

# research evidence for policy



Canal water, which may be contaminated with untreated sewage and faecal sludge, is often used for agriculture. This photo was taken in Thailand, but the situation is similar in Cambodia and Vietnam. Photo: Thammarat Koottatep

## A paradigm shift for improved sanitation: Focus on demand

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Case studies featured here were conducted globally

### Policy message

- Public investment in sanitation should focus on raising consumer demand instead of subsidising the production of toilets.
- Beneficiaries and all other stakeholders should be involved in designing adequate solutions to both urban and rural sanitation problems.
- Sanitation offers good opportunities for small and medium businesses in toilet production, construction, and waste management.

- Compared to other types of investment in development, sanitation is very much the poor cousin. Health care, water supplies, education, and other types of infrastructure – they all get a lot more government attention and donor funding than toilets and sewage disposal. This is despite the vital role that good sanitation and hygiene play in maintaining health and economic growth. This issue of *evidence for policy* looks at why this is, and what can be done about it.

- Poor sanitation is a major problem in development: about one-third of the world's population lacks adequate sanitation (see Box 1). Most of these people are poor: indeed, poverty is partly defined as not having access to basic services such as sanitation. Without a toilet, people are forced to defecate in the open. The faeces contaminate surface and groundwater or are spread by animals and rain. As a result of this and poor personal hygiene, an estimated 6,000 people die every day from diseases related to water and sanitation, and thousands more suffer from a range of debilitating illnesses. Lack of sanitation is the world's main cause of infections (WSSCC 2008) and contributes to about 10% of the global disease burden, causing mainly diarrhoeal and parasitic diseases (Mara et al 2010).

Again, it is the poor who are affected most, though their better-off neighbours may also have to live with insanitary conditions, and may succumb to communicable diseases. That reduces their income and forces them to spend a big portion of their earnings on medical treatment. It also harms the economy as a whole because of lower productivity and lost output.

### Water is life. Sanitation is dignity.

The damage caused by poor sanitation is not just economic. It is also a major concern related to human dignity, gender, and education: without a toilet at home, many women are forced to wait until dusk before going outside to defecate – but then they fear being attacked or raped under the cover of darkness. Poor sanitation also harms

## Featured case studies

### Community-led urban environmental sanitation (CLUES)

This method of planning environmental sanitation infrastructure and services in poor urban and peri-urban areas was developed with NCCR North-South support. It covers water supply, sanitation, solid waste management, and storm water drainage. It emphasises the participation of all stakeholders throughout.

The approach consists of seven steps: (1) create demand, (2) launch, (3) assess the situation, (4) prioritise and validate problems, (5) identify service options, (6) develop an action plan, and (7) implement. Cross-cutting tasks include awareness-raising and communication, capacity development, and monitoring and evaluation.

A good understanding of the enabling environment is also necessary. This includes government support, the legal and regulatory framework, institutional arrangements, skills and capacity, financial arrangements, and socio-cultural acceptance (Luethi et al 2011).

### Sanitation as a basis for business

Until the mid-1990s, international agencies supported around 1,000 government latrine-production centres in Bangladesh. But the staff of these centres were poorly motivated and lacked passion or marketing spirit. Even though their prices were subsidised, they sold few latrines. Large-scale stockpiling became a hallmark of the programme. "People are not interested in latrines," was the conclusion.

The situation changed drastically when UNICEF and the government switched to a nationwide social mobilisation campaign. This positioned latrines as desirable products that increased customers' prestige, comfort, and privacy. The campaign budget was much lower than the expenditure for the latrine-production centres.

As a result, stockpiling in the government production centres got worse, but at the same time, latrine coverage doubled within a few years to around 50%. Both effects had a common cause: small rural workshops had become interested in producing and selling latrines as this had become a good business once the market had been stimulated. Thousands of new jobs were created: in 2004, around 6,000 small rural enterprises were producing some 1.2 million latrines per year (Heierli et al 2004, Heierli and Frias 2007).

### Box 1. Sanitation and poverty in figures

- 2.5 billion people lack access to adequate sanitation.
- 1.1 billion people have no sanitation facilities at all and practice open defecation.
- 1.5 million children die each year of diarrhoea caused by poor sanitation.
- 660 million people live on less than US\$ 2 a day, and 380 million on less than US\$ 1 a day.
- In 2006, inadequate sanitation cost India alone economic losses equivalent to US\$ 53.8 billion, or 6.4% of the country's gross domestic product.

Sources: UNICEF/WHO (2008), WSP Economics of Sanitation Initiative: <http://tinyurl.com/bwz9s5u>

children's education, with some 443 million school days lost each year due to diseases related to water and sanitation. A lack of toilets in schools that serve the poor deters girls from continuing their education, particularly after puberty.

The most vulnerable groups – female-headed households, the elderly, and ethnic minorities – tend to be most adversely hit by inadequate sanitation. Their voices are often the last to be heard when such services are established.

### Sanitation: a neglected need

It is in everyone's interest that households have, and use, toilets. So improving sanitation should be a high-priority matter of public health. Nevertheless, sanitation is grossly neglected. Despite worldwide initiatives such as the UN International Year of Sanitation in 2008, sanitation is still not adequately reflected in policy and resource allocation.

- Compared with other sectors (particularly health and education), water supply and especially sanitation are treated as low priorities for investment. While development aid

has been increasing, the share for sanitation and drinking water fell from 8% in 1997 to 5% in 2008. During this same period, official development assistance for health rose from 7% to 12%, while the share for education remained steady at around 7% (WHO/UN Water 2010).

- There is a tendency to invest more in water supply and even solid-waste collection than in sanitation. Donors and governments do not recognise that better hygiene and sanitation are just as important as clean water and rubbish-free streets.
- Many countries do not have clear policies for rural and urban sanitation. They lack appropriate institutions at all levels, and existing institutional arrangements do not work well.

### The wrong approach

Many attempts to promote improved sanitation have been ineffective. Many programmes subsidising the construction of latrines have been big failures. Simply providing a family with a heavily subsidised latrine does not guarantee they will use it properly, and it will not necessarily change their hygiene behaviour.



Left photo: A flush toilet in a peri-urban city, Vietnam. It is an improvement on the hanging toilets (see right) often found in rural and peri-urban areas, but is not economical due to its water use.

Right photo: Hanging toilets commonly found in rural and peri-urban areas in Cambodia and Vietnam. Photos: Thammarat Koottatep



Such initiatives suffer from several major flaws. Managed in a top-down way, they typically lack the involvement of beneficiaries and other stakeholders in planning, design, and implementation. They often promote a single “hardware” solution (such as one particular type of toilet) that is not adapted to the intended beneficiaries’ needs and means. They are based on an inadequate understanding of people’s motivations to improve sanitation: the reason many people do not invest in latrines is often not a lack of money, but because they do not see sanitation as a high priority in comparison with other amenities such as a mobile phone or even a TV. The latest figures from India’s census revealed that almost 50% of the population still defecate in the open, with no toilet in their homes, yet 53% of the people have a mobile phone and 47% have a TV.

### A better way

Recent initiatives have identified a more effective approach:

- **Involve beneficiaries and stakeholders in choosing the sanitation solutions.** “Community-led urban environmental sanitation” (CLUES) is a 7-step approach to planning appropriate sanitation in urban areas (see “Featured case studies”).
- **Promote status and convenience, not health.** The design of messages is important. People are more likely to be motivated by appeals to the status and convenience of a toilet/latrine than by warnings about the dangers of diseases.
- **Invest in raising awareness rather than hardware.** Getting communities to appraise open defecation in their own area enables them to come up with their own solutions. It shifts the focus from providing subsidised toilets to community action creating “open defecation-free” villages. Social pressure can be a very powerful way of ensuring that all households find a hygienic way to dispose of waste.
- **Harness small and medium businesses.** Government workshops that make toilets often end up with big stockpiles of unsold inventory. But where the government fails, small and medium businesses can succeed. Motivated by making a profit, they promote their products and make only what they

can sell (see “Featured case studies”). The barriers to market entry are low, and there are business opportunities in production, construction, management, and sludge collection/disposal. However, sludge emptying/collection activities are often related to occupational health hazards and require careful attention from health authorities.

- **Different situations, different solutions.** When it comes to toilets, one size does not fit all. In rural areas, many households can build their own toilets. In crowded urban areas, this is not possible: land is too scarce, so the community and local authority must be involved. As people become better off, their demands change and they are able to pay for an improved facility.
- **Look at the whole system.** Merely choosing the right type of toilet is not enough. Rather, it is also necessary to consider how the toilets can be financed (microfinance is a promising option), how they are used and maintained, and how the sludge is removed and safely managed. For public toilets, levying user fees to cover costs for caretakers and soap provision is essential.

### Box 2. Improving sanitation, hygiene, and drinking water supplies would...

- ...cut diarrhoeal diseases by nearly 90%.
- ...mean 2.2 million fewer children would die each year.
- ...save huge amounts in health care costs and lost workdays.

### Definitions

**Sanitation:** provision of facilities and services for the collection, transport, treatment, and disposal or reuse of human urine and faeces including the maintenance of hygienic conditions.

**Environmental sanitation:** the management of human excreta and domestic wastewater as well as of municipal solid waste and storm water drainage.

**Sanitation hardware:** toilets, latrines, pipes, sewers, and ancillaries such as pit-emptying equipment.



A faecal sludge tanker in Thailand. Photo: Thammarat Koottatep



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## Policy implications of NCCR North-South research

- Public investment in sanitation is justified because sanitation is a major public health concern: everyone (rich and poor) benefits if waste is disposed of safely.
- Subsidy-driven, top-down approaches must be replaced by demand-driven approaches. Public funding should be used mainly for promotional or marketing activities to create demand. Only a small percentage should be spent on hardware subsidies, strictly targeted to the poorest of the poor, who really cannot afford them.
- There is no single solution to all sanitation problems. Beneficiaries and other stakeholders must be involved at all stages to identify the solutions that best suit their needs and means as well as local environmental conditions.
- Environmental sanitation services offer good business and income-generation opportunities for small enterprises and the local private sector.

### Further reading

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### This issue

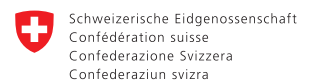
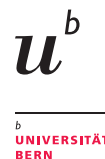
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