



postnote

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ACCESS TO SANITATION IN DEVELOPING COUNTRIES

In 2000, 40% of the world's population lacked access to basic sanitation¹. At the World Summit on Sustainable Development (WSSD) in Johannesburg in the summer of 2002, the international community agreed to a target to halve the proportion of people who lack access to basic sanitation by 2015. This briefing outlines the scale of the challenge and reasons for improving access to sanitation. It also examines the technical, economic, social, and institutional issues that will be faced in delivering the target, and the UK's contribution towards that end.

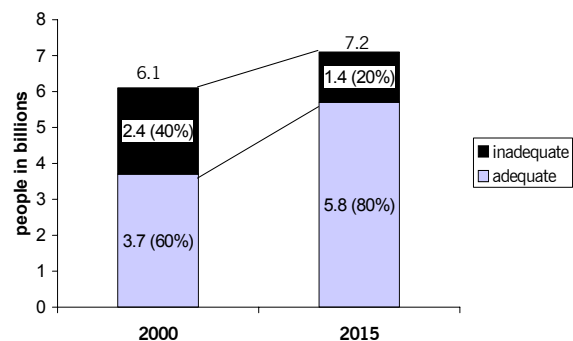
Background

Adequate sanitation is defined as the safe management of human excreta and includes both 'hardware' (sanitation technologies, such as toilets and hygienic latrines) and 'software' (hygiene promotion, such as hand washing with soap)². Inadequate sanitation is not a new concern – indeed, the 1980s was the United Nations' *International Drinking Water Supply and Sanitation Decade*. At that time, the international community set a target of achieving 100% coverage in water supply and sanitation by 1990. It was an ambitious target and progress over the decade could not keep up with population growth. By 2000, the World Health Organisation estimated that 1.1 billion people still lacked access to a safe water supply, but over twice as many people, 2.4 billion, lacked access to basic sanitation¹. Development agencies believe the new sanitation target agreed at the WSSD is more realistic, but still presents a significant challenge (see box).

The new sanitation target joined the existing Millennium Development Goal of halving the proportion of people without access to safe water by 2015³. Together they provide an international commitment for an integrated approach to sanitation, water supply, and hygiene promotion. It is recognised that delivering the new

The sanitation challenge

As the figure below shows, the world's population is expected to increase from 6.1 billion in 2000 to 7.2 billion in 2015. In 2000, 40% of people (2.4 billion) had inadequate sanitation. The sanitation target is to halve this proportion to 20% of people by 2015. Meeting this target means an additional 2.1 billion people will need to be served with adequate sanitation. However, 1.4 billion people will remain without adequate sanitation.



Meeting this target is a substantial challenge, as the following facts illustrate:

- 1 billion people gained access to sanitation hardware between 1990 and 2000; achieving the target will require sanitation to be provided more than twice as quickly as in the 1990s.
- 62% of people in rural areas do not have access to sanitation, compared with 14% in urban areas. In total numbers, more people will lack basic sanitation in urban areas by 2015, due to rapid urbanisation.
- China and India have the bulk of the world population without access to basic sanitation.

Source: WHO and UNICEF, *Global Water Supply and Sanitation Assessment 2000*

sanitation target will require considerable political will together with significant financial, technical, and human resources.

Impact of sanitation on public health

Inadequate sanitation can cause several diseases, which are transmitted from faeces to humans via contaminated hands, soil, water, animals and insects. Sanitation provides a barrier to faecal diseases by isolating human excreta and removing traces of faecal material from hands after contact.

Sanitation related diseases

The following diseases can largely be prevented with basic sanitation and hygiene:

- **diarrhoea** causes an estimated two million deaths per year, mostly among children under the age of five.
- **cholera** - as of September there were 106,547 reported cases of cholera and a total of 3,155 reported deaths in 2002⁴.
- **schistosomiasis (bilharzia)** infects 200 million people, of which 20 million people suffer severe consequences. Improved water and sanitation may reduce it by ~77%.
- **trachoma** causes blindness in 6-9 million people. Access to sanitation may reduce it by ~25%.
- **intestinal worms** infect about a third of the population in developing countries; improved sanitation would control their transmission.
- **hookworms** cause malnutrition. Using concrete slabs to cover pit latrines can prevent them from being transmitted to humans.

Source: WHO and UNICEF, *Global Water Supply and Sanitation Assessment, 2000*

Promoting hygiene

Hygienic behaviours, such as using latrines, hand washing with soap after use and cleaning sanitation facilities are important in improving public health. Schools are an important place for promoting hygiene, as children can be agents of behavioural change within households. The overall goal is to have households making decisions which promote a safe and clean domestic environment.

Sanitation technologies

The hardware component of sanitation comprises the safe containment, treatment, and disposal of human excreta through either on-site sanitation (pit latrines and septic systems) or off-site sanitation (sewerage systems). Both types of sanitation technologies can, if appropriately designed, maintained and operated, safely dispose of human excreta and have minimal environmental impact. However, sanitation technologies by themselves are not enough - hygienic behaviour is also needed to improve public health (see box above).

On-site technologies

On-site sanitation provides an appropriate solution for many rural and poor urban areas. These technologies allow for a decentralised approach to providing sanitation that is affordable and that can be upgraded. There are various designs for on-site sanitation. Some allow sludge to be left alone, while others require it to be removed. Emptying a latrine manually can pose a significant health risk. Municipal trucks are a safe way to remove sludge, but they may be costly and impractical. Alternative technologies have been developed to overcome those problems. Some sanitation systems reuse waste, but this can be a potential health hazard.

Off-site technologies

In many parts of the world, sewerage systems have been used successfully to provide adequate sanitation services, but they may not be appropriate in parts of developing countries. Sewerage systems can be more expensive to set-up and operate than on-site sanitation facilities. They also use large amounts of water, which may be a scarce resource. Once disposed of, sewage can also have downstream health and environmental effects if inadequately treated. There are lower cost sewerage options, which may be an appropriate option in places, but they still require strong institutional frameworks and skills to construct, operate and maintain.

Issues

While sanitation appears to be a basic problem with a seemingly relatively easy solution, recent international efforts have shown it to be a complex issue involving political, financial, technical and institutional issues.

Political commitment

Sanitation, hygiene and safe water supply need to be integrated to maximise their effectiveness to meet public health and environmental goals. However, sanitation has not received the same level of investment as water supply. From 1990 to 2000, sanitation received only 20% of the US\$16 billion invested in water supply and

Benefits of improving access to sanitation

Increasing access to sanitation is a key component of development and poverty reduction, as it has major health benefits as well as associated social, economic and environmental benefits. These include:

- **public health** – diseases related to inadequate sanitation and poor hygiene are among the highest causes of illness and death in developing countries, especially among children under five (see box above). Providing sanitation is also instrumental in meeting international health targets.
- **public services** – the public health consequences of inadequate sanitation puts pressure on health services in developing countries.
- **human dignity** – sanitation facilities provide privacy, safety, dignity, a cleaner environment and greater convenience to users.
- **gender** – without access to household sanitation women and girls face safety and dignity issues. They may only be able to defecate at certain times to ensure privacy and/or avoid harassment and sexual assault. Lack of school sanitation is a barrier to girls enrolling and staying at school, especially during menstruation.
- **poverty elimination and economic growth** – illness and death from poor sanitation results in lost economic activity, which reduces household income and the productivity of the local economy. The contamination of rivers and aquifers from human excreta can also damage agricultural production and tourism, which can impact national economies.
- **water supply** – when human excreta enters a drinking water supply, it compromises safety. Improving sanitation and hygiene practices maximises the benefit of investments in water supply.

sanitation by national governments and external support agencies¹. The difference in investment between water supply and sanitation is partially responsible for the gap between water and sanitation coverage. Political commitment for sanitation is seen by many as important in shaping government policy and investment priorities, and in implementing the programmes required to meet the target.

Financing

Sanitation's public health and environmental benefits make it a public good, but sanitation is also a private good at the household level. Until recently, most countries and donor agencies treated sanitation only as a public good that could not be provided by the market, and which needed to be subsidised to provide greater incentives to expand coverage. Inappropriate targeting of government subsidies has, however, affected government plans for increasing access to sanitation, as subsidies did not reach those who needed them most. In response, a demand approach to sanitation was developed (see box).

Most of the financing for meeting the target is likely to come from users of the facilities, either through their purchasing of materials and providing labour, or through cost recovery schemes. Low interest bank loans are one option to help to ensure that poor families can generate enough money to purchase adequate sanitation facilities. Some NGOs and community groups have resisted full cost recovery for basic services to poor people, as they see this as exacerbating poverty, but others note that many basic services are already paid for by users.

Technology transfer and innovation

There are a number of known sanitation technology options that are appropriate in many different contexts in developing countries. To facilitate the appropriate transfer of technologies, there is a need for information to be disseminated to local decision-makers as well as the technical capacity to adapt them to local circumstances. This requires both networks for information exchange and skilled technicians to design and market locally appropriate sanitation solutions.

One way of increasing local capacity for technical innovation is to assist developing countries' institutions to adapt solutions to suit local conditions. Some locations may require innovative solutions, for example in wetland areas where groundwater contamination is an issue, or, in extremely poor areas, where technologies might need to be altered to be more affordable. Technical innovation can also aid sanitation suppliers by improving their products and incorporating local materials and building practices into the design of new technologies.

Institutional capacity

Sanitation programmes need planners, decision-makers, and sector professionals who are trained in evaluating different approaches to providing, operating and maintaining sanitation. However, many point to a severe shortage of engineers and field workers to provide the

Demand-responsive approaches to sanitation

Past experiences by development agencies have indicated that the main problems in achieving sustainable sanitation projects were an over-reliance on supply-driven approaches, neglect of user requirements and an emphasis on large scale projects². Agencies found that for projects to be sustainable, there was a critical need to focus on the demand for sanitation at the household level. Additionally projects needed community involvement, especially by women. However, the demand-responsive approach may be constrained by poor people not having enough purchasing power to gain access to improved sanitation. Similarly, sanitation suppliers may not be able to meet demand.

Marketing sanitation

Selling sanitation on its health benefits alone has been largely ineffective, although sanitation can be marketed like any other consumer good. Social marketing of sanitation could increase the demand for sanitation by advertising it as a home improvement that provides security, convenience, privacy, lack of smell and flies, and improved social status. However, there has been limited research into the effectiveness of marketing in increasing demand.

technical and social scientific skills to develop sanitation programmes. This shortage could jeopardise efforts to meet the sanitation target.

Historically the sanitation sector has been divided between different government agencies such as health, water, and education. This has led to poor coordination. Some point out that meeting the sanitation target and sustaining its progress require an increase in the capacity and accountability of the public sector to promote, coordinate and regulate sanitation provision.

The private sector, mainly in the form of local enterprises, but also including large corporations, has a role in improving access to sanitation. Local small scale suppliers who deliver sanitation products to consumers include local masons, builders and market owners. Individuals entering the sanitation sector may need help and training to provide effective sanitation services to households. The banking sector could also play an important role in providing low cost loans for sanitation improvements.

Monitoring progress

The current baseline figures for global sanitation coverage were published in the Global Water Supply and Sanitation Assessment 2000¹. Continued monitoring is necessary to establish if the target is met. Systems for reporting sanitation coverage at a sub-national level can also raise public awareness as well as being important for administration and efficient budgeting⁶.

UK contribution

The UK contribution to meeting the sanitation target will probably come from the public and private sectors and NGOs working unilaterally and through partnerships. The UK is well placed to facilitate the exchange of information about a range of issues, including technical considerations, project planning and design, education on health and social issues and institutional frameworks.

Public sector

The Department for International Development (DFID) works towards sustainable development and eliminating world poverty. It is the lead department responsible for co-ordinating the UK's contribution towards meeting the sanitation target and is advocating an integrated approach to sanitation, water supply and hygiene to improve health and combat poverty. In 2001-02, DFID's bilateral expenditure on sanitation, hygiene promotion and clean water was £87.2 million.

DFID is working to meet the target by bringing together the expertise and knowledge of the health, infrastructure and environmental sectors to help to deliver combined water and sanitation projects. On the ground, DFID has a number of bilateral projects to improve access to sanitation, including expanding coverage in households and schools. DFID could also assist developing countries to integrate sanitation, water supply and hygiene into their poverty reduction plans and strategies.

DFID supports three major multilateral initiatives:

- The 'Water, Sanitation, and Hygiene for All' (WASH) campaign, co-ordinated by the Water Supply and Sanitation Collaborative Council (www.wsscc.org).
- The Water and Sanitation Programme, a multi-donor programme administered by the World Bank; and
- UNICEF's School Hygiene and Sanitation Programme.

DFID also funds the WELL Resource Centre, which works to enhance the communication, knowledge transfer and co-operation between DFID, its partners and other organisations on issues relating to water, sanitation and environmental health.

The Department for Environment, Food and Rural Affairs (DEFRA) is the lead department responsible for sustainable development policy across Government. To improve access to sanitation in developing countries DEFRA is facilitating the tri-sector initiative *Partners for Water and Sanitation* (see box). PAWS is a significant part of the UK's contribution towards meeting the international targets for water and sanitation. The partnership has begun developing a number of projects to improve water supply, but none so far to increase access to sanitation. This is because communities have been more concerned with water supply, placing sanitation as a secondary concern. The Partnership is aware that, if this continues, it could lessen the initiative's effectiveness in increasing access to sanitation in developing countries.

Private Sector

Given the scale of investment necessary, there is a role for the private sector in meeting the target. Private sector expertise in technical issues, marketing, and financial management can help in providing sanitation. However, the scale of the project, regulatory framework and the risk climate in the host countries are crucial factors in determining private sector participation in sanitation projects. One initiative includes soap companies promoting hand washing in developing countries.

Partners for Water and Sanitation (PAWS)

PAWS was launched in 2001 and the first phase of engagement with partner countries is expected to be completed by the end of 2003. It was prompted by the Prime Minister's call for increased co-operation between government, industry and civil society to provide sustainable solutions for Africa's water and sanitation crisis. The emphasis of the initiative is on capacity building in corporate, institutional, financial and technical areas of water and sanitation in peri-urban and secondary cities. So far, PAWS has been working with municipalities and water service providers in South Africa, Nigeria and Uganda.

Source: <http://www.partnersforwater.org>

NGOs

UK NGOs are active in increasing access to sanitation by providing technical expertise for projects, raising public awareness and lobbying politicians. WaterAid and TearFund have taken a lead role in both providing sanitation facilities on the ground, as well as lobbying to give sanitation a higher profile through their *Water Matters* campaign (www.watermatters.org.uk).

Overview

The international community has agreed to a target to halve the proportion of people who lack access to basic sanitation by 2015. Meeting the sanitation target will mean providing an additional 2.1 billion people with sanitation by this date. Even if this target were met around 1.4 billion people would still be without access to basic sanitation.

To improve public health and reduce poverty in developing countries, sufficient resources are needed to boost sanitation, hygiene and water supply. Increasing access to sanitation in developing countries requires considerable political will, backed-up by adequate financial, technical and human resources. The UK has a significant role to play in contributing towards the sanitation target. The key is learning from past attempts to expand sanitation coverage and building on these to develop new solutions.

Endnotes

- 1 WHO and UNICEF (2000). *Global Assessment of Water Supply and Sanitation*.
- 2 WELL (1998). *DFID guidance manual on water supply and sanitation programmes*.
- 3 POSTnote 178 *Access to water in developing countries*. May 2002.
- 4 Cholera cases reported to WHO January-September 2002 <http://www.who.int/emc/diseases/cholera>
- 5 Saywell, D. & Cotton, A. (1998.) *Strategic Sanitation Approach*.
- 6 Jolly, R. (2002). *Delivering Clean Water for All*.

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