

Bangladesh

References

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⁴ World Bank; World Development Report Washington 2004

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⁶ World Bank; 2002, Ibid

⁷ Water Supply and Sanitation Sector, Project Database, Unit for Policy Implementation (UPI), Local Government Division, Government of Bangladesh

⁸ WHO and NEF data on National (2005) Debt Service Repayment

⁹ Final Summary Report, “Current Situation – Institutional Review”, Water Supply and Sanitation Sector, Bangladesh, carried out by Unit for Policy Implementation (UPI), Local Government Division, September 2004

¹⁰ Progotir pathey

¹¹ Draft WaterAid Bangladesh Country Strategy

¹² *Bangladesh Public Expenditure Review* (World Bank and Asian Development Bank May 2003, Ch.1, para.7)

¹³ Current Situation – Institutional Review (Draft Summary Report), water supply and sanitation sector, Bangladesh, Conducted by UPI, LGD

¹⁴ Current Situation – Institutional Review, carried out by UPI during 2002

¹⁵ Streams of Knowledge (STREAMS) is a global coalition of resource centers actively involved in addressing the global crisis in water sanitation and hygiene sector through promoting action learning, achieving equitable access to information and focusing knowledge where it can build capacity.

Where the Government’s debt service payments are 16 times greater than the extra money needed to meet the water and sanitation Millennium Development Goals



WaterAid – water for life
The international NGO dedicated exclusively to the provision of safe domestic water, sanitation and hygiene education to the world’s poorest people

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WaterAid – calls to action

- Government must use its national Poverty Reduction Strategy Paper to make the case that donor financing should prioritise water and, especially, sanitation
- Government and donors must implement a sector-wide approach to ensure resources are targeted effectively, in particular to deal with arsenic-contaminated water supplies and create demand for sanitation to meet the Millennium Development Goals (MDGs)
- Government and donors must provide Pourashavas (municipalities) and Union Parishads (local government) with enough resources each to provide 20 households with safe water and 18 with basic sanitation every month.

Introduction

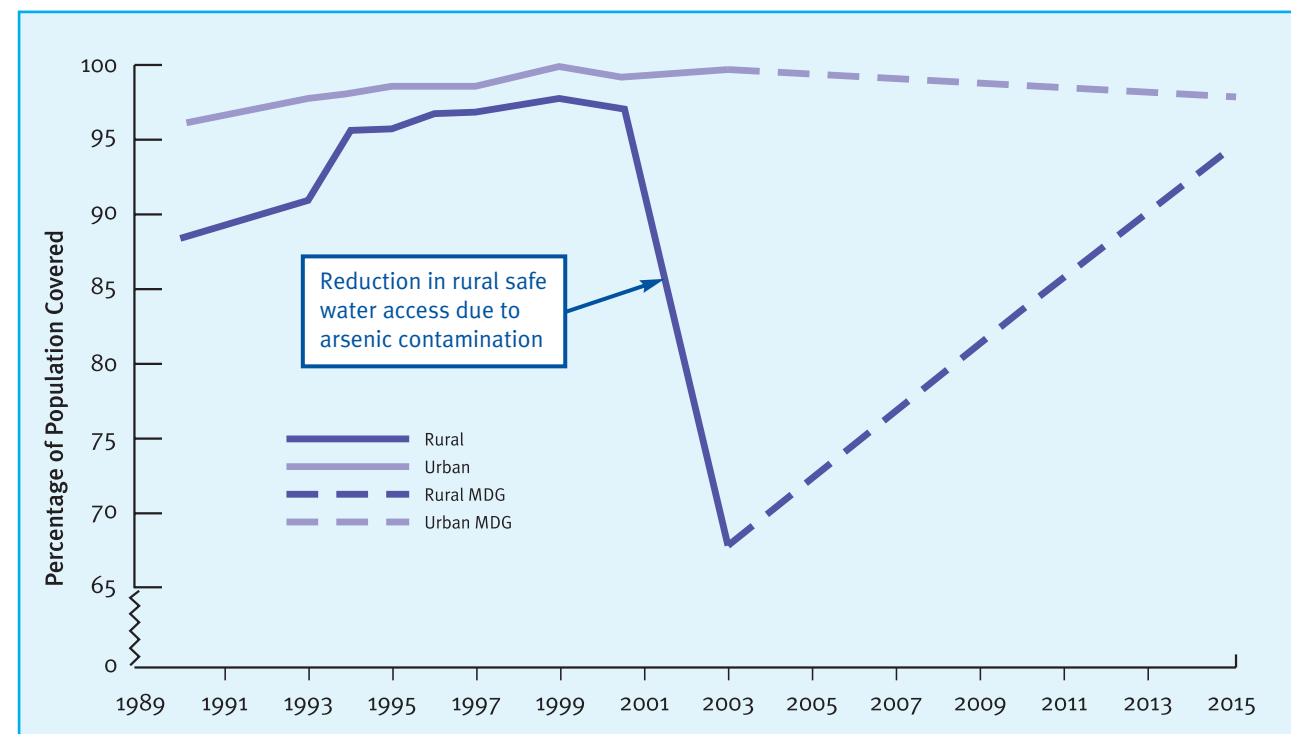
Bangladesh's 147,570 square kilometers are crisscrossed by many rivers. Its 128 million population is predominantly rural (79%) but a 3.2% growth rate in the urban population suggests that by 2030 some 50% of the population will live in urban areas. Half of those people will be living in slums.

Life expectancy at birth is currently 61.1 years¹. Water-borne and diarrhoea-related diseases are still the main cause of

death – responsible for 24% of all deaths². Gastroenteritis and diarrhoeal diseases kill 110,000 children below the age of five annually³.

Per capita GNP in 2002 was US\$360⁴ with a total GNP of US\$48.5 billion⁵. Annual growth has risen from 4.4% in the 1980s to 5.5% today. The importance of agriculture is decreasing as the manufacturing and service sectors grow.⁶

Figure 1: Progress towards urban and rural water MDG supply targets in Bangladesh



Fact box

Population today – total (rural/urban)	128m (97m/31m)
Population projection for 2015 – total (rural/urban)	154m (110m/44m)
Present access to safe water (rural/urban)	69% / 99%
Present access to basic sanitation (rural/urban)	29% / 60%
Annual deaths of under fives due to diarrhoea	110,000
Productive days which would be gained with 100% access to water and sanitation	8.2m
School days lost to diarrhoea by five to 14 year olds	125.5m
School days which would be gained with 100% access to water and sanitation	8.7m
Monthly number of households requiring access to reach water MDG	94,000
– increase required (on performance since 1990)	300%
Monthly number of households requiring access to reach sanitation MDG	85,000
– increase required (on performance since 1990)	100%
Monthly local government water/sanitation MDG targets	20/18 households
Current annual water spend ⁷	\$83m
Water/sanitation sector annual finance need for MDGs	\$125m
Water sector annual MDG finance gap	\$42m
Annual national debt service payment ⁸	\$948m

Key events

- 1935** Department of Public Health Engineering (DPHE) created to promote public health through ensuring provision of drinking water and, since 1954, sanitation
- 1963** Water Supply and Sewerage Authorities (WASAs) set up in Dhaka and Chittagong
- 1971** Independence. New government undertakes massive shallow hand-drilled tubewell (SHTW) construction programme to provide safe drinking water
- 1993** Arsenic contamination of ground water first detected. By 2004 nearly 30% of SHTWs assessed were found to be contaminated with arsenic. National arsenic mitigation plan adopted
- 2002** Interim-Poverty Reduction Strategy Paper (I-PRSP) published, omitting water and sanitation
- 2003** South Asian Conference on Sanitation (SACOSAN). Month-long sanitation campaign held in October and target of 100% sanitation set for 2010
- 2004** 20% of annual Upazila Development Block Allocation ring-fenced for provision of sanitation. Water and sanitation considered for inclusion in full PRSP

Water sector characteristics

Bangladesh has made good progress in improving access to safe water (Figure 1). In rural areas 85% of people are within 150 meters of a tubewell and 96% of people drink water from tubewells. But surface water supplies are generally polluted with bacteriological contaminants, and groundwater, until recently the source of safe drinking water, is now known to be contaminated with arsenic in many areas. National rural coverage of safe drinking water is now between 50% and 70%.⁹

Coverage in urban areas is 99.5%¹⁰, already meeting the MDGs. There is, however, a major challenge in sustaining this rate of coverage in the face of rapid urban population growth (3.2%). As well as major cities like Dhaka and Chittagong, 101 of the 257 municipal towns have piped water systems¹¹. People in city slums and fringes, and in medium and small towns, rely on hand-drilled tubewells or illegal connections to piped water supplies. There is no legal provision for water supply and sanitation in urban slums.

Shallow-suction handpumps are used in areas where the water table is shallow. Deep tubewells mostly serve coastal areas. Deep Tara or Taradev handpumps are the options in areas where the water table periodically falls below the suction limit of shallow pumps. The suction pump is cheap and user friendly, while the Tara handpumps cost relatively more. The deep tubewells are the most expensive options.

A recent nationwide sanitation survey by the Government of Bangladesh found hygienic sanitation coverage rates of 29% in rural areas and 60% in urban areas (Figure 2). For rural sanitation, the technologies are mainly water-sealed pit latrines. Local village sanitation centres (VSC) produce the sanitation goods and sell them directly to users or through the masons who construct the latrines. However, there are 2000 Unions where there are no VSCs at all. In rural sanitation, the Community Led Total Sanitation approach has recently been successful in using public financing to create demand for sanitation while households themselves pay for the infrastructure.

Community Led Total Sanitation in rural Bangladesh

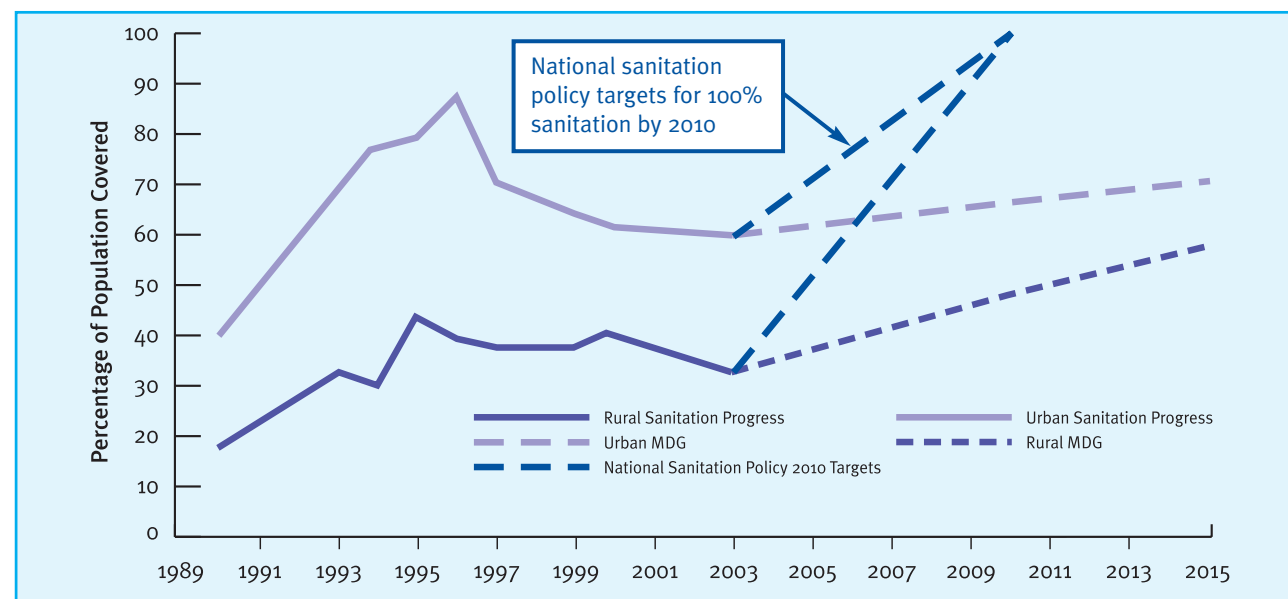
WaterAid Bangladesh and its rural partners Village Education Resource Centre (VERC) have jointly developed an integrated, participatory and empowering approach in collaboration with people living in rural areas. The approach is called 100% (total) sanitation, which is nationally and internationally termed as the Community Led Total Sanitation (CLTS) approach. There are three basic elements:

- Stop open defecation
- Safe disposal of faeces
- Handwashing

The principal method is the creation of peer pressure among households to adopt sanitation so that all households in a village adopt sanitation practices. This is done in part by encouraging children to sing songs about the need to stop open defecation and to plant flags highlighting any such excrement (“goo”) which is still disposed of unsafely. VERC has so far covered 415 rural communities and five unions, covering 31,214 households. The projects of other national and international NGOs are now beginning to replicate this approach in Bangladesh. The necessary sanitation infrastructure is provided by the community whose own skills, abilities and knowledge are recognised. The absence of any subsidies for latrine construction means that external finance needs are only for the facilitation roles of local government and their partners.

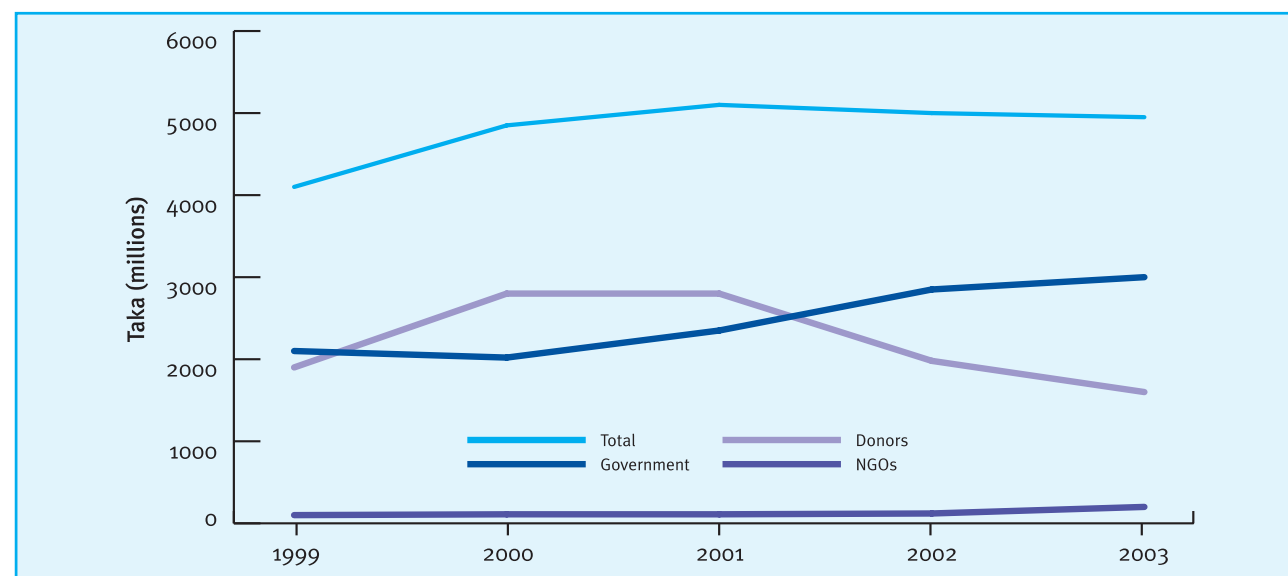
Except in Dhaka, where there is a piped sewerage system covering the central parts of the city operated by Dhaka Water and Sewerage Authority (DWASA), urban sanitation is the responsibility of City Corporations and the 288 Pourashavas.

Figure 2: Progress towards urban and rural sanitation MDG targets in Bangladesh



Finance

Figure 3: Bangladesh water sector financing 1999-2003



WaterAid calculates that \$125m needs to be spent each year to reach the water and sanitation MDGs. This equates to Tk.7.5bn. The water budget in recent years has been around Tk.5bn.

Donors

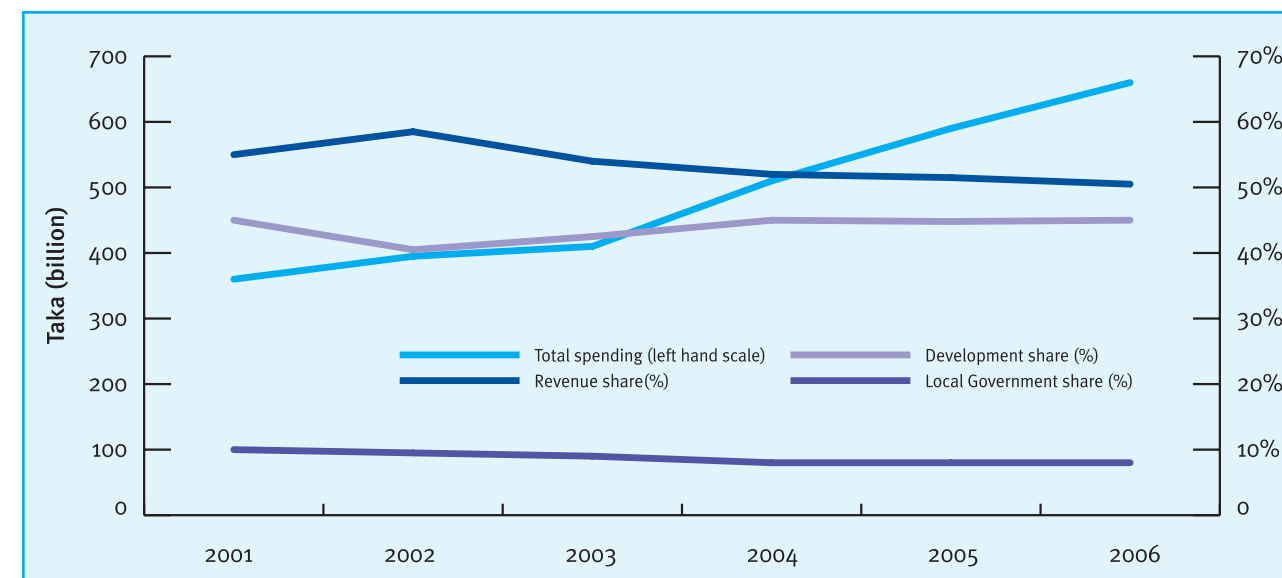
Donor financing has been declining – particularly in the urban sector. While the Government has spent more to make up the shortfall the net result has been a flat budget since the MDGs were agreed in 2000 (Figure 3). The Government is increasingly borrowing money from domestic sources to finance its spending – a fact which donors, perhaps perversely, have raised concerns²⁷ about. The I-PRSP therefore stated that spending in non-core areas like administration would be restrained. However, this revenue spending still exceeds capital development expenditure (Figure 4).

Staffing

Despite the large budget share for revenue spending, there is still a lack of staff. For example, most of the DPHE staff are engineers carrying out implementation work. There are almost no staff with training in socio-economic disciplines, which means that the communication and awareness-raising, so critical to sanitation and hygiene in particular, are the weakest part of DPHE activities.

A trend towards 100% funding of urban projects by donors has led to a lack of ownership by the Government, which in turn has led to delays in staff being allocated to work on these projects. Disenchanted with this situation, the Dutch stopped funding urban water in 2002, the ADB pulled out in 2004 and DANIDA is now stopping its support. Donors' implicit strategy now is to fund NGOs to facilitate citizens in demanding that their political representatives deliver their rights to water services.

Figure 4: Bangladesh public spending – I-PRSP projections



Share of total public spending

The allocations (Figure 5) for water supply and sanitation in the first three of the five-year plans from 1975 to 2002 showed a sharp decline before slightly increasing in the fourth plan (1990-95). However as this was grossly inadequate to meet the new challenges of arsenic mitigation and sanitation, the allocation was increased substantially in the fifth plan.

The Government of Bangladesh issued the first version of the interim Poverty Reduction Strategy Paper (I-PRSP) in April 2002 and the second version in December 2002 – but water and sanitation issues received little attention in either. WaterAid then facilitated a civil society sector submission in March 2003 on behalf of the Local Consultative Sub-group on water and sanitation. The draft full PRSP now identifies water and sanitation as one of seven priority sectors.

As the national budget allocation and donor support will be in accordance with the PRSP in the near future, the inclusion of water and sanitation supplies as a separate chapter in the full PRSP should help ensure adequate funds for accessible water and sanitation services for all in Bangladesh.

The Government must use its PRSP to make the case for donors to agree that water and especially sanitation should have priority for financing.

“PRSPs present a dilemma for donors. If they get involved and press for certain items to be concluded, then the PRSP becomes a donor document.” Donor representative

Sector coordination

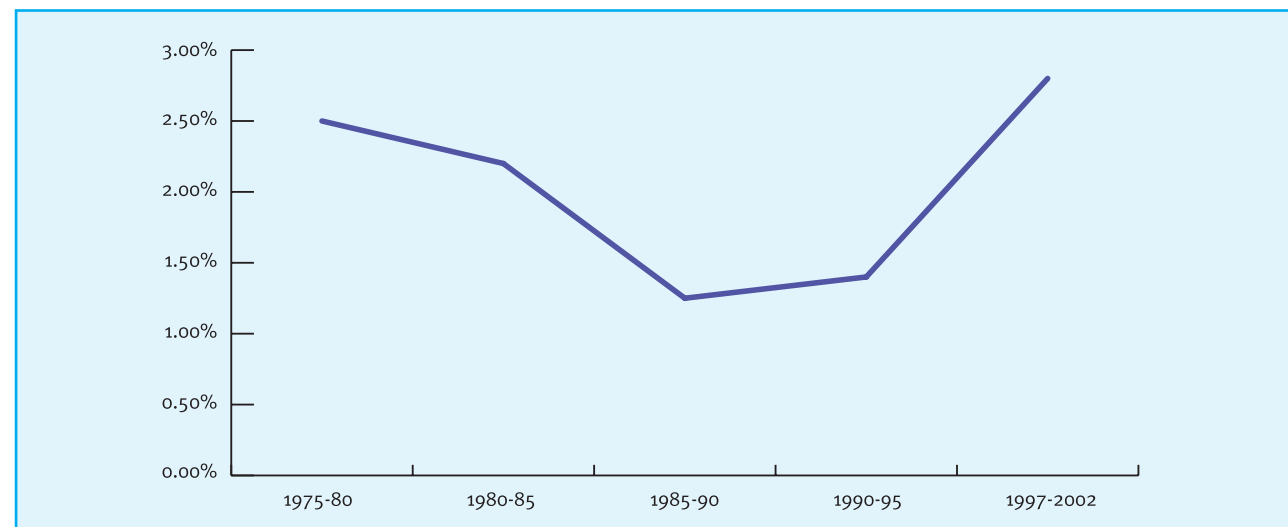
The history of coordination is not good. It includes one donor funding two different UN agencies simultaneously to implement sanitation projects in the same urban area, one of which insisted on a financial contribution from the community while the other provided free latrines.

A Sector Development Framework (SDF) however has recently been approved by the Government. Major obstacles identified in the SDF include:

- Lack of sector coordination with negative impacts including under-use of training facilities
- Centralised planning disempowering local government institutions
- Lack of capacity in urban water authorities and administrations
- Socio-cultural customs undermining gender equality in provision of, and access to, water and sanitation services
- Failure to target new resources on unserved areas or to ensure that subsidies reach the poorest people
- Lack of attention to social mobilisation as the route to sustainable hygiene behaviour changes
- Failure to put in place sustainable operation and maintenance cost recovery mechanisms
- No strategy for encouraging private sector provision of urban piped water
- Little involvement of NGOs in local planning
- Minimal range of technology options, including for the removal of arsenic
- Lack of attention to environmental considerations, especially in relation to urban waste disposal and drainage

A Sector Development Programme is now being set up to address these issues. Separately, donors have also formed a Local Consultative Group which has now expanded to include government and NGOs. Multiple coordination initiatives should be avoided. **Government and donors must implement a sector-wide approach to ensure resources are targeted effectively, in particular to deal with arsenic contaminated water supplies and to create demand for sanitation to meet the MDGs.**

Figure 5: Water and sanitation shares of funding allocations under five-year plans



Decentralisation

City Corporations and Pourashavas (municipalities) are responsible for providing water supply and sanitation (WSS) services within their jurisdictions. Pourashavas rely on central departments for design, construction and sometimes the management of water systems. There are 288 Pourashavas in Bangladesh.

Union Parishads (local governments) are responsible for the provision and maintenance of wells, water pumps, tanks, ponds and other water works. DPHE is the dominant government agency for water and sanitation in rural areas and should therefore facilitate Union Parishads (UPs) in implementing WSS projects. There are 4470 UPs.

It is a legal requirement that UPs have a Water and Sanitation Committee (WATSAN Committee) responsible for the allocation of the new tubewells which DPHE installs. User communities participate in site selection, make cash contributions for water points and are responsible for operation and maintenance. UPs, through the rather weak Union WATSAN Committees, are also beginning to play an important role in hygiene education and community mobilisation.

City Corporations and Pourashavas receive a block grant of around Tk.12-13m each financial year under the Annual Development Programme, of which 15% will now be awarded subject to their meeting performance criteria. Union Parishads in part receive funding according to their area, population size and the relative backwardness of development. Typical yearly total revenue of a UP is nearly Tk.1m, of which 20% is ring-fenced for sanitation from the Annual Development Block Allocation. Since the average UP population is 20-25,000 the overall per capita allocation is worth just Tk.40-50 or \$0.75. The 20% for sanitation is therefore worth just \$0.15 per person.

Within each UP there are generally three Gram Sarkars which are each responsible for between one and three villages. The government recently gave Tk.5000 to each Gram Sarkar for their local development work, of which WSS is a major part.

Disaggregation of WaterAid's estimates of the national numbers of households which must be served each month to reach the water and sanitation MDGs reveals that **Government and donors must provide Pourashavas and Union Parishads with enough resources each to provide 20**

households with safe water and 18 with basic sanitation every month. At present though the medium term expenditure framework accompanying the I-PRSP envisages that the share of public spending to be allocated to local government will fall from 10.2% in 2001 to 9.2% in 2006 (Figure 4).

“The MDG targets can only possibly be delivered by local government and the private sector. Central government is damaging prospects by holding out the prospect of free water and sanitation facilities. The legal framework for decentralisation exists: making it real is a question of political will.”

Donor representative.

Equity

There are no specific rules regarding the share of money going to different regions. Around 50% of the available finance in the last five years has gone to urban areas, even though just 21% of the population live there. However, given the expensive technologies, complex nature of urban areas and population growth, even this disproportionate share is insufficient to meet the urban MDGs.

On average, 100 people use each water point. In 1971, the figure was 448. Although these averages confirm progress, there remain disparities by regions and also by income groups. In shallow water table areas, an average of 50 people use each tubewell while in saline coastal areas the figure is as high as 242.

“The UNICEF guideline is for a source to be within 150m but the preferred measure in Bangladesh is the number of people per source. The target is to reduce this to 50. That would require another 1.4 million water points. If these are to be constructed by 2010 it would require 300,000 to be built every year... the previous rate of construction was just 30,000 per year.”

Official, Department of Public Health Engineering

Sustainability

Sustainability of government water points is the responsibility of DPHE technicians, four of whom are based in each Upazila. They inspect public tubewells and make fortnightly reports. Upazila reports are consolidated at district level and sent to Dhaka every six months. Functionality rates in 2004 were reported to be 90-95%.

In WaterAid's experience the gender make-up of sector institutions is a good indicator of sustainability. This is because water is usually a female responsibility so women and girls have clearer vested interests in the continued functioning of water supply systems. They are therefore more likely to take care of the infrastructure and of any funds collected to maintain it. Bangladesh however is a male-dominated society. The Local Government Division of the Ministry of Local Government, Rural Development and Cooperatives, which provides overall guidance to the water sector, has 198 staff and a male/female ratio of approximately 20:1. DPHE employs 7254 staff headed by a chief engineer but few women are employed at any level. Of all the degree and diploma professional engineers, for example, only six are women¹³.

Growth of private sector

Private funding of water and sanitation has mainly been for private tubewells and household latrines. Estimates are that the total private investment in WSS is about Tk.1.8m per year, which is approximately 50% of the total of public sector investments and five to six times higher than NGO investments¹⁴.

The geographical pattern of investments varies. The Government is more prominent in the south, where deep tubewells costing Tk.45,000 are required. The private sector has proved more able to operate in the upper, northern belt where shallow tubewells costing just Tk.2000 are sufficient.

Both public and NGO projects also outsource implementation contracts. For example, the biggest national sanitation project is outsourcing 50% of its activities.

Transparency and civil society

Data on the water and sanitation sector are produced annually by the DPHE, the Bangladesh Bureau of Statistics (BBS), and the National Water Resource Database held by the Ministry of Water. Information on health indicators is held by the International Centre for Diarrhoeal Research in Bangladesh (ICDDR'B). Data from DPHE are generally not accessible. Data of BBS related to water supply and sanitation are available, as are the data books published by ICDDR'B. However, despite the fact that most Bangladeshis do not understand English, these data are generally published in English. There is however no system of annual water sector reviews and published reports.

Each year, the Government of Bangladesh submits its budget to the national parliament for debate and finalisation. The budget is also published in national newspapers, but the system of budget accounting is cash-based and weak.

Public funds are usually tracked through individual agencies and their supervising line ministries, as well as

the Ministry of Finance. The NGO Affairs Bureau, under the Office of the Prime Minister, is responsible for tracking NGOs' funds for the sector. There is no formal procedure for tracking private funds.

Audits of government spending are compromised because the separation of audit and accounts has yet to be implemented in the Controller and Accountant General's Office. Audit reports are generally not available to the public.

Deficiencies in public sector procurement practices are the single most serious issue. There is no sound legal framework governing how the public sector buys the materials and equipment to carry out projects – diverse rules and procedures apply to different agencies. Procurement is delayed by inadequate capacity and lack of professionals to manage it. Contract administration is ineffective. Protracted bureaucratic procedures allow rent-seeking at many water points. And there are no mechanisms for ensuring transparency and accountability in public procurement. Procurement reform is a priority area for improvement in public expenditure management and aid effectiveness.

The Water Supply and Sanitation Collaborative Council – Bangladesh (WSSCC-B) is a Civil Society Network for addressing the concerns in water supply, sanitation and hygiene in Bangladesh. Jointly with STREAMS¹⁵ the WSSCC is also involved in a grass-roots initiative called the WASH-STREAMS partnership which promotes multi-stakeholder and people-centred approaches to improve water sanitation and hygiene.

Conclusion

Bangladesh has previously demonstrated its ability to make great strides in water supply. Such progress is still needed given widespread arsenic contamination of drinking water on the one hand and, on the other, very limited access to basic sanitation especially in rural areas. Both local contractors and households themselves have proved that with the right incentives they will play their part in constructing water supplies and sanitation systems. But the overall policy and financing environments have to be got right first. The priority actions identified in this assessment therefore are firstly for the national poverty reduction plan and budget to focus on water and sanitation, and second for the resources consequently available to be used with maximum efficiency by being accurately targeted at local administrations to match their responsibilities for the water and sanitation targets.

Further information

This document is one in a series from WaterAid Country Programmes assessing national water sector issues in support of both national and international advocacy work in 2005. This document was written by A.B.M. Ziaul Kabir, Programme Officer – Advocacy, WaterAid Bangladesh and discussed with the Local Consultative Sub-group on water and sanitation in Bangladesh and Partner Organisations of WaterAid Bangladesh. The full set of documents is available at www.wateraid.org/boilingpoint. Further information on this document can be obtained from Ziaul Kabir at ziaul@wateraidbd.org and on the international advocacy work from Belinda Calaguas at belindacalaguas@wateraid.org