys and girls in a UNICEF-supported school in Senegal, Africa © UNICEF/HQ99-0812/Lemoyne

Goal 1: Eradicate Extreme Poverty and Hunger: Sanitation provides economic benefits that reduce extreme poverty. A recent cost-benefit analysis by the WHO (Hutton and Bartram, 2008) demonstrated an estimated economic return of between US\$3 and \$34 for every US \$1 invested in water and sanitation. Improved sanitation also reduces deaths from malnutrition (Bartram et al., 2007).

Goal 2: Achieve Universal Primary Education: Improved sanitation promotes school attendance - 443 million school days are lost each year due to water-related diseases². Moreover, there is a clear gender divide in access to education. A majority of the 121 million school-aged children not in school are girls; at the primary level, this is a result of being responsible for household chores including fetching water. Once girls reach puberty, a lack of access to sanitation becomes a central cultural and human health issue. Female illiteracy and low levels of education often lead to poor health outcomes for pregnant women and their children (see Goal 5). As a corollary, school-based sanitation education can influence entire communities by training the next generation in safe and sustainable hygiene practices (Breslin, 2008).

Goal 3: Promote Gender Equality and Empower Women: Safe sanitation facilities reduce exposure to sexual and physical violence and harassment for women and girls, and gender-sensitive hygiene facilities at school and work promote the attendance of menstruating girls and women. The lack of dignity, privacy and safety accorded women without access to sanitation can further manifest itself through increased urinary tract infections as women choose to drink less during the day as part of their sanitation strategy.

² http://www.wateraid.org/international/what_we_do/statistics/default.asp



Proportional distribution of cause-specific deaths among children under five years of age, 2004 © UNICEF/WHO 2009.

Goal 4: Reduce Child Mortality: In addition to reducing child mortality from diarrhoea-related malnutrition, improved sanitation can help to reduce morbidity for millions of other children. An estimated 50% of cases of malnutrition are associated with repeated diarrhoea and intestinal infections as a result of unsafe water, inadequate sanitation or insufficient hygiene. This accounts for 860,000 preventable child deaths per year (Prüss-Ustün et al., 2008).

Goal 5: Improve Maternal Health: Maternal health, child survival and access to sanitation are intricately linked. Poor maternal nutrition, including diarrhoea-related malnutrition, is a major risk factor for maternal deaths and can affect birth weight and child development. Poor sanitation and lack of access to clean water increases the risk of infection during childbirth. Improved sanitation and hygiene enhances the health of mothers as caregivers, primary water carriers and food preparers.

Goal 6: Combat HIV/AIDS, Malaria and Other Diseases: Improved sanitation and hygiene reduces risk of waterborne diseases like cholera, reduces morbidity and mortality from opportunistic infections for AIDS sufferers and helps to ensure that they have access to clean and private facilities (UNICEF, 2009).

Goal 7: Ensure Environmental Sustainability: Improved water and sanitation benefits the connection between environment and health (Harvey, 2008). Community participation in water, sanitation and hygiene practices facilitates recognition of the connections between environment, health and sustainable stewardship of local resources.

Goal 8: Develop a Global Partnership for Development: The sanitation sector is currently fragmented, with stakeholders playing diverse roles in different regions and time periods. A more harmonized coalition-building approach between these partners, where tested, has improved partnerships and access to sanitation.

It is now widely accepted that the Millennium Development Goal (MDG) target of reducing, by half, the number of people without access to improved sanitation will not be reached by 2015. A 2008 study (WHO) calculates that \$358 billion is required to meet the MDG target worldwide – \$142 billion to expand coverage (mostly to rural areas) and \$216 billion to maintain existing services (mostly in urban areas)(Hutton and Bartram, 2008). In order for Africa to meet the water and sanitation MDGs, the number of people served has to double from 350 million in 2006 (AMCOW, 2008). In Sub-Saharan Africa, at the current rate of progress, the sanitation MDG will not be met for a long time. Although difficult to predict using current models, some suggest it may even be as late as 2076 (UNDP, 2006).



Figure 1: Sanitation Ladder Concept (Courtesy of J. Bartram)

The “sanitation ladder” offers a practical step-wise approach to sanitation provisioning. The world sanitation community refers to facilities as “improved” according to a “ladder” of sanitation (Figure 1). Each improvement - from open defecation to more sophisticated toilets - represents a rung on the ladder. Globally, 2.6 billion people do not use improved sanitation. Eleven per cent use an “unimproved” sanitation facility – one that does not ensure hygienic separation of excreta from human contact. A further 11% share an improved facility with other household(s). Worldwide, only 61% of people have access to private, improved sanitation facilities (JMP, 2010). Many technical solutions exist, as does the expertise to implement

them. Basic sanitation technologies at the bottom of the ladder are relatively inexpensive and can be locally sourced.

Sanitation: a sanitized word for the simple practice of dealing with human defecation. Sanitation can be used more broadly to include solid waste disposal, but this document focuses on human biological waste. **Ideal sanitation facilities** are those that:

- promote safe treatment of human waste for health and for the environment;
- limit human exposure to faecal matter; avoid contamination of water and food sources;
- provide secure spaces for men, women and children to defecate, each with their unique needs;
- encourage hygienic practices including handwashing.

Sustainable sanitation is a fundamental requirement for local participation in educational and economic activity. For example, lack of sanitation hurts local economies when poor health results in lost working days and school absenteeism, presenteeism (reduced productivity while at work or school), reduced school attendance and increased time taken to care for the sick. According to UN figures, reducing by half the number of people without access to sanitation would add 3.2 billion annual working days worldwide by promoting the daily health of workers; universal sanitation coverage would add more than four times as many working days (Hutton and Haller, 2004).

The world is off track to meet the MDG for sanitation by 2015. Appropriate, adequate, sustained investment is required to make sustained and sustainable improvements in global sanitation. Maximizing partnership and network benefits, and harmonizing and coordinating sector activities at the local, regional, national and international levels are essential for securing this financing.

Binaries, Barriers and Breakthroughs at the Local Level

Addressing global sanitation needs requires innovative action and broad commitments that can be tailored to local situations based on strengths and circumstances. Reviewing progress in sanitation entails coming to terms with “binaries” as well as investigating the barriers preventing, and the breakthroughs that have or should help to further a system of accountability, delivery and decision-making for funding sustainable improvements in sanitation at all levels.



Public Latrine on the shore of Lake Victoria, Kenya © C.Wallace 2009

GENDER AND SANITATION – EMPOWERING YOUNG GIRLS

**Kathryn Cooper,
Water for People**

Women are the direct beneficiaries of improved knowledge on health and hygiene related issues. Women's enhanced awareness is translated into improved hygiene practices that directly benefit children, the elderly, their families and the wider community. It is imperative that women are educated about the importance of hygiene to ensure personal health and that of their families. Exposing one's self in the open, especially during menstruation, affects women's safety, dignity and sense of self-worth; maintaining dignity is critically important during a young girl's adolescent years. Having proper, safe and private sanitation facilities helps to ensure that girls stay in school and further their education, thus improving the overall status of their families and livelihood.

International conferences throughout the 1990's consistently highlighted the importance of increasing women's participation in water-related initiatives by drawing on women's knowledge and increasing their involvement as managers and decision makers on water-related issues; however, little has been done to promote women's involvement in the sanitation sector. Household sanitation is everyone's responsibility. However, women carry a large percentage of the burden through their role as caregiver, as well as their personal sanitation needs.



School latrines in Liberia, part of the UNICEF-supported back to school programme © UNICEF/HQ07-0634/Giacomo Pirozzi

To combat sanitation and hygiene issues internationally, we need to collectively articulate who is most affected and how we can make the greatest impact on the community. For many women, their lives are lived in shadows cast by men and dominated by the demands of subsistence farming. They lead a life that precludes time for regrets or hopes of a different future. Improving girls' education, especially at the secondary level where gender differences are more pronounced, is the first and most critical step towards the economic empowerment of women, and towards reducing child and maternal mortality. Research shows that for women and girls, secondary education is associated with improved economic prospects, better reproductive health, and improved HIV awareness. Moreover, it is now widely recognized that the education and economic empowerment of women is key to changing the trajectory of world poverty. Specifically, an extra year of female education can reduce infant mortality by 5-10 percent (e.g. Peña et al., 2000). In Africa, children of mothers who receive five years of primary education are 40% less likely to die before age five than those of uneducated mothers (UNICEF, 2009a). Kofi Annan, in 1999, describes girls' education as the "single highest returning social investment in the world today". Education is the key to human development and women who are educated have fewer and healthier children and are far more likely to send their own children to school.

Lack of sanitation and inadequate hygiene are crucial issues that are rarely addressed, yet they contribute to a number of problems facing women and girls in developing countries. Communities that lack sanitation and practice poor hygiene have increased rates of diseases like diarrhoea, cholera, typhoid and parasitic infections. These diseases have a strong negative impact on the health and nutrition of children, which in turn, negatively

impact their capacity to learn and their ability to regularly attend school.

Women and girls are particularly impacted by the sanitation crisis. Poor access to improved sanitation increases their vulnerability to violence when having to relieve themselves in the open after nightfall. The situation is further complicated by menstruation. Studies show that girls who are menstruating do not attend school because school latrines, if available, often do not offer the necessary privacy, sanitary waste disposal or hand-washing facilities (e.g. Tien, 2007).

A compilation of qualitative information is being developed based on a series of face-to-face interviews in Malawi and Rwanda in conjunction with an environmental scan. Five hundred girls were interviewed over a period of 6 months in 2008 regarding the role of women and girls, their social barriers, and physical constraints pertaining to their use of improved sanitation and hygiene practices in Africa.

The work was undertaken in order to help young women identify their secondary school sanitation requirements, empower them to gain greater control over their educational experience in order to reach their full potential, and to provide opportunities to resolve issues related to access to sanitation in schools. The following observations are based on a small subset of respondents (n=43) with an average age of 17 from Rwanda. The majority self-identified as middle-income families (65%), with 35% identifying themselves among the poorest in their community.

Preliminary findings illustrate that all respondents had a latrine in the house, but only 18% had a sink next to the latrine; even with a household latrine, 4% of respondents still practiced open defecation. The household

latrine was valued for its perceived role in the improvement of dignity (53% of respondents somewhat; 16% significantly). In the school environment, 25% of respondents did not have a facility to wash their hands by the toilet and almost 40% when asked what they would improve at the school mentioned a combination of sinks, soap and oil for their hands. Almost 40% indicated that they missed at least some school while menstruating, although 88% of respondents felt that the school provided a safe, clean place to go to the toilet.

Around the world, girls' education is stopped short - not for lack of desire, but for lack of sanitation. Many practical and cultural barriers form once a girl reaches puberty, all of which are easily overcome by access to appropriate sanitation.



Household Latrine in a rural Kenyan community © C.Wallace 2009

ENHANCING CAPACITY IN SANITATION PROVISIONING FOR THE RURAL POOR: AN NGO PERSPECTIVE

Alexander Karapetov, Jespal Panesar and Delna Karanjia

International Development and Relief Foundation

There is a paucity of education dealing with why sanitation is important and about hygiene in general which is why IDRF is involved with volunteer training on hygiene promotion and environmental sanitation campaigns as well as infrastructure development. For project initiatives to be successful, there are many barriers relating to the decision-making processes at macro and micro levels, including the role of governance structures and social relations.

MACROECONOMIC FOCUS:

NATIONAL GOVERNMENTS IN CO-OPERATION WITH CIVIL SOCIETY INSTITUTIONS

When NGOs work together cooperatively as well as in cooperation with local governments, their chances of successful advocacy for progressive change increase. Strong and continued partnership amongst various stakeholders (Governments, NGOs, communities) and capacity building is a prerequisite to achieving total sanitation. A main goal of NGOs should be to keep governments accountable, keep sanitation on the political agenda, mobilize citizens, and deliver access to sanitation.



Construction of shallow wells in Somalia © IDRF

A central challenge to partnership building is finding reliable local partners with the requisite capacity to deliver technical assistance. It is even harder to find an NGO with existing relations with government agencies. Locally, individual NGOs are often seen as vociferous and antagonistic. Therefore, effective contributions to sanitation provisioning requires well organized, credible NGO networks. These local networks should have very clear objectives and strategies. External support is often necessary initially but requires a sensitive approach that includes the ability to pull back and encourage the development of local leadership over time. When there is no competition between government and NGOs, they become development partners and civil society becomes represented at the highest level.

In this context, the most critical issues include:

- Local Governments often underestimating or ignoring the potential impact of NGO activities;
- NGOs underestimating and ignoring the value of partnership with Government and businesses;
- A lack of trust and professional networking between NGOs, Government authorities and the business community, reducing effectiveness and efficiency;
- NGOs lacking practical experience and institutional capacity to render training, information and consulting services to the end-beneficiaries especially in remote rural areas
- A lack of information exchange among government regulatory bodies, international organizations, local NGOs and communities on existing problems, experiences and opportunities;
- A lack of transparency; and,
- Difficulties with custom and tax regulations, security regimes and legislative norms at the federal and provincial levels.

COORDINATION OF INTERNATIONAL ASSISTANCE

The level of collaboration between Canadian NGOs is quite low, limiting coordination of project initiatives, the mobilization of resources, development of institutional capacity, as well as exchange of technical expertise and best practices. A number of Canadian organizations are working on similar sanitation projects, facing similar challenges with project design and implementation. There is a deficit of adequate

information on the sanitation situation in developing countries and a lack of professional contact with local partners. This problem can be applied to a majority of international charities and institutional donors regardless of the scope of activity, location and specific sectoral focus. In response, IDRF, with a grant from the Harbinger Foundation, is actively working to establish a coalition of Canadian Islamic-based organizations, involved in international water and sanitation projects.

ENERGY

Energy is central to sustainable development and poverty reduction efforts. It affects all aspects of development - social, economic, and environmental - including livelihoods, access to water, agricultural productivity, health, population levels, education, and gender-related issues. None of the sustainable development goals can be met without major improvement in the quality and quantity of energy services in developing countries. Working on IWS strategies for Afghanistan and Pakistan, it is clear that in order to provide rural populations with sanitation facilities, alternative energy sources should be utilized. The power grids of the majority of developing countries suffer from a lack of capacity or significant damage. In general in these situations, the majority of household consumers depend on solid fuels which contribute to environmental degradation and exacerbate pulmonary diseases. In certain regions, solar energy is a key solution for remote communities. Estimates suggest that the annual energy potential from solar radiation on the territory of the most part of South Asian countries, countries of Africa and Middle East exceeds its total proven hydrocarbon reserves (ISES, 2004).

AVAILABLE EQUIPMENT & TECHNOLOGIES, APPROPRIATE LOGISTICS

Despite many efforts undertaken by international organizations, the lack of sanitation contributes significantly to the burden of illness associated with water-related diseases. Large scale solutions to the sanitation crisis are not always practical. These approaches require significant capacity in engineering, business development and fiscal management as well as long-term support from donors, which does not fit the typical donor funding cycle of 1 to 2 years. Moreover, these approaches tend to encounter problems associated with a shortage of trained administrative and technical staff.

The most efficient way to design IWS projects, especially for remote rural areas, is to use “plug-in” technologies that are flexible, compact, mobile and solar powered. Most importantly, these technologies should be readily transferable to local communities so that local stakeholders themselves can be responsible for operation and maintenance.

HUMAN RESOURCES

Given that most international donor organizations terminate activities at the end of a project, it is necessary to enhance the capacity of local partners to achieve financial sustainability and self-sufficiency post-project in order to ensure long-term development opportunities. Local development of awareness on the issues of sanitation through education provides many more opportunities for application of knowledge and more extensive participation in reconstruction processes and future development. Low literacy rates and a lack of technical skills deprive people of the basic resources to contribute to their enhanced health and well-being. Enhancing capacity is essential in order to maximize the benefit of external assistance.

MICROECONOMIC FOCUS:

GENDER

Gender-inclusive participation in hygiene and sanitation initiatives, including governing structures and education or training activities, directly impacts the longevity of community sanitation initiatives. One of the cross cutting themes of IDRF’s work is gender empowerment specifically targeting women in resource poor households and marginalized communities. It is recognized that this can only be an effective agent of change if women have equal access and, when required, they are given preferential opportunities to participate in project initiatives. Recognizing the challenges posed and the critical nexus between sanitation, poverty reduction and social development, IDRF’s projects have sought to invest in capacity building in hygiene promotion and sanitation initiatives that incorporate a

gender-inclusive approach. Gender issues in sanitation go beyond the understanding of women as simply being ‘water stewards’ of potable water resources. Providing flexible and effective community-oriented gender policy reflecting local traditions while also mainstreaming gender is central to integrating sanitation projects within local communities. Despite the progressive policy initiatives advocating for greater female participation in sanitation initiatives via membership quotas and training activities, there remains a significant gap in practical implementation of gender-inclusive initiatives. Formal and informal structures are considered to be a critical entry point for women to participate in platforms of dialogue and hence negotiate change. This is of particular relevance in emergency relief situations.



Hygiene Promotion Session in Bangladesh © IDRF

Local community traditions are important when trying to implement gender-inclusive programs. For example, in the drought affected Northern Afghanistan region of Andkhoy, established cultural and religious constraints on female representation at the community level mean that women’s needs and concerns are provided through male representatives in community *Shuras* (councils). Hence, despite great progress, there remain challenges in overcoming the practical implementation of gender-inclusive agendas. However, although traditional governance structures can sometimes be a barrier to gender inclusive processes, they can also be an agent of behavioural change. In this case, the *Shuras* were utilized as a platform to provide hygiene and waste disposal awareness to male and female recipients. As a result, the region (population 11,000) has experienced a sharp decline in water-borne illnesses.

LOCAL COMMUNITIES

The integration of international sanitation projects and the life of local communities is dependent upon flexible and effective community-oriented policy. IDRF’s mandate is based on Islamic principles of human dignity, self-reliance and social justice and depends upon unique, indigenous solutions to self-identified needs. Within this context, community participation is not just seen as mere input into the management of the Project Cycle (Identification and Design) but has to be viewed as an underlining principle that strengthens and augments all activities. This has resulted in very responsive and effective programming because local organizations are able not only to deliver results but experience a great deal of ownership over the projects, thus improving sustainability of the interventions.

RESULTS/REPORTING DICHOTOMY

The micro level realities of participatory development provide a host of interesting challenges. One of the key issues is to identify realities that deter meaningful participation, especially for women, youth, certain ethnic groups and the resource vulnerable (within a resource poor community). Although these challenges will never be ideally met, it is important to identify differences of power within communities and work to actively mitigate the impact of these differences in a respectful manner. Communities are structured to provide leadership, conduct social and religious activities, and attend to legal, property, and economic matters affecting their members. Clearly, therefore, communities should be the focal point in the management of water and sanitation systems because they have a vested interest.

Transparency, accountability, flexibility and responsiveness are essential, as is future stakeholder analysis to aid and mobilize communities to come up with their own solutions. Rigorous focus from the donor community on “outputs” “deliverables” and “timelines” puts pressure on participatory development projects. As a funding partner, IDRF is aware that the true test of participatory projects is not output but the process that leads to creation of those deliverables.

BINARIES

Binaries can provide a useful roadmap for navigating the world of sanitation, but they can also constrain our thinking. These binaries need to be revisited periodically in order to ensure that they are useful and progressive. Key binaries that have the potential to derail the most well-intentioned solutions include: wet versus dry sanitation; male versus female needs; shared versus private facilities; and, provision versus use.

While some argue that water-based sewage treatment technologies represent the pinnacle of improved sanitation, they may not be ecologically or economically feasible or appropriate. The current sanitation ladder (Figure 1) does not privilege water-based sanitation over other forms of sanitation. However, centralized water-based sanitation systems, used in most regions of the world with high levels of access to improved sanitation, were inherited via the infrastructure created during the first Sanitation Revolution in Europe. Historic scientific beliefs were based on the premise that running water purifies itself; the result is an infrastructure that promotes contamination and a culture of water waste in which users simply “flush and forget” (Benidickson, 2007). Choosing appropriate technologies is an important component of community-based sanitation, and the cultural privilege accorded to water-based sanitation may discourage communities from choosing more ecologically appropriate and sustainable systems, such as urine diversion and dry composting toilets.

Women’s voices have tended to go unheard, despite the fact that women’s needs are materially different from those of men. Defecation taboos force both men and women in open-defecation communities to wait until nightfall to defecate in fields and roadside ditches. Night-time defecation puts women’s security at risk. Similarly, shared toilets put women at risk of violence and harassment. Menstrual taboos, meanwhile, discourage women from using shared toilets where menstrual blood may be seen, inhibiting women’s social and

economic participation and girls’ participation in school. Further, women and girls act as primary caregivers in the home, putting them at risk of contracting diseases from the contaminated faeces of children and the ill. It has been widely recognized that benefits accrue from involving women in the design, implementation and management of sanitation systems (e.g. WSSCC 2006).

Shared sanitation facilities need to be valued.

The sanitation ladder approach does not recognise shared sanitation facilities as “improved” because shared facilities can create barriers to safe access for women and girls. But in slum areas where space is at a premium, shared facilities designed with the needs of females in mind, may represent the best possible practice for immediate improvement to sanitation coverage. The question of which technologies best meet the needs of girls and women in diverse environments is not well-articulated by the current hierarchy depicted by the sanitation ladder approach. Shared facility designs that meet the needs of women and children need to be included.

Long-term behaviour change is a prerequisite for the sustainable use of sanitation facilities.

Communities that do not understand the connections between hygiene practices and community health and prosperity are less likely to adopt and sustain healthy sanitation practices. Many examples exist of effective and efficient *provision* of sanitation facilities which lack sustained use. In order to facilitate this understanding, buy-in and ownership of the problem and solutions, communities and individuals need to be fully engaged. Participatory methods that build upon local knowledge and existing capacity have proven effective, as has the promotion of relevant traditional practices.

Stimulating local demand for sanitation is a first step towards sustainable improvement.

However, in some cases, appropriate technologies can stimulate behaviour change (supply driven). Technologies that are useful, interesting or confer status can stimulate community demand. Some

communities have succeeded in creating demand and stimulating community pride by encouraging communities to choose their own technologies (i.e., ecologically friendly latrines, or biogas toilets) because of the benefit of selling the fuel produced, being able to supply lighting in the home, or producing dependency on other, less convenient fuels.

BARRIERS

Inadequate information is made available about the links between poor sanitation and ill-health.

Lack of understanding at the individual level about the intrinsic links between health, sanitation and hygiene, and therefore the importance and relevance of maintaining sanitation and hygiene practices is one barrier to sustained adoption. Even when people are aware of the connections between sanitation and hygiene and health and well-being, barriers (including land tenure rights, lack of time, and social taboo) act to prevent individuals and communities from advocating on their own behalf in an effort to adopt sustainable sanitation.

Top-down sanitation approaches are not sustainable. Instead, approaches must be community-led. Communities, defined in the broadest sense, should make decisions about and deliver their own sanitation services. A broad definition of community includes not only people (i.e. households, individuals and traditional leaders), but it also includes institutions, such as schools and health centres, and in particular local governments. Community-led approaches enable flexibility with respect to local social, cultural, ecological and economic needs. Women's unique sanitation needs must be reflected through the participation of women in sanitation governance. Further, community empowerment involves revisiting issues at the community level; for example, issues such as tenure, ownership and property rights, and coordination between funders, governments and services.

Basic training is not available to community-based sanitation workers and professionals.

Currently, comprehensive community sanitation training programmes or centres do not exist. NGOs typically highlight a gap in capacity enhancement as a major barrier to sustainability once they leave a community. Courses are needed that encompass a range of fields in order for the local level workers to engage and communicate with experts and officials across water, sanitation, environment, finance and public health sectors.

Sanitation is under-prioritized by donors and recipient communities. Social stigma associated with sanitation mean that groups need to be convinced to embrace sanitation as an investment priority. The significant benefits which accrue through improved health and wellbeing, reduced burden on the healthcare system, improved water quality and decreased environmental degradation, and increased opportunities for education and economic engagement have been well articulated. However, individuals need to be educated on the benefits that are of greatest value to them; different groups respond to different arguments, and messages need to be targeted. The financial cost-benefit ratios may resonate with the government sector, while improved health may justify the effort by mothers. Meanwhile, biogas production for use and sale may be the reason that male members of a household embrace change. The cost-benefit analysis for sanitation has rarely been translated to recipients at the individual, household and community levels. But households and communities stand to benefit in terms of, for example, costs savings for doctor visits and medications for diarrheal infections, as well as fewer work and school absentees.

IMPROVING SANITATION THROUGH ADVOCACY AND SOCIAL MARKETING

Diana Karanja, Kenya Medical Research Institute

The role of advocacy and social marketing strategies in health, which aim to raise awareness and foster policy change are well acknowledged, but outcomes are often variable. Investing in improved sanitation, with zero open defecation and clean water, requires strategies that overcome many obstacles. Many nations, although committed to the sanitation MDG target, lack cohesive, strategic national mechanisms for eradicating open defecation. Efforts to tackle this problem have frequently been jeopardized by a poor knowledge base and ignorance, under-prioritization by governments leading to low commitments to community development and under-developed Health Sectors, extreme poverty with constrained resources, and social obstacles.



Women's group photo © D.Karanja

These challenges are illustrated in the case study of an advocacy and social marketing strategy used to improve sanitation and clean drinking water in two lakeshore communities in Western Kenya riddled with diseases that are linked to sanitation. This project sought to provide information on sanitation, safe water and water related diseases to affect change from open defecation to the use of toilets.

Successful implementation of such a strategy should bring about change in a community and enable the members to make choices that lead to improved sanitation. This strategy requires great communication skills and well-crafted strategies. Messages incorporated in the strategy must be clear, persuasive, and should address the needs of multiple stakeholders within the community, affecting behaviour change from the household level to policy makers.

QUESTIONS FOR GROUNDWORK

1. What are you advocating for? The message
2. Who are you targeting? Community and Stakeholders
3. What will be your obstacles? Underlying issues and context
4. Is there competition? Other causes/more pressing issues for the community
5. Is your message affordable? Time and financial investment
6. What are the perceptions of need for your message?
7. What are your strengths for advocacy and social marketing?

LAYING THE GROUNDWORK

Behaviour change is complex and can be heavily dependent on factors such as age, education and culture. Various approaches can be used to bring about this change; good principles of advocacy and social marketing for health can be compared to principles of business companies. For companies, effective and targeted salesmanship brings about a desire for the product. In the same way, health organizations can target specific individuals and entire communities to buy into various health information and behavior change. To change behavior (make a sale), there is a need to target the most needy (best customers), in order to improve chances of success. The strategy should also be evidence-based - supported by statistics that the community can relate to in order to invoke sustainable action and have the greatest impact. It is important to know the issues well enough to present convincing arguments. This requires laying groundwork within a chosen community, including baseline surveys and community mapping exercises to understand the community and for them to understand the issues they face.

CHOOSING A COMMUNITY

Does a target community present itself due to its needs, or is a selection process necessary for success? Communities may have a need that they cannot define, and it therefore becomes necessary to assist in defining this need before the advocacy cause is accepted. In the case of sanitation, a community may be aware of the consequences of poor sanitation such as diseases, but they may not be aware of the root cause. For example, open defecation may be considered a perfectly acceptable means of waste disposal and asking the community to spend limited resources to build latrines may not make sense to them. Community choice will therefore depend on actual and perceived needs, as well as the available resources and time within which to complete the exercise.

In this case study, two communities were selected. Rota and Osiri are both lakeside communities with no running water and limited access to toilet facilities and sanitation. Previous studies have shown high incidences of water and sanitation related diseases in both communities. In fact, the disease perceived to be most important in each of the communities was diarrhoea, followed by malaria. Both communities had poor road infrastructure, although roads in Rota were far worse than Osiri, and both communities had limited access to health facilities and schools. In terms of access to sanitation at home, 75% of families in Osiri had access to a toilet within their compound, compared to 70% in Rota.

CONDUCTING SURVEYS

Baseline surveys can be very useful in providing information about the knowledge, attitudes and practices of the target community, and in identifying the best advocacy and social marketing partners in the community. It helps to begin the search with respected members of that community and spreading this to other groups within the community. This information helps to inform the direction and strategies to ensure that the decisions being made have the best chance to produce the desired effect. Information gathered helps planners and policymakers better understand the prevailing situation, identify positive and negative factors contributing to the current situation, assess strategic alternatives, and craft policies to resolve existing and potential problems. Building an adequate information base is a critical component of advocacy, social marketing and policy formulation.

IDENTIFYING THE BEST ADVOCACY PARTNERS IN THE COMMUNITY

Although it is not possible to target everyone at once it is necessary to select individuals, both within and outside the community, who will assist in creating the intended change. These individuals should be more accessible than other groups or individuals in their community, receptive to new ideas, and should include individuals who have some authority in the community and thus are able to influence other members of the community. Initial targeting of key stakeholders is useful in eventually reaching those hardest to reach.

Knowing who your best partners are helps in the implementation of goals that are relevant to the needs of the entire community. Because relevance is critical, asking the right questions will reveal how much your partners know about sanitation. So the question becomes: How much do they perceive themselves as needing what you are advocating on their behalf? The more your message talks to the needs of these partners, the more likely they are to listen to you, and the more likely they are to pass on the message to the rest of the community. In this case study, these individuals included the Government, represented by the District Commissioner and the Medical Officer of Health in the Ministry of Health, local administration represented by the chief administrator of the location, and women's groups.



Rota Women's Group © C.Wallace 2009

Traditionally, women have had the role of household management, including family health management, and are most affected in cases of family illness. The Rota community had a weak, loosely coordinated women's group that we identified as a partner in our activities, whereas Osiri had a very well organized women's group that we chose to partner with.

RAISING AWARENESS

Important outcomes of awareness-raising among the key stakeholders include understanding the cause and developing a sense of ownership of the issues and becoming ready to engage in advocacy, policy dialogue, and planning. Awareness forums offer great opportunities to identify a range of the community's priority issues and specific stakeholders

Messages Passed on to the Two Communities

1. Improving sanitation and drinking clean water reduces diseases and reduces health costs to the family
2. How-to information on improved sanitation and clean drinking water
3. Illustrated hand books for further and future reference

with a passion to lead the advocacy and social marketing efforts. The process of advocacy and social marketing requires illustrative points to create persuasive messages for target audiences. The Western Kenya project used information booklets, demonstrations, and visits by key partners to sites outside the community relevant to the cause. Providing information on all possible approaches and making a sales pitch in formal and informal settings was a key strategy.



Rota Well © D.Karanja

OUTCOMES

- Post-implementation surveys with advocacy and social marketing community partners reveal an improved knowledge base and desire for improved sanitation in both communities;
- Awareness raised in the general community for approaches to tackle sanitation problems;
- Government representatives approached on behalf of the community;
- Area member of parliament participates and advocates for sanitation;
- Member of parliament inputs government District Development Funds for improvement of the security of the wells in the Rota community;
- Area District Commissioner participates and promises to continue advocacy for sanitation.



Osiri Water Well © D.Karanja

EIGHT YEARS DOWN THE LINE:

USING THE CONDITION OF DONATED WATER AS INDICATOR OF COMMITMENT TO THE MESSAGE OF SANITATION AND CLEAN WATER IN THE COMMUNITY

Osiri water well is properly managed by the women's group and is used as an income-generating project by the women's group, which helps to finance the maintenance costs.

Rota water well has been abandoned and the women's group is still requesting help in its rehabilitation. Some of the donated materials have been removed for use in house construction.

WHAT HAPPENED IN THE ROTA COMMUNITY?

WHY WAS THE MESSAGE EMBRACED IN OSIRI, BUT NOT IN ROTA?

THIS REMAINS AN UNANSWERED QUESTION.

BREAKTHROUGHS

In collaboration with effective partners and facilitators, local governments can govern and deliver improved access to sustainable sanitation. There is broad consensus that local governments are a key stakeholder in sanitation provision. However, local governments often lack the capacity (financial, technical and political) to effectively contribute to decision-making, as well as engage in the sustainable provision of sanitation services to their communities. Sanitation improvement therefore requires effective partnerships that connect local governments and their communities with civil society, national governments, international donors and local sanitation providers (private or public). Other stakeholders can endeavor to empower local governments by working within and strengthening existing political systems.

(Waste)Water Operator Partnerships (WOPs) is a successful new partnership model that has emerged in response to public-private-partnership models. These partnerships pair public sector utilities in need of capacity building, with successful public sector utilities and private businesses (the latter on a strictly not-for-profit basis). The WOPs remove risk and profit motives while encouraging public utilities and private businesses to share knowledge and expertise. The model was promoted by the Hashimoto Action Plan and facilitates mainly south-south co-operation between regional utilities. A north-south component facilitates technology transfer, training and information exchange to enhance practices in the local area (UNECOSOC, 2008; UN-Habitat, 2007). However, by their very nature, these partnerships tend to exclude both rural and remote communities which are not large enough to sustain a large public utility, and peri-urban areas which are not part of the formal infrastructure.

Social marketing and civic participation techniques are effective tools in stimulating demand for sanitation. Examples of such techniques include: participatory mapping, which helps communities make the connections between physical sites of defecation and the health impacts of open defecation; school-based sanitation facilities and hygiene programs, which encourage children to heed and pass on messages related to improved sanitation; local media advertising; household-level training that includes learning about household costs and benefits of sanitation (for example, cost of toilet as compared to costs of repeated visits to a health centre, or the costs of medications); and two-stage or conditional funding at individual and community scales (such as governmental awards programs that reward communities for transitioning into open-defecation free spaces as a way to stimulate community pride about sanitation; and conditional microcredit loans to households or individuals that require construction of toilets before releasing loan money for other activities).

Community-led Total Sanitation (CLTS) can mobilize communities to build their own sanitation facilities and stop open defecation practices. Pioneered in Bangladesh, CLTS is an innovative approach that rewards the elimination of open defecation practices, fosters community pride and facilitates understanding of sanitation and its links to health. In this manner, while not providing 'bricks and mortar', CLTS paves the way for future investments in sanitation hardware.



Cooperative Group Usoma, Kenya © S.Elliott 2009

User-pay models can ensure sustainability by encouraging community ownership. Without behaviour change and a sense of ownership (for example, via user fees), latrines tend to be un- or under-utilized. There is broad consensus in the development field that each community should pay for their own sanitation services. This user payment can take the form of “sweat equity” and labour contributions, which is especially relevant for the most poverty-stricken communities and households. In fact, in order for user-pay to be successful, mechanisms have to be in place to protect those who do not possess the ability to pay. Encouraging the transition from passive “beneficiaries” to active owners is a significant step toward community-led sustainability in sanitation. This has led to a move away from subsidy-based interventions and includes governmental award programs that reward communities for achieving open-defecation free status.

Small-scale pilot models have demonstrated the potential for local enterprise and employment in the sanitation sector. Maja na Ufanisi, a Kenya-based NGO, has created jobs in sanitation construction and maintenance in the slums of Nairobi. Rather than top-down privatization by large companies who see little profit in sanitation, and who tend not to reinvest profits in the community, this alternative approach encourages job creation, local ownership and community economic development. Further, compost and energy-from-waste toilet technologies (particularly in areas that are not currently on the sanitation ladder) could create local economic and ecological development opportunities.

A National Sanitation Strategy: Bangladesh

In Bangladesh in 2003, 42% of households overall did not have a latrine, increasing to 47% in rural areas (Bangladesh, 2005). The Government of Bangladesh responded by developing a national sanitation strategy designed to eliminate open defecation by 2010. This approach is integrated (water, sanitation and hygiene), multi-sectoral and multi-stakeholder in scope, with NGOs being utilized to facilitate community involvement. Recognizing that behaviour change is required for creating and sustaining demand for hygienic latrines, decision-making was decentralized to the local level through Water and Sewerage Authorities. The absolute poor, schools and mosques are subsidized through this program and a significant amount of the overall investment is allocated to ‘soft’ sanitation (awareness and education campaigns, training etc.). The private sector is engaged through soft credit and skill development programmes provided by both government and NGOs. Once local communities achieve 100% sanitation access, they are rewarded through access to increased funds.

In addition to providing sanitation facilities, the approach incorporates resilience against natural disasters. This has been achieved through ensuring that: sanitation facilities are built above the flood levels; designated evacuation centres have adequate sanitation facilities; mobile sanitation facilities are available to transport to flooded regions; and, media messages have been developed to promote good sanitation and hygiene behavior under state of emergency conditions.

THE ROLE OF AFRICAN CIVIL SOCIETY IN ADDRESSING THE AFRICAN SANITATION CRISIS

Edward Kairu, Executive Director, Maji na Ufanisi and Chairman of ANEW

Ultimately, real development is in people and their ability to take increasing control over the resources and decisions that directly affect their lives

- Maji na Ufanisi

KEY CHARACTERISTICS OF THE GLOBAL SANITATION CRISIS IN AFRICA

In 1925, Mahatma Gandhi is quoted to have said that 'sanitation is more important than political independence' (Mulama, 2008). In Africa, 342 million people lack access to potable water and 585 million people lack access to sanitation (JMP, 2010). Sanitation coverage in 35 countries is less than 50% (JMP, 2010). While sanitation coverage increased from 28% in 1990 to 31% in 2008, the number of people without access to latrines and toilets in SubSaharan Africa has increased by 194 million in the same time period (JMP, 2010). This is because the increase in coverage did not keep pace with population. Moreover, 46% of Africans still live on < 1 dollar per day. The 2006 Human Development Report (UNDP, 2006) predicts that under a business as usual scenario, the MDG sanitation target will not be reached until 2076. Bad governance and corruption in the sector, low political commitment and political instability leading to a proliferation of unfinished projects, exacerbate this. Moreover, political leadership is de-linked from society, in that very few Kenyan leaders have visited Kibera, a slum village outside Nairobi and there are very few sanitation champions in Africa.

IMPACT OF CLIMATE CHANGE

According to IPCC (2008), Africa is one of the most vulnerable continents to climate change and variability. This situation is aggravated

by the interaction of multiple stresses which occur at various levels and which adversely impact adaptive capacity. For example, Africa's major economic sectors (agriculture and tourism) are vulnerable to current climate sensitivity, with huge economic impacts. This vulnerability is exacerbated by existing developmental challenges such as endemic poverty, complex governance and institutional dimensions. Limited capital (including markets, infrastructure and technology), ecosystem degradation, complex disasters and conflicts are other major factors.

AFRICA SPECIFIC INITIATIVES TO ADDRESS THE AFRICAN SANITATION CRISIS

On the continent, pan-African sanitation meetings (AfricaSan) have been held since 2002 (Johannesburg) and have resulted in the eThekweni Declaration (2008). Several other declarations pertaining to water and sanitation have been made such as the Sirte declaration (Assembly of African Union, 2004) and the Sharm el Sheikh Declaration (11th African Union Summit, 2008). In addition, the Pan African Implementation and Partnership conference on water was held in Addis Ababa in 2003 and the first Africa Water Week was held in Tunis in 2007. AMCOW (African Ministers' Council on Water) meet on a regular basis to (in part) provide political leadership, policy direction and advocacy and strengthen intergovernmental cooperation to address the water and sanitation issues in Africa. It should be noted that, although AMCOW has managed to provide leadership in sanitation, it has not yet managed to leverage the kind of resources (internal + external) needed to halt, let alone reverse the worsening sanitation crisis in Africa. UN Water/Africa was launched soon after the 2000 Millennium

Summit. It brings together the UN Commission for Africa, the African Development Bank and the African Union. Its 'African Water Vision 2025 – Equitable and Sustainable Use of Water for Socio economic Development' specifies 10 indicators of success, such as access to water and sanitation, ecosystem health, regional co-operation and sustainable water institutions. While undertaking many successful initiatives, the full potential of UN Water / Africa is far from being realized. The African development Bank's (AfDB) Africa Water Facility (co-managed with AMCOW) supports pilot projects using best practices, new technologies and small scale projects with a major impact on local communities. The Rural Water Supply and Sanitation Initiative (RWSSI) was established to mobilise African governments and international donors to accelerate access to sustainable investments through innovative approaches to service delivery. As of 2005, RWSSI was supporting 13 African countries with another 19 countries under consideration. While AfDB has been doing a commendable job in addressing the African Sanitation crisis, it needs to be more aggressive in soliciting funds for the Africa Water Facility.

Internationally, the Kananaskis G8 Summit (2002) was followed in 2003 by the African Water Action Plan, established at the Evian G8. The plan supported African efforts to promote sustainable development of water resources; improve access to sanitation and potable water; mobilise technical assistance; improve sector efficiency; and support reforms aimed at decentralization, cost-recovery and enhanced user participation. Since 2006, the G8 commitments have focussed on health systems, disease eradication, Avian Influenza and vaccination programmes.



People working on a drainage ditch © Maji na Ufanisi

EXAMPLES OF CIVIL SOCIETY ACHIEVEMENTS



Newly cleaned up drainage ditch © Maji na Ufanisi

Through trained teams of volunteers, Maji na Ufanisi works with periurban communities to clean up and redig drainage ditches in order to reduce environmental contamination and reduce human contact with faecal matter. Furthermore, these teams are working to clean up dump sites in an effort to improve health and well-being. A key initiative is to bring shared sanitation facilities to slum villages in Kenya. Kenya's more than 40 tribes are represented in most urban slums in all the major Kenyan cities. Maji na Ufanisi works with the various government stakeholders to obtain land tenure for the structure. Community members are taught how to cut stone and build the structure. Interestingly, most of the construction jobs have been filled by women. Each 24 cubicle sanitation facility costs US \$ 27,000 to construct. Usually, the funds are given as grant to the community, by Maji na Ufanisi (from her donors). Given the lengthy community consultation processes that underlie the construction of a sanitation block, it takes 2 months to complete one block. However, through these dialogues and interactions, social cohesion and community integration are enhanced. **This has resulted in**

greater consensus on community matters, values and norms within these slum villages. Moreover, an improved understanding and articulation of the structure of leadership has led to democratic election of leaders. These leaders are provided with enhanced leadership capacity by Maji na Ufanisi.

On average, the community collects US \$ 1,400 per month from water sales, toilet usage and showering. The group pays salaries amounting to US \$ 236 per month for the different sanitation attendants and operation costs are US \$ 157 per month. Thus, the CBO will be able to save US \$ 1,007 per month. Some CBOs now have 5 sanitation blocks in one slum village and are now working on modalities of investing those funds with a view to buying land and other basic necessities. Moreover, these projects have created many jobs for the slum dwellers including water vendors, toilet cleaners and office administration. In addition to generating jobs and money, these projects establish permanent structures inside the village, making evictions more difficult. Most of the CBOs are currently in the process of being converted into private companies which will give shares and dividends to their members.

At a higher organizational level, the African Civil Society Network on Water and Sanitation (ANEW) is an organization for water and sanitation organizations in Kenya. Activities of the trust include advocacy skills training workshops, thematic areas (participation, capacity building and equity / inclusion) as well as developing a policy on a tracking and alert mechanism to follow the progress towards the sanitation MDG target. Since 2007, ANEW has partnered with AMCOW and the AfDB, which will see members directly involved with AfDB projects in the future.



Community gathering at public toilet © Maji na Ufanisi

INNOVATIVE WAYS OF HASTENING PROGRESS IN SOLVING THE GLOBAL SANITATION CRISIS, PARTICULARLY IN AFRICA

There are many approaches, which, if universally committed to, could increase our progress towards the sanitation MDG. It is essential to undertake genuine pro-poor commitments and to treat commitments to urban slum sanitation as national priorities. Water and sanitation should be integral to government Poverty Reduction Strategies and Programmes and viewed differently in urban and rural contexts. It is also important to take advantage of traditional knowledge and practices e.g. Moslem habit of washing hands before worship. Finally, a change in perspective is required, by viewing sanitation as a fundamental human right which safeguards health and dignity; by viewing the 313 million Africans without good access to sanitation as potential customers; by challenging the taboo in some African cultures, especially through local schools; by facilitating the work of community-based organisations (CBOs) in African countries; by focusing on sustainable service delivery, rather than construction of facilities alone; and by ensuring that utilities are answerable to consumers.



Community clean-up in Africa © Maji na Ufanisi

Binaries, Barriers and Breakthroughs at the National, Regional and International Levels

There is a need for nationally-led policies, capacity development and resource allocation.

While significant progress can be made towards resolving the global sanitation crisis at the local level, vertical linkages are required to provide the local community (including local government) with access to: grants and loan programmes; opportunities to enhance capacity; best operational practices; policy templates; technological information and specifications; and market forces (e.g. security for external and foreign investors). Binaries at these scales overlap with those at the local level and include: the urban/rural divide; cost versus benefits or economic benefit versus human rights and social necessity; hardware versus software (infrastructure versus behaviour and policy change); aid versus investment; and, government versus civil society.

BINARIES

There is a disparity between rural, urban and slum sanitation provision. More government investment is being made in planned urban areas than in rural areas and slums. Governments are unwilling to invest in slums because of land tenure and ownership issues, which must be addressed by planning authorities in order to improve existing sanitation conditions. In general, access to improved sanitation in urban areas has increased by over 813 million since 1990, but overall population growth has been 1.1 billion (JMP, 2010). Given that urban areas will continue to experience the fastest growth in the coming decades and will re-

quire increased sanitation investments, urban/rural disparities will continue to increase. The greatest challenge to meeting the MDGs will be providing access to rural inhabitants. Lower incomes, lower education, increased subsistence and a lack of infrastructure and energy all impact the ability of governmental organizations to provide sanitation in these communities. Although slum areas demonstrate significant deficits in access to sanitation compared to formal urban areas, 7 out of 10 people without improved sanitation are rural inhabitants (JMP, 2010).

The benefit of sanitation to communities far outweighs the initial cost of investment. The global community has begun to articulate the case for improved sanitation in terms of economic, social and environmental benefits. The return on investment is manifested through cost savings in health care services, workplace productivity, and school attendance. For example, \$552 million in direct health treatment costs would be avoided by meeting the MDG sanitation target (Hutton and Haller, 2004).

Sanitation has been neglected within both private and public sanitation delivery systems. Public delivery systems have not kept pace with the MDG target, especially in peri-urban and rural areas where providing access is more problematic and requires distributed approaches. Conversely, lessons from the water sector in the 1990s and early 2000s have demonstrated that wholesale privatization and its more tempered version, the



A girl leaves a latrine at a child friendly girls school, Quetta, Pakistan © UNICEF/NYHQ2006-0342/Giacomo Pirozzi

public-private partnership, have not provided the promised panacea. Privatization is un-regulated, leading to issues of affordability even though the informal sector is the only provider in many rural and peri-urban areas (Moore and Urquhart, 2004). Impoverished communities are often considered too risky for private companies. Further, companies have seen little profit in sanitation compared to water provisioning. In some instances, private companies have tapped into public aid funding, loans and tariff revenue to create profits, while reducing access and affordability for extremely poor consumers. Recent research and resolutions by the UN (Prasad, 2007) have confirmed that this approach has resulted in few gains at the expense of community ownership and economic development.

Private investment for improved sanitation should be the responsibility of community business owners, but it also makes good business sense. Investing in sanitation provides businesses, communities and workers with long-term benefits, such as improved productivity and health. Long-term investment in sanitation for the local community and an insistence on sanitation and hygiene within a company will reduce absenteeism and presenteeism. This has a net effect of boosting productivity and profitability as well as providing significant external benefits to the community.

Sanitation software and hardware require different delivery agents and mechanisms. Sanitation hardware includes the physical materials and technologies for sanitation, which can be addressed by technical workers. Sanitation software consists of training, education and behavioural change that can be implemented with the knowledge and support of social workers and educators. Traditional government approaches have been more effective in implementing hardware programs than software programs. Compared to water projects, the implementation of sanitation projects and their necessary software for behaviour change are often less effective in creating community level improvements; they require longer time implementation periods and investments to achieve their objectives.

Sanitation solutions do not have to come from established regional, national and international stakeholders. Informal groups, centred around education, religious or other institutions can provide critical investment in pilot projects that illustrate the value of sustainable sanitation. This can then be expanded through linkages in the local community to impact a broader population with small-scale interventions.

INTERNATIONAL INFORMAL CO-OPERATION: GRASS ROOTS PROJECTS AND NORTH-SOUTH FACILITATION IN PUNJAB, INDIA³

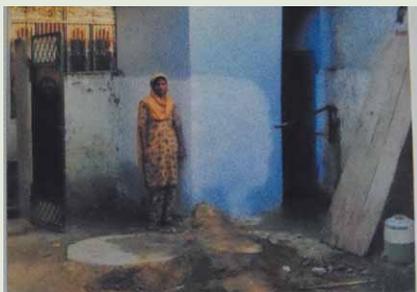
Mandip Sandher,
Canadian Toilet Organization

“Be the change you want to see in
the world ” *Ghandi*

“Recognize the whole human race
as one” *Guru Gobind Singh*

“Through selfless service eternal
peace is obtained” *Guru Amar Das*

Sanitation is a global issue and India is not immune to the problems associated with lack of access to sanitation facilities. Much of the world has the luxury of access to basic sanitation at the very least, yet if we put ourselves in the shoes of others who do not, it could help to prioritize the actions required by individuals to make this a better world for those less fortunate. Sikhism teaches every Sikh to conduct seva – selfless service – to those in need. In the past, Gurus would dig wells for water and work to provide clean environments. If these activities were good enough for them, deeply-rooted Sikh faith believers, irrespective of where they are in the world, should be able to take responsibility for organizing sanitation improvement initiatives in their own villages in India and beyond.



Improved Sanitation Facilities © Mandip Sandher.

3 www.punjabliones.com

EXACERBATING THE PROBLEM

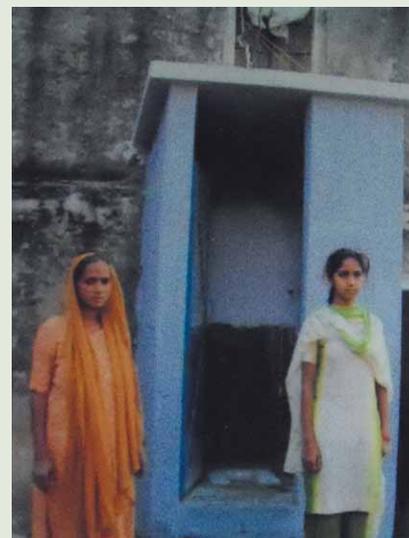
Many Western Punjabi families have returned to India in the last few years to construct mega “koti’s”- large houses with numerous bathrooms and toilets where they reside while in India. These properties are locked up and left vacant for 6 or more months in a year as families reside in two countries. The construction of these large properties, including the sale of land to commercial property developers is placing a heavy burden on local families as they contemplate where to answer the call of nature in an environment of diminishing open space.

GETTING STARTED

The primary reason to focus on the State of Punjab was family ties, having migrated from that area and being able to relate to the local sanitation issues. Punjab is a state in the North West of India, and is comparatively a very wealthy state in India. For example, according to the 2008 Global Hunger Index⁴, Punjab has the lowest level of hunger in India. In spite of the statistics demonstrating relative wealth, sanitation, and open defecation specifically, remains a problem. Thus a campaign was launched among migrant Punjabi families now residing in North America to take action to improve sanitation facilities in their villages of origin. The campaign started by creating awareness of the global sanitation crisis experienced in areas such as Punjab through North American Gurdwara’s (temples), which are attended frequently by Punjab Sikh families. It became quite evident in discussions with people of various cultures that the issue of global sanitation is not widely recognized. Many Sikh youth were shocked to hear about the lack of access to basic sanitation in Punjab, primarily because they have not travelled to India. They were eager to get involved in campaigns to improve the situation.

The first sanitation project was established in the town of Chak Hakim, near Phagwara. Meetings with the local village head committee confirmed that improvements in sanitation were desperately needed in the village and that they were willing to help in any way possible. Further, it was identified that the Punjab Government offer grant money for sanitation improvement initiatives.

4 Ref



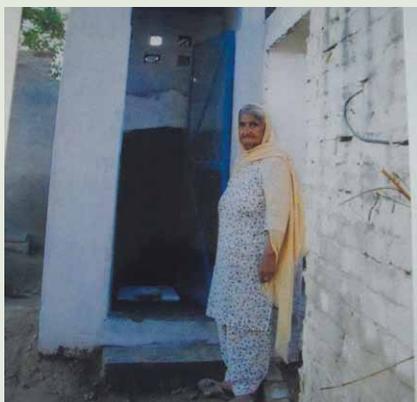
© Mandip Sandher.

After thorough review of the various toilet technology designs and systems available, it was determined that the low cost, 2 pit pour and flush composting toilet would be the best solution for the village project. This solution utilizes 2 litres of water for flushing and includes a squat-down design, concrete pit covers and a free standing brick enclosure with a metal door for privacy. Each of the composting pits have a capacity to support a family of five for a three-year period. When one pit fills up after approximately 3 years, the waste is re-directed to the second pit. When this pit fills up, the original pit is emptied of its contents, which, after 3 years, becomes dry, odourless compost that can be used or sold. The families are responsible for the minimal maintenance of the system. Each system cost CA\$300 (provided by the Sandher family) including the cost of materials and a Sulabh labour and management fee of 15% (to cover workmanship and surveys).

A total of 10 out of a community of 300 households were chosen to receive the first pilot toilets; selection was based on adult girls and women who were in need of such facilities, and were made by the local committee. Local family representatives recruited alternative donor families when three of the original families pulled out of the project as a result of misinformation from other villagers – they were told that the toilet design was unsafe because it did not have a traditional septic bed system.

PARTNERING LOCALLY TO DELIVER SANITATION SOLUTIONS

Research established that Sulabh International Social Service Organization⁵ – an NGO and manufacturer of toilet technologies – was already involved in sanitation improvement initiatives in India. Discussions led to a personal meeting with the local Punjab representative and a meeting at their Delhi headquarters with the founder, Dr. Bindeshwar Pathak, in 2008.



© Mandip Sandher.

It was evident that local village support would be needed to ensure that the project was executed efficiently. A local relative was selected to coordinate the village input and work with Sulabh, who managed the technology deployment. Prior to construction of the toilets Sulabh carried out site surveys of the selected households to ensure that sufficient land space was available for the composting toilet infrastructure. During the construction phase, Sulabh trades people were hosted by the Sandher family.

OUTCOMES

Sulabh has confirmed that they conducted successful follow up site surveys and have determined that the infrastructure is operating efficiently, is eco-friendly and that the new owners are satisfied with their toilets. The project has been deemed a positive experience, as 7 of the original 10 families are using the toilets provided. The other 3 families have

⁵ The United Nations chose the Indian NGO, Sulabh International Social Service Organisation, to highlight progress made in achieving a Millennium Development Goal on July 2, 2008 during the High Level Segment of the Economic and Social Council (ECOSOC) of the UN. More information about Sulabh can be found at: <http://www.sulabhinternational.org/>

not broken the habit of open defecation, but do use the toilet occasionally and the hope is that they will continue to move towards sole use of the facilities.

Through this experience, the decision was made to co-found the Canadian Toilet Organization chapter of the World Toilet Organization (www.worldtoilet.org) as a vehicle to increase local awareness of the sanitation crisis and to continue the work started in the Punjab region.

Sanitation awareness is important at the local, regional and national level, not just in Punjab. The needs of girls and women must be voiced clearly with heads of Indian states to make a conscious effort to find a viable solution to this crisis. It is important to educate communities on the availability of safe composting toilet options, which offer faster deployment than traditional septic bed solutions. Sikh community involvement not only makes sense, but is critical at the local village level in India. The local village communities know their own “back yard” better than anyone else. A campaign and matching funds from the Punjab State Government to encourage expatriates to work in local villages would be welcomed by these communities. The Sikh Gurdwara’s (temples) and Indian media in donor countries are efficient mechanisms to get the message out and to rally community support.



© Mandip Sandher.

The experiences of this pilot project reveal that full funding (charity) is not the best solution in all cases. A 50% funding option will be used in future projects in order to encourage ownership and increased prioritization of sanitation within the family. Some families have financial resources (the ability to pay), but have not allocated them for sanitation (willingness to pay).



© Mandip Sandher.

Sanitation awareness, education and the needs of women and girls must be addressed if a conscious effect is to be made to find a viable solution to this crisis.

Expatriate Sikh community involvement not only makes sense, but is something at the local village level in India. This can be mobilised by government grant incentives, the Gurdwaras outside India and Indian media in donor countries

BARRIERS

Sanitation is under prioritized by donor and recipient governments. Historically, toilets have not made for great headlines. Many other causes have higher emotional and therefore public interest. Governments are ultimately answerable to their voting population and sanitation simply has not been part of the dialogue. Sanitation is not a quick fix as it requires investment in education and behavioural change. There are many competing choices for bilateral and multilateral aid - in the past, sanitation has not made the list. Moreover, fragmentation of policies and lack of explicit sanitation leadership has made it difficult for recipient governments to develop national and regional sanitation strategies.

Measuring sanitation progress is a challenge because the sector is fragmented. Community-based and international non-governmental organizations (NGOs), national and local governments, donors and multilateral organizations, private multinational companies, local small businesses and research organizations have unique and valuable roles to play in different regions and at different stages. A more harmonized coalition-building approach between partners, where tested, has improved the strength and quality of partnerships and access to sanitation. Because of the fragmentation of the sanitation sector, more work needs to be done to track how sanitation investments translate to improvements in sanitation. The low priority afforded sanitation by some donor and recipient governments is based in the paucity of information specific to the sanitation sector which makes evidence-based policy decisions difficult (WHO, 2008).

While there is broad consensus in the sector that sanitation must move to the top of the policy agenda, sanitation remains the “poor cousin” to clean drinking water in policy, research and action. The broad sector, called “WatSan” or WASH (water, sanitation and hygiene) premises its work on the strong interconnections

between clean water, sanitation and hygiene. But some advocates are beginning to argue that, in order to ensure appropriate priority is given to providing effective sanitation improvements, the delivery and governance of water and sanitation should be separate in policy and practice. This suggestion raises several key questions: How far should this separation go? Should water and sanitation be examined separately as finance issues, as budget items, or in all aspects of provision? Does this mean that sanitation should be considered independently of other community needs? While sanitation requires a higher profile, an absolute separation of water and sanitation issues will be counter-productive in the longer-term.

For central governments, two broad approaches can be taken. One is to ensure that sanitation is represented across multiple ministries. For example, sanitation must be considered when building schools and developing curricula, in cross-subsidies with other community development initiatives such as shower facilities, and/or that its economic development potential is exploited through new local business opportunities or energy harnessing. A second approach is to create a separate ministry that can ensure sanitation is a core government activity. In Madagascar, prior to the most recent coup, a new Ministry dedicated to water, sanitation and integrated water resources management (IWRM) was given the capacity to monitor and invest more strongly in sanitation than ever before (Rakotonrainibe and Rasolofomanana, 2008).

Central governments tend to measure provision rather than use, and household-level surveying to monitor use can be resource-intensive. Measures of and methods towards progress on investment and coverage continue to be debated and refined and the evidence-base for improved sanitation is beginning to take shape. The UNICEF/WHO Joint Monitoring Programme (JMP, 2010) for water and sanitation has begun to shift from using provider-based data (usually central government censuses and facility counts) to user-based

data (household surveys), as a way of capturing the sentiments of community residents about their use of community and private sanitation facilities. However, user-based reporting requirements, especially of multiple donors, can be onerous for communities. One way to address this challenge is to streamline reporting requirements and increase community capacity for the management and monitoring of sanitation via *participatory monitoring and evaluation*. This approach engages the community in its progress on sanitation and provides a reliable, local source of information on use, rather than simple provision, of sanitation facilities. Many local contributors can provide more comprehensive and locally appropriate monitoring and feedback than a costly external consultation. Moreover, it reduces issues associated with external experts coming into a community and provides an opportunity for increased ownership and empowerment at the community level.

BREAKTHROUGHS

The Millennium Development Goal for sanitation has forced the global community to measure access to and use of improved sanitation and hygiene. The global sanitation community has begun to develop a body of evidence to inform policy makers on the scale, scope and geography of sanitation needs (who needs sanitation, what kind of sanitation is needed, and where) and the costs and benefits of investment in sanitation (economic, health, social, ecological and political). This evidence is informed by measures of behaviour change, not just by capital measures (use, not simply provision, of sanitation facilities). Prior to the implementation of this goal in 2002, there were few baseline data on sanitation, conflicting evidence and data sources between national governments and international agencies, and a lack of a common definition for what constitutes “improved” sanitation.

The Global Annual Assessment of Sanitation and Drinking-Water (GLAAS) aims to bring together evidence of the changes in sanitation capacity and investment. A pilot report released by UN-Water, GLAAS consolidates service levels (reflected in coverage data) with measures of institutional capacity, policy framework(s), human resources capacity and sector funds (WHO, 2008). The report stems from the rationale that, while monitoring activities are being undertaken worldwide by numerous organizations in various sectors, a broad mechanism to synthesize information for policy-makers does not exist.

The sanitation “ladder” measures degrees of improvement in sanitation at the regional level. Initial measurement of progress toward the MDG target was based on a rudimentary analysis of access to sanitation facilities on a binary scale: improved or unimproved. However, this scale did not capture the needs of the billions of people living with only marginally “improved” sanitation. By this measure, progress on the MDG could easily be overstated with many people still facing health and economic hardships as a direct result of poor sanitation. While the ladder approach represents an improvement from the previous model, it does not address all aspects of sanitation, with the chosen hierarchy of rungs still under debate. As the ladder is based on measures of access, not use, it does not: represent hygiene behaviour (handwashing); distinguish between wet and dry sanitation; acknowledge the limitations of providing private sanitation facilities in crowded regions; or measure safe disposal of human waste.

Bottom-up economic development pilots have demonstrated opportunities for small business and job stimulation at the local level in sanitation construction, maintenance, social marketing and waste technology and treatment. Higher-order water operator partnerships are a potential model for larger-scale capacity building, without resorting to 1990s-era privatization. Public and private sector donors and investors should look to help finance these operations, but the bulk of financing can and should come from government sources.

TAPPING THE MARKET POTENTIAL - WHEN THERE IS A PROBLEM, THERE IS A MARKETPLACE

Jack Sims, World Toilet Organization

As the current global economic crisis erodes demand from the top of the global wealth pyramid, companies are at a loss for how to find the next big group of customers to fill the spare capacities created by this vacuum in demand. Governments are hoping to design policies to help businesses maintain demand for products and thus maintain jobs so that unemployment will not expand to unmanageable levels that may spill into social hardship and unrest. Some poor populations are worried that donor funds will dry up, having become dependent on donations in the past as their main source of sustenance.

This is the first time that the capitalist world at Davos (Switzerland) is questioning the limits of capitalism. People are looking to re-evaluate the meaning of progress and economic models; having 1% of the richest owning 40% of all the wealth in the world and 4 billion living below the poverty line cannot be the most sustainable model. The world needs a new vision of a bright and promising future. This historic moment offers a great opportunity for us to exploit the spare capacities of factories to retool for the unaffected marketplace at the base of the global wealth pyramid (BOP); to provide an accelerated opportunity to balance the global wealth distribution because of the current economic crisis; and, that helping the poor through giving them access to goods and services will help the rich as well.

With 2.6 billion people without access to sanitation facilities around the world there is a potential demand for 500 million units of household toilets (assuming 5 persons per family). The sanitation marketplace also extends into non-residential toilets and treatment systems for schools, religious buildings, fish/food markets, transportation and recreation centres, hospitals, government buildings, etc and if we include in the entire supply chain from raw materials to designs, production, transportation, logistics, distribution, marketing, installation, maintenance, financing, upgrading, capacity building, and all the multiplier effect in between, the World Toilet

Organization estimates the market size to be about USD 1 Trillion.



Girl with cell phone next to her toilet © J.Sim

The cost-benefit ratio associated with access to improved sanitation through preventing loss of income, productivity and other quantifiable economic costs essentially means that the poor can buy their own sanitation facilities and earn the income to pay for it if they are more healthy and productive. In the past, the reasons for not investing in personal sanitation facilities has been four-fold: people did not realize the importance of sanitation and their priorities for television, radio and hand-held telephones took precedence; access to sanitation supplies was limited; access to sanitation financing was limited; and, when water and sanitation were bundled together, water took precedence.

As seen in the past, donors' funds are not sufficient to solve this problem. We need a systemic approach to create a vibrant marketplace and fund the building of market-infrastructures to generate competition and innovation and serve this sector so the poor can be motivated to own toilets and, along the way, learn to become business people serving their local needs. The past approach in marketing was too rational and forgot that humans are spiritual beings capable of emotions like jealousy, comparison, pride, and a host of similar feelings that drove capitalism at the top of the pyramid to exuberance and consumption. The same rules of emotional motivation apply to both the rich and the poor.

APPROACHES

Aspirational Marketing will feature strongly in this sanitation marketplace alongside the rationality of good sanitation. Fear of being looked down upon, the avoidance of embarrassment, the need for privacy and dignity,

and keeping up with trends are often higher priorities than the perceived needs for hygiene, health, and productivity. Cost has often been cited as a barrier, but Nobel Laureate MohdYunus has shown us that micro-loans can be highly effective. If the poor can get access to financing, they can (re-)pay through instalments. If the poor can afford televisions, hi-fi systems, and hand-held telephones, they certainly can afford toilets. The take home message should be that different models can still lead to the same result.

INNOVATIVE FUNDING MODELS

India, Sulabh International's Pay-2-use public toilets sustain themselves by cross-subsidizing profitable city centre toilets against loss-making slum toilets.

Dr Pathak, a social entrepreneur, founder of Sulabh and winner of the 2009 Stockholm Water Prize, established a toilet program that has liberated the low-caste "untouchables" into a 60,000 strong public toilets workforce

David Kuria a young social entrepreneur, started IKO-Public Toilets in Kenya using a Free-2-Use concept financed through cross-subsidizing earnings from shoe-shine and magazine/snack kiosks.

Jiu San Society in Southern China has already installed 1.5 million ecological sanitation household toilets through a partial government subsidy program.

Dr KamalKar, one of the fastest innovators with his Community Led Total Sanitation (CLTS) motivates entire villages to build their own toilets to become 100% open-defecation free, all the more remarkable as the program advocates zero-subsidy.

The World Toilet Organization sees its role as the platform to weave all members related to the sanitation community into a big business community. Together with the Sustainable Sanitation Alliance (SuSanA), related UN agencies, the Water Supply and Sanitation Collaborative Council (WSSCC), and all other key activists, we can:

- Map the network of existing resources and find synergies between them, weaving a multi-faceted approach that makes each unit effort easier, faster, cheaper and better;
- Drive demand for sustainable sanitation with-

- out subsidies as much as possible through a CLTS approach and other winning strategies;
- Involve the poor in the delivery and distribution to become sanitation businessmen, eg, in Sani-Shop franchises;
 - Fund and build Market Infrastructures to facilitate accessibility to markets for the poor;
 - Scale up Winning Models through innovative financing in Grameen-type micro-financing; on-line financing portals like Kiva and Wokai; pass-through donation like Give2Asia; innovation driver like Ashoka Social Financial Services; pure commercial players like Citigroup, HSBC and Deutsche Bank; and patient financial investors who are attracted by the triple bottom line;
 - Fund a WTO Support Center: bridge and match all resources as catalyst driving demand and supply; and,
 - Simplify technologies into expert-system software that is picture-based so that the un-schooled can learn to be sanitation engineers.

Engaging the 2.6 billion customers with the business community will allow us to exploit grand economies of scale in supply, reduce risk of investments and push down costs for financing, promotion, production, distribution, capacity building, and market expansion into other sectors like water, education, healthcare and food economies. When we incorporate co-buying of raw materials, common shared components, R&D costs defrayed over huge volumes, cross-industry innovation to medicine, micro-insurance, material sciences, decentralized/centralized production strategies, ... the space for an innovation for extreme affordability is very appealing.

The good news is that the world has ready sets of key players with the appropriate technologies, ideas, success models, funds, capacity, and reach in their own rights. Currently they largely function in silos and are to various extents, protective of their own space and scope of operations. The business community can be also viewed as bottom-line driven and not altruistic. Bringing together the global and local players requires honest brokers rather than a strong leader in this case. We need non-threatening, mission-driven facilitators who understand the nature of market mechanism and how to align forces in the entire supply chain in mutually beneficial positions, preferably facilitators who do not charge consultancy fees for their work, and are able to harmonize the community towards the attainment of the MDGs regardless of styles, philosophy, ethnicity, ethos, motivation, ideology, technologies, scale and idiosyncrasy.

To be successful, we need to focus on the mission with pragmatic delivery, action-orientated multi-faceted approaches where the strength of each network member energizes the whole network both in actual products and emotional charge. We need to accept differences in approaches, appreciate both small and large successes and learn continuously from each other's uniqueness. There is no heavy moralizing, no paralysis through analysis and no competition. We are all collaborators because the sanitation issue is so big; there is enough for all of us to play our part. In fact, innovations in this sanitation marketplace will only motivate others to come up with better solutions and move this industry forward like any other progressive industry in the past.

IKEA-FOR-THE-POOR

Mission: to bring affordable quality of life to the common people WTO hopes to enlist the help of IKEA for their expertise in logistics and supply chain to enter the bottom of the pyramid sanitation marketplace

THE ROLE OF POLICY

Government policy is another interesting area for development. With China's economic engine slowing down, the central government is speeding up the "New Socialist Countryside" program, developing the rural areas by bringing "rurbanization" (urbanizing the rural regions) including roads, schools, and other infrastructure to the less developed inner regions. This acceleration in re-distribution of services to the BOP in China will serve as a great model for the rest of the developing world to follow. Effective immediately, 30,000 unemployed fresh graduates will be employed as rural teachers. Of course, the schools will need toilets - with about 300,000 rural schools in China, the market for low-cost self-treatment toilets is clearly attractive. When the children enjoy toilets in school, they will cajole their parents to put in toilets at home. Soon it will become a trend and envy will help to move the market forward.

The general price point will range from zero cost to USD 10 to 100 for a start per family and thereafter the up-graders market will develop itself into another major sector as the poor starts to become healthier and wealthier, moving out from poverty into the middle-income sector. Businessmen who can smell the money early will be ahead of the trend followers and the laggards. Brand recognition and loyalty among the poor is much higher

than the rich because the poor need the brand safety of robust products and cannot risk buying the wrong one. Sintex, the largest plastic company in India which produces bio-gas digester units and a range of water and sanitation related products are already researching and designing products to serve this market. WTO has identified more than 200 low-cost sanitation products in the market made by small players that can be scaled up. BORDA offers mid-range treatment solutions not available from large systems suppliers. IDE, IDEI, Designers without Borders, Betterplace, Ministry of Design, Air Division, and a host of new designers are now developing new sanitation products for the BOP. In addition, of course, the old hands in this space like Procter & Gamble, Unilever, Danone, Cemex, and all the hand-phone telcos are already doing good and profitable business.



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Singapore: Market Approach in Action

In 1965 the newly independent Singapore was a third world country. Growing up in poverty there, I have traced Singapore's economic progress from open defecation, to drop over the pond, to the bucket-truck systems, through cholera out-breaks, deaths and the cleaning up of the Singapore (Sewage) River, to our first flush toilet, to today's deep-tunnel sewage treatment and NeWater (recycling to drinking water) treatment plants and our Marina Barrage turning rivers into reservoirs.

The story of Singapore's journey from third world to first world has its roots in our toilets, our government hygiene policy, our human capital progress and our improvement in quality of life for everyone.

National Governments are recognizing the need for co-ordinated strategies to provide the requisite policies and resources to improve access to sanitation. Over the past several years, countries such as Bangladesh, Madagascar and Ethiopia (AMCOW, 2008) have developed policies and/or co-ordinated ministries to help tackle the sanitation crisis. These initiatives are having an impact on open defecation rates and general access to improved sanitation, especially in rural areas.

Innovations for harmonizing sanitation investment, advocacy and action are becoming realities: the Global Sanitation Fund⁶ (GSF), the Sanitation and Water for All; Global Framework for Action, the United Nations Secretary General's Advisory Board (UNSGAB) and the G20 at the international level; sanitation ministries and coordinating bodies at the national level; and civil society networks in developing and developed contexts. In 2008 the Water Supply and Sanitation Collaborative Council (WSSCC) and the WHO established a new fund designed to increase financing for the sanitation sector. The GSF supports organizations in eligible countries by providing grants out of a pooled fund. It is a financing mechanism established to boost expenditure on sanitation and hygiene in accordance with national sanitation and hygiene policies. Sanitation and Water for All, conceptualised by End Water Poverty and supported by a broad membership base, is calling upon world leaders to accelerate coverage for access to water and sanitation. An inaugural Annual High Level Meeting will bring together Ministers of finance, water, sanitation and development co-operation in order to discuss and agree on priority actions to increase sector performance for safe water and sanitation provisioning.

Networks of NGOs have begun to work together to harmonize activities and speak to a common agenda. For example, the African Civil Society Network on Water and Sanitation (ANEWS), a regional networking body of African civil society organizations (CSOs) actively involved in the field of sustainable water management, water supply

and sanitation, is providing a platform for effective engagement, coalition building, sharing of best practices, and advocacy and dialogue with governments. In the developed world, networks such as SuSanA (Sustainable Sanitation Alliance) and the Sanitation and Water Action Network Canada (SWAN Canada) have built successful coalitions to engage and lobby governments for international aid and action on sanitation. GoAL WaSH is a new international programme established by UNDP that will enhance governance, advocacy and leadership at the national level in countries which are lagging behind MDG targets for water and sanitation.

Some countries have increasingly begun harmonizing the efforts of sanitation actors. In Uganda, for example, a National Sanitation Working Group (NSWG) was set up in 2003, to coordinate and promote hygiene and sanitation in the country. To date, this has led to increased sanitation budgets, development of a financing strategy to improve sanitation and hygiene, advocacy, a national handwashing campaign, and the identification of best operational practices (WSSCC, 2009).

Government-hosted regional sanitation meetings have succeeded in bringing together numerous actors in the sanitation field in order to discuss national strategies. Since 2006, these regional conferences have been held in South Asia (SACOSAN), Latin America (LATINOSAN), East Asia (EASAN) and Africa (AFRICASAN). In addition to identifying ways of moving the sanitation agenda forward, these conferences also create accountable national leadership. They bring together ministers across sanitation, health, education and finance departments, sanitation experts, civil society and local government. The net result has been a building of momentum for sanitation provisioning and an opportunity for various stakeholders to learn from successful implementation projects (Bartram, 2008). The World Bank is currently following up on the various regional and national-level declarations that have been established through these events in order to evaluate their impacts.

⁶ GSF: Investing in sustainable sanitation and hygiene. WSSCC 2008. http://www.wsscc.org/fileadmin/files/pdf/GSF/GSF_leaflet_English.pdf

CAN A G20 (LEADERS) FORUM SOLVE THE GLOBAL SANITATION CRISIS?

**Corinne Schuster-Wallace,
UNU-INWEH**

In order for improved sanitation to outstrip population growth, a concerted and co-ordinated effort is required that emphasizes the value of sanitation and hygiene education in and of itself, rather than as a component of access to safe water. It is equally clear that the solution does not lie in an existing institutional structure, otherwise the MDGs would be on target. The UN has significant convening powers, but given its size and complexity, it is not sufficiently streamlined to take on this task; the G8 is not able to represent the face of the sanitation crisis and thus lacks legitimacy to tackle it independently. What better mechanism to demonstrate effective global leadership through example than the G20 Forum, consisting of key developed and developing countries, representing international political will, financial capacity, technological capacity and human capacity?

In 2005, then-Prime Minister of Canada, Paul Martin, articulated the benefits and use of this new leaders' forum. The fiscal G-20 – central bank governors and finance ministers from 20 leading and emerging economic countries – first met in 1999. According to Martin, the fiscal G20 provided several lessons: some problems can only be dealt with at a political level; all countries are dealing with and are affected by similar issues; and, when you provide a platform for open dialogue between national decision-makers, solutions are created and resolutions generated.

There are four compelling motivations in support of a global leaders' forum to address the sanitation crisis. First, of all global crises, the sanitation crisis is financially achievable, results in significant economic benefits and is one of the most fundamental steps towards eradicating poverty, improving education, and maximizing the potential of individuals, along with access to safe drinking water. Specifically, global rates of return on investments in water and sanitation are estimated to be between 3 and 34 USD for every dollar invested (Hutton and Bartram, 2008). This is of direct or indirect benefit to each country around the table as well as those represented by proxy. G20 members account for approximately 70% of the global

population without adequate sanitation. Even in higher income countries, aboriginal and other marginalized populations do not necessarily benefit from the same level of services as the majority of the population.

Second, as previously stated, the MDG for sanitation will not be achieved. The UN Joint Monitoring Programme reports that between 1990 and 2006 the number of people with access to improved drinking water sources increased by almost 40% - the number of people without access has fallen to less than a billion. However, the global distribution is uneven and some countries will fall significantly short of the MDG (i.e., in sub-Saharan Africa). Rates of sustainable sanitation coverage have increased at a much slower rate, which, when extrapolated will mean that the MDG falls short by almost 700 million people. Furthermore, this does not take into account the other half of the population that is not targeted by the MDGs. These data provide the basis for an opportunity to build upon the MDG experience and momentum that a new leaders' forum could use to establish its place and utility at the global level; improving and co-ordinating the response required for 100% access to sanitation by 2025. One of the key advantages of a leaders' forum is that in order to be successful, solutions to the water and sanitation crisis require input from the finance, health, water, education and environment ministries as well as multi-level action within a country.

Third, the problem does not lie in technology or affordability - rather, empowerment, education, capacity building, co-ordination and political will are the prerequisites for sustainability. It has been argued previously that sanitation is an inherently local problem not suited to a global forum; however, co-ordinated top-down and bottom-up action is necessary to resolve this global crisis. Specifically, a Leaders G20 can minimize the political risk involved in investment and has greater leverage for developing economic markets. A semi-structured forum mechanism - such as the G8 - has proven the utility of international frameworks for action that are implemented at the national level.

Finally, the crisis affects marginalized individuals as well as the least fortunate countries within the world. The G20 has a moral obligation, as well as an inherent self-interest via their representation within many of these groups.

Grounds for addressing the global crisis lie in the development multiplier, as summarized by Ralph Daley and others (2004: p.8) who first

examined this issue within the context of an L20 Forum: "Once SDS is no longer a 'suffocating impediment' to progress, other important aspects of the water crisis, such as water supply, water for agriculture, integrated water resource management, trans-national water issues, water and peace issues, can be dealt with more effectively. With the SDS log-jam broken, global energies can also be more effectively channeled towards a longer-term global vision for freedom from want and fear."

Sanitation provisioning has to be culturally, socially, economically and environmentally sustainable. Whether as a human right or in terms of human and economic benefit, sanitation should be made an immediate priority. Global environmental change is only going to exacerbate existing global water issues. Timing, availability and quality of water are becoming more critical as climate change continues to affect the hydrological cycle. Given that the water and sanitation crisis is hindering progress towards sustainable sanitation, it is imperative to deal with so that other water-related issues can be placed at the forefront. Moreover, the release of human and financial capital as a result of reduced illness and health care costs, along with increases in education and productivity, would be invaluable.

It could be argued that the state of the global economy precludes the coming together of the G20 Leaders to solve the global sanitation crisis. Alternatively, the crisis can be seen as an opportunity to mobilize communities, invest in infrastructure and education and stimulate the local economy, as well as to stabilize economies around the world. Canada will host the G8 and G20 in 2010 – a place to demonstrate leadership, highlight the global sanitation crisis and catalyse movement towards a G20 solution.

When you provide a platform for open dialogue between national decision-makers, solutions are created and resolutions generated.

The global sanitation crisis is not driven by technological constraints, but by a lack of empowerment, education, co-ordination and political will.

Future Challenges and Recommendations

IMPACTS OF GLOBAL CHANGE

Climate change will bring about broad impacts on society through a changing water cycle. Future scenarios indicate that the effects of climate change will vary according to location, but in general, current spatial patterns of water quality and quantity will be altered through changes in frequency, duration, intensity and timing of precipitation events. This will lead to more frequent and severe water contamination events. In some regions where water resources are already scarce, this may lead to intolerable water shortages. In other areas where the infrastructure does not exist to capture less frequent, but more intense precipitation events, or cannot handle flood events, water shortages may occur.

In areas where adequate access to sanitation does not exist, this change in water resources will exacerbate existing problems. For example, during flood events in areas of no or insufficient sanitation, shallow groundwater aquifers and surface waters will become contaminated. During periods of drought, hygiene practices are likely to suffer due to a lack of access to water, and contaminants will be concentrated in reduced water bodies. As such, sanitation as a barrier to source water protection plans will assume a heightened level of importance.

Superimposed upon climate change and the global sanitation crisis, population growth, urbanisation and land use changes may serve to increase population density, stress existing sanitation systems and increase contact between individuals and faecal material, consequently increasing exposure to and likelihood of disease. Clearly, these global changes have significant implications for human health for those already living under poor sanitary conditions.

RECOMMENDATIONS

1. **Sanitation must be addressed in the broader context of global poverty and in concert with the other MDGs as part of an overall strategy to increase global equity.** The role of sanitation in education, empowerment and engagement within the local economy through a reduced burden on health and well-being is a critical component.
2. **Sanitation should be a primary focus but must be situated within the broader context of water management and access to safe water.** From an epidemiological perspective, sanitation and hygiene are equally important as transmission routes for water-related diseases, and as such it is not practical to target interventions at one transmission route to the exclusion of others. Maintaining a distinction between water supply and sanitation will only work if we recognise and incorporate their inherent links.
3. **Sanitation must be integrated into community life – holistic, community-based and community-driven. Empower local communities (not just households) to identify needs, change behaviour, create demand for ownership and overcome obstacles such as land tenure.** Simply providing latrines is not a sustainable solution – sanitation facilities must be used and maintained. As it stands, many water and sanitation projects are no longer operating after 5-7 years – they fall into disrepair, or are used for other purposes including food storage, or are technologically or environmentally inappropriate for local conditions (requiring large amounts of water in dry areas, or flooding in wet



Cambodia, 1992 © UNICEF/NYHQ1992-1621/Lemoyne

areas). Top-down and other prescriptive approaches are not sustainable and do not always meet the needs of the individual, family or community. In order for sanitation solutions to be appropriate and embraced by community members, the process needs to be driven, implemented and embraced by an empowered and enlightened community. Mechanisms for facilitation will vary according to social, economic and cultural contexts, but will include education, social marketing and supply driven approaches.

4. **Investments in sanitation must be co-ordinated, long-term and focus on both “software” (usage) as well as “hardware” (facilities). To make monitoring more valuable, community-based evaluations should strive to integrate and examine failures and successes associated with sanitation delivery.** The Global Sanitation Fund is an important step forward; donors need to demonstrate support in this initiative. Similarly, the UN International Year of Sanitation 2008 made great strides in advocating for sanitation, as did the launch of the Sustainable Sanitation Alliance (SUSANA). We must not allow this momentum to fade. In addition, new financing mechanisms need to be explored, including cross subsidization of sanitation through, for example, water services (e.g. bottled water) and payment for ecological services (e.g. nutrient reduction). Monitoring and evaluation must address the sustainability of sanitation facilities and hygiene behaviour – that is, to measure sanitation’s “software” (usage) as well as its “hardware” (facilities). Moreover, community-based evaluations should be established and strive to integrate and examine failures and successes associated with sanitation delivery.
5. **“Acceptable” sanitation access must be redefined within the context of gender, economic realities and environmental constraints.** The sanitation ladder concept is a significant improvement over previous measures, but it does not recognise some types of sanitation facilities that are being used successfully in various locations and situations. A new definition of sanitation is required that reflects gender sensitivities, economic realities and environmental constraints.
6. **Achievement targets should be redefined, moving from 50% coverage by 2015 to 100% coverage by 2025.** The MDG process has provided momentum and an increased commitment to global sanitation. It has also demonstrated the inherent difficulties associated with reaching this milestone, particularly in some regions of the world.
7. **National NGOs need to co-ordinate their response to the sanitation crisis and enhance communication, especially regarding lessons learned, to form an effective and vocal lobby group for sanitation advocacy in order to facilitate a co-ordinated response.** Within countries, this unified voice is important to draw attention to the sanitation crisis (independent of the water crisis) and to demonstrate the need for national investment.
8. **New business models should be designed to develop markets at the bottom of the pyramid and deal with the apexes of the water-sanitation-hygiene triangle concurrently.** There is tremendous business potential in solutions that improve health and well-being through reducing the transmission of water-related diseases if they are designed to meet the needs of vulnerable families and communities around the world. Despite high risks and low per unit profit margins, the size of this untapped market and the social marketing strategies that can be brought to bear could realise a significant return on investment, in both financial and human capital terms.
9. **Countries need to recommit to official development assistance equal to 0.7% of GDP and, within this framework, commit 0.002% of GDP to international investments in sanitation.** Sanitation has been in the shadow of drinking water for far too long. When considered together, it is impossible to identify what proportion of aid/investment has been targeted towards the sanitation crisis. Although sanitation cannot and should not be addressed in isolation, it is valuable and timely to identify specific investments, successful approaches and to fund sanitation in its own right. Achieving a target of 100% sanitation by 2025 would require an additional US\$20 billion per year over and above the costs of achieving the MDG (Daley et al, 2004). The cost of achieving the MDG is approximately \$10 billion per year in 2000 USD (Hutton and Bartram, 2004). In 2006, 0.002% of GDP for high-income countries was approximately US\$60 billion. Given the subsequent economic downturn and accounting for inflation, a commitment of 0.002% of GDP should provide the requisite investment for achieving sanitation for all by 2025.

GREYWATER / BLACK WATER RECYCLING AND REUSE

Finding effective solutions for wastewater utilization is an integral part of the response to the sanitation crisis. In regions of the world where water scarcity is experienced on a regular and/or persistent basis, creative sanitation practices are being developed to maximise water returns to the hydrologic system. Such initiatives include: spraying treated wastewater into groundwater recharge zones; using natural vegetation to treat wastewater; and using dual plumbing systems so that greywater (from hand, body and clothes washing) can be reused for irrigation and to flush toilets with minimum treatment. Black water recycling requires more stringent treatment practices in order to ensure that the wastewater is safe for re-use. Technological advances are not seen as barriers to implementation and uptake of these conservation practices; rather, cultural and religious sensitivities and policies for implementation are preventing uptake. In countries with the finances to invest in these solutions, building codes, water quality protocols and other legal instruments require significant modifications in order to allow these types of technologies to become mainstream.

The sanitary revolution needed for the 21st century requires investment not in vast tunnels for sewerage, but in helping to create an intermediary sanitary economy with cheap, attractive, good quality products ready to meet the emerging demand for simple, decent facilities. Such an economy would have the attraction of providing local people with jobs - not as miserable muck-shovellers, but in respectable skilled occupations. Black, 2008

AN EMERGING DEBATE: THE HUMAN RIGHT TO SANITATION

The emerging discussion around access to water and sanitation in the context of human rights may provide a new conceptual and legal framework for future action. Debates over the nature of sanitation as a private benefit, an untapped market, a public service, or an international moral and economic obligation have characterized the sanitation discourse for many years. Article 25(1) of the Universal Declaration of Human Rights states, "(1) Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control."⁷ The provisions around health, well-being, food and economic security contribute to discussions advocating for the identification of water as a human right. In South Africa, the right to water has constitutional status and is set at a rate of 25 L per person per day. The recent report by the UN Independent Expert, Catarina de Albuquerque, suggests that the human right to sanitation in and of itself is inextricably linked to other human rights (Albuquerque, 2009). Moreover, the right to sanitation involves explicit requirements in terms of accessibility, affordability, availability, quality and acceptability (Albuquerque, 2009). However, currently there is no consensus that the human rights framework is an effective legal mechanism for sanitation promotion. The concept of sanitation as a human right may reduce community responsibility for and ownership of sanitation (many advocate some form of user-pay for sanitation services).

⁷ <http://www.un.org/Overview/rights.html>

SANITATION AFTER THE MDGS – A NEW REVOLUTION?

In 2007, sanitation was recognised as the most important medical advance of the past 150 years, according to a poll conducted by the British Medical Journal (Ferriman, 2007). It is time for a new sanitation revolution, one that invests in sustainable sanitation for all people by incorporating and building upon the scientific, social, legal, economic and technological advances of the past 150 years.

A new goal of 100% sustainable sanitation coverage by 2025 is required. Building upon the momentum of the MDG target, key stakeholders should be evaluating levels of resources, capacity development and behaviour change required to provide improved global sanitation by 2025. It is time to begin a new review of targets and timelines for sanitation coverage. The 2006 Human Development Report (UNDP, 2006) estimated that annual investments of \$30 billion are required to provide universal water and sanitation access - an additional \$20 billion per year over investments for MDG targets. Investments would need to be targeted towards Sub Saharan Africa and Asia, where progress towards the MDG target is slowest. New targets and timelines are made possible via the combined breakthroughs of:

- a) New approaches to Community-Led Total Sanitation, which have led to remarkably rapid elimination of open defecation in many communities across several countries;
- b) More accurate measurement of coverage under the Sanitation Ladder and use under participatory monitoring and evaluation will make it easier to track improvements in sanitation at the ground level; and
- c) The increasingly harmonized policy and finance infrastructure for sanitation, including the Global Sanitation Fund, regional networks and sanitation meetings, national ministries for sanitation, the international G20 and other forums, which provide opportunities to streamline and track investments in and commitments to sanitation.

Meeting this commitment will entail further investment and commitment by the global community, including commitments to continue monitoring and refining evaluation measures for progress, coverage and use; and commitments to build local capacity at the local governmental level. In summary, developing countries have the opportunity to partake in a new sanitation revolution – one that provides environmentally, financially and culturally sensitive sanitation.

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EDWARD KAIRU

Edward Kairu Maji na Ufanisi is a membership based Kenyan Water and Sanitation NGO which has a vast experience of over 10 years. It was established in response to the need to continue strategies and experiences of the former Water Aid Kenya. Over the last 10 years, Maji na Ufanisi has maintained a focus on building the capacity of partner institutions e.g. CBOs to analyze and address their challenges and concerns. The three main thematic activities are Urban Water and Environment Sanitation (WES), Rural WES and Research and Advocacy.

ANEW formed in 2003 and registered as an Africa CBO Trust based in Kenya in 2007. It currently has a membership in excess of 200 organisations. Some of these members have their own memberships that register in the hundreds of individuals. The trust has four sub-regional offices in Senegal, Chad, Nairobi and Botswana.

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Alexander Karapetov, Delna Karanjia and Jespal Panesar are staff members of Program Department of International Development & Relief Foundation (IDRF). IDRF is a Canadian non-profit organization whose mission is to empower the disadvantaged people of the world through emergency relief and participatory development programs based on the Islamic principles of human dignity, self-reliance and social justice. IDRF works on the model of empowerment and self-sufficiency, partnering with national organisations that have capacity and credibility to effectively collaborate with local communities.

MANDIP KAUR SANDHER

Mandip Sandher Personal life experiences have a wonderful way of re-connecting the human being with his/her consciousness. In the case of Mandip Kaur Sandher, a successful businesswoman in Canada originally from the Punjab State in India, experiences solidified the notion that success comes as a by-product of helping others. This notion triggered a very important question: how do women and girls around the world cope with the social and health conditions associated with post-puberty lack of access to basic sanitation?

KATE MULLIGAN, MICHELLE VINE, CORINNE SCHUSTER-WALLACE, SUSAN ELLIOTT

Kate Mulligan, Michelle Vine, Corinne Schuster-Wallace and Susan Elliott are affiliated with the water-health nexus programme within the UNU Institute for Water, Environment and Health. UNU-INWEH is the UN think tank on water. With a focus on safe water provisioning in rural, remote and otherwise marginalised communities, the water-health nexus programme is involved in initiatives to enhance capacity at the community level, bridge research and policy at all levels of governance and develop evidence based tools to facilitate these exchanges.

JACK SIM

Jack Sim is one of the world's toiletmen and a successful business man, turned sanitation advocate. In 2001, Jack launched the World Toilet Organization and hosted the 1st World Toilet Summit. His vision is safe, clean, affordable and ecological sanitation for everyone. The WTO has evolved into an umbrella organization with 235 member organizations from 58 countries.

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