



# DSK: a model for securing access to water for the urban poor

## FIELDWORK REPORT

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WaterAid / Liba Taylor

### Summary

This case study documents the process by which Dushtha Shasthya Kendra (DSK), a non-governmental organization (NGO), helped residents of some of Dhaka's squatter settlements to gain access to public water and sanitation services<sup>1</sup>. The programme started in May 1996. By June 2002 DSK had constructed 97 water points in Dhaka and a further five in Chittagong. In addition, other NGOs and the Dhaka City Corporation who had seen the programme's success and wanted to replicate the approach have constructed a further 26 and 46 water points respectively throughout Dhaka.

The programme's success is largely due to a combination of two features:

First, DSK used the innovative strategy of acting as an intermediary between poor urban communities and the water utility agency to facilitate water and sanitation provision at regulated prices. Persuading the Dhaka Water Supply and Sewerage Authority (DWASA) to install water points in squatter neighbourhoods was an important breakthrough. Previously, DWASA policy was to make connections only to households who could demonstrate legal tenure

of their plot. As it is very rare for inhabitants of Dhaka's poorest neighbourhoods to have legal tenure, this effectively bars them from official water provision. In addition, DWASA had no way of recovering its costs in this type of neighbourhood.

Second, DSK paid great attention to motivating poor communities, and building their capacity, so that they could manage and maintain the new facilities themselves. This sense of community ownership is crucial to the programme's success. Helping to develop it has been a considerable challenge, because of previously low levels of social cohesion in the target settlements.

The mediation model has proved very effective for the medium term. However, DSK recognises that what is ultimately needed is a policy change on DWASA's part. If the utility agency were to recognise rights to water irrespective of land tenure, this would remove an important barrier that currently prevents the residents of slum and squatter settlements from gaining access to water services. On the positive side, in 2001 DWASA reduced the security deposit that NGOs have to pay for a water connection in these neighbourhoods.

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The international NGO dedicated exclusively to the sustainable provision of safe domestic water, sanitation and hygiene education to the world's poorest people.

<sup>1</sup>The case-study draws on a report by Nilufar Matin: "Social Intermediation: Towards Gaining Access to Water for Squatter Communities"

## Introduction

This case study documents the process by which Dushtha Shasthya Kendra (DSK), a non-governmental organisation based in Dhaka, developed and implemented a water supply programme in some of Dhaka's poor squatter settlements. DSK started working in these communities in the late 1980s. Their water and sanitation initiative is part of an integrated programme including primary health care, savings, credit and income generation.

The aim of the project was to develop a replicable model for water supply to the urban poor, based on devolution of management to the communities themselves. The specific objectives were to:

- ◆ Build bridges between the water utility agency and potential user communities, through advocacy and intermediation
- ◆ Encourage changes in the local institutional environment to facilitate the supply of water to the urban poor
- ◆ Help build capacity in the communities to operate, maintain and manage water supply facilities
- ◆ Provide technical assistance to communities and the water utility agency to establish and maintain water connections and ancillary facilities

<sup>2</sup> According to the GOB's "Census of slum areas and floating population" (Bangladesh Bureau of Statistics 1997), 60% of Dhaka's slum dwellers had lived in their settlements for 5 years or more, and 20% for 15 years or more.

<sup>3</sup> Islam, N., N. Huda, Narayan, Francis B. and Rana, Pradumna B. 1997 Addressing the Urban Poverty Agenda in Bangladesh.

The project has brought about significant changes in power relationships between slum dwellers, landlords, the water utility and city authorities. DSK's experience shows that social intermediation can be a highly effective strategy to help urban slum-dwellers gain access to water.

## Background

Dhaka, like other cities in Bangladesh, is undergoing an urban crisis. A 1996 survey found that approximately 20% of the population of the

Dhaka Metropolitan Area, (1.1 million people), were living in slum and squatter settlements. These neighbourhoods, most of which have been in existence for several years<sup>2</sup>, are characterised by high levels of deprivation. Basic services, including water and sanitation, are absent or grossly inadequate. Ninety-seven per cent of poor households in Dhaka do not own the plot on which they live<sup>3</sup>. This is important in relation to basic service provision, because access to water and sewerage, as well as gas and electricity, is contingent on legal tenure of a plot. In consequence, the urban poor are excluded from public services. An informal water market has arisen, where poor people have to pay higher prices than the better off, who can access public water supplies.

## Stakeholders

### The target communities

Most of the settlements where DSK works have existed for between 11 and 30 years. Dwellings are made of impermanent materials such as bamboo, wooden boards or sheets of plastic on rough frames. Roads, open latrines and drainage are also makeshift. Some of the settlements are in low-lying locations outside the flood barriers, and here the houses have to be built on bamboo stilts.

The inhabitants of these neighbourhoods work as day labourers, garment factory workers, street vendors, maids, transport workers and in a variety of menial jobs in the public and private sectors. The average monthly income is between 2000 and 3000 Takas (US\$35-54).

Access to resources is a recurring source of tension and conflict in these slums. It is common for an area to be dominated by a *mastaan*, or informal local leader, who controls access to employment, shelter and essential services such as water. *Mastaans* rely on intimidation and violence to back up their power.

### DWASA

Dhaka Water Supply and Sewerage Authority is the statutory body responsible for water supply, water-borne sewerage and sub-surface drainage in Dhaka city. During the course of the programme, DWASA officials have shown commitment to meeting the needs of Dhaka's poor residents. However, as has already been seen, their policy on connection means that thousands of the urban poor are barred from accessing their services. DWASA itself also loses, both because it is deprived of the revenue from these potential consumers, and because it suffers heavy system loss<sup>4</sup> through the widespread use of illegal water points.

### Dhaka City Council (DCC)

Dhaka City Council (DCC) has overall authority over development in the city. With DSK's mediation, DCC has allowed roads to be dug up where necessary, and for water points to be sited



Kallyanpur Pura Bastee Slum in Dhaka— a typical overcrowded, ramshackle development

WaterAid / Abir Abdullatif

on land that DCC itself owns. However, this concession has not involved any change of official DCC policy on the rights of squatters and slum-dwellers to housing and related services.

### **WaterAid**

WaterAid is an independent British charity that works in developing countries to bring about lasting improvements to water, sanitation and hygiene, using local skills and appropriate technologies. By June 2002 WaterAid had funded the construction of 86 waterpoints by four local NGOs in Dhaka.

In 2001 WaterAid formed a donor consortium consisting of itself, Plan and UNICEF to scale up the model in a programme which will support the construction of a further 300 waterpoints in Dhaka and Chittagong. WaterAid's participation in this is mainly funded by DfID. WaterAid is also undertaking advocacy work to change government policy on water supply in informal settlements.

### **The UNDP-World Bank Water and Sanitation Programme**

This programme aims to assist low-income households in both rural and marginalised urban areas to gain access to water and sanitation services, by promoting innovative solutions tailored to local needs and conditions. The programme prioritises capacity-building and the analysis of policy and institutional environments. It works with partners from government, external support agencies, NGOs and the private sector. Together with The Swiss Agency for Development and Co-operation the programme provided the funds for DSK to install 20 water points in its first phase in 1996-8.

### **Swiss Agency for Development and Co-operation**

The Swiss Agency for Development and Co-operation (SDC) provides technical and financial assistance, as well as humanitarian aid, to developing countries. SDC has been working with partner organisations in Bangladesh since 1972.

### **UNICEF**

UNICEF has worked in the field of urban water and sanitation since the 1980s Slum Improvement Project (SIP). UNICEF is part of the donor consortium supporting the second phase of DSK's programme and to date has funded 11 water points.

### **PLAN International**

PLAN International is an international humanitarian, child-focused development organisation. It has worked in Bangladesh since 1993 and is now part of the donor consortium supporting the second phase of DSK's programme, having funded five water points to date.

### **DSK's early experience**

DSK has been working among the slum and squatter neighbourhoods of Dhaka since 1988. At

first DSK worked with people in two neighbourhoods in the Tejgaon area of the city, where the Bangladesh Railway owns the land. When DSK started working in the area, access to safe water was very limited. There were no public water hydrants and women had to fetch water clandestinely, and at awkward times, from nearby factories and offices, bribing gatekeepers and messengers for the privilege. In one of the neighbourhoods, people were using a pool of wastewater from a chemical factory. Not surprisingly, during the first meetings between the communities and DSK, residents prioritised access to safe drinking water.

DSK approached DWASA for connections to the mains and offered to act as guarantor for the security deposit and bill payments. DWASA officials eventually agreed to waive their usual policy, and sanctioned two water points. The first was commissioned in 1992, with a total capital cost of 70,000 Takas (US\$1250). This first experience was not altogether successful, as a mastaan, or local powerholder, soon took over the water point, stopped paying the weekly instalments to DSK and bribed the DWASA meter readers to report lower than actual readings. However, DSK judged that the initiative was not a complete failure, because 200 households now had access to a water point, and were paying lower prices for water than before.

This experience helped DSK when it went on to commission a second water point in 1994. DSK held intensive discussions with residents of this second settlement to make sure there was genuine community ownership of the initiative. Two groups, one comprising only women and the other men, were formed. These elected a Water Management Committee responsible for managing and maintaining the water points, collecting water charges from users, paying DWASA bills, appointing and paying the caretaker and paying the instalments to DSK. Four years later, DSK had recovered its initial investment of Tk 20,000 (US\$357), DWASA bills were being paid regularly and the community was satisfied with the service.

Based on what it had learned from these two initiatives, DSK worked with the UNDP-World Bank Water and Sanitation Programme, the Swiss Agency for Development and Co-operation and WaterAid to develop a replicable model for sustainable water supply for the urban poor. The pilot project began in twelve communities in 1996.

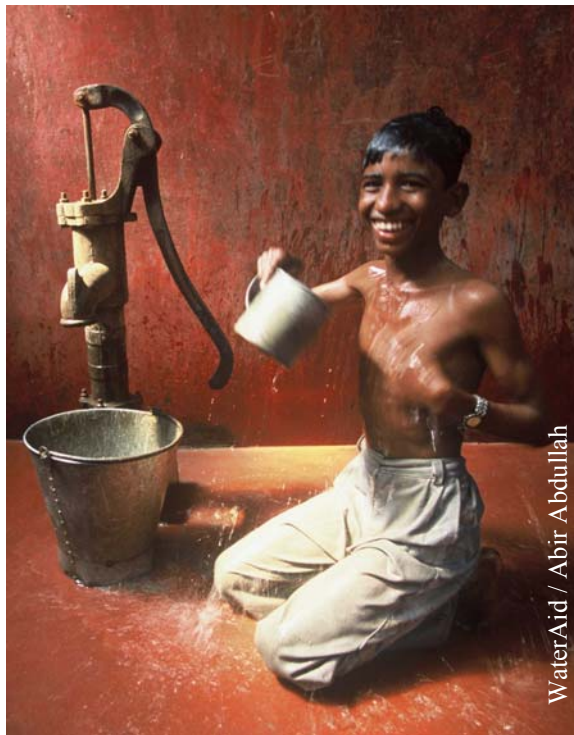
## **The current programme**

### **Selecting communities**

In 1996, DSK began a needs assessment survey of various slum and squatter communities in Dhaka, as the first step to selecting communities to work with. The community selection criteria were:

- ◆ Expressed community demand, and willingness to pay for services

<sup>4</sup>System loss was estimated as 56% in the Dhaka Metropolitan Development Plan 1995-2015, Volume 1 p. 30.



- ◆ Age of settlement: communities that had been settled for a long time were preferred
- ◆ Prior community experience of group-based participatory development approaches
- ◆ Proximity of DWASA water mains
- ◆ Freedom from domination by *mastaans*

Communities that were used to free water and sanitation services were avoided. Using these criteria, twelve communities were selected for intervention.

### **Negotiating with government agencies**

Negotiations with DWASA began in 1996. At the outset, DWASA agreed to grant permission for 12 new water points, provided that the cost for delivering the services could be recovered within the existing institutional framework. Since then, DWASA has not changed its policy on linking access to water and sanitation to property tenure. However, in 2001 it reduced the security deposit that NGOs have to pay for a water connection in a squatter settlement from Tk 7500 (US\$134) to Tk 1000 (US\$18), a significant concession.

### **Community capacity-building**

DSK has worked hard to help develop a strong sense of community ownership. This has been particularly challenging, because of social tensions in the communities, attempts by *mastaans* to appropriate water point fees and, in some cases, opposition from neighbouring agencies and communities who resent the presence of the squatter settlements. Yet it was precisely because of these adverse conditions that DSK realised communities needed to be strengthened, if the project was to have any chance of success.

Once the communities were selected, meetings were held with groups of interested residents, called “Water Hydrant Associations”. There was no single blueprint for the formation or function of these groups. Rather, this depended on local conditions. In some cases, the association was a distinct body that also undertook savings and credit, health and hygiene activities, whereas in others, the whole user community was referred to as the Water Hydrant Association.

DSK and the communities agreed their respective duties and responsibilities as follows:

#### **DSK**

- ⇒ Mediate with DWASA and facilitate obtaining legal access to water and sanitation
- ⇒ Assist in building community capacity, through the organisation of women’s savings and credit groups as well as the formation of Management Committees for water points and latrines
- ⇒ Train the management committees to manage, operate and maintain the services
- ⇒ Liaise with communities through regular monthly meetings
- ⇒ Supervise the installation and management of the water points for two years, or until DSK’s initial investment had been repaid, whichever was sooner. After that time, DSK would hand over the water points to the communities.

#### **Participating communities**

- ⇒ Operating water points
- ⇒ Minor repairs and ongoing maintenance
- ⇒ Collecting user fees
- ⇒ Appointing caretakers and paying their salaries
- ⇒ Regular payment of DWASA bills
- ⇒ Repayment of DSK’s capital investment

### **Monitoring and support**

Project staff regularly visit communities and water points and continue to help build community capacity to manage the services. For instance, there are meetings between project staff and management committees each month to review progress and discuss matters such as maintenance, the cleaning of water point sites, bill payment and conflict resolution within the communities. DSK has also run training courses for management committee members on hygiene and how to manage and maintain water points.

### **Water point siting and construction**

Finding a suitable site for the water points was

difficult in most of the neighbourhoods. The settlements are very crowded, and it was hard to find space for the underground reservoirs – necessary because of the lack of continuous water supply – bathing areas and, where they were provided, toilets. In most cases, group members offered their houses or part of their houses for the purpose, and were compensated in various ways. Where water points were sited on land owned by DCC, DCC allowed their construction to go ahead.

DSK procured construction materials locally. Efforts were made to employ masons from the communities themselves, but there were not enough skilled workers available. However, DSK was able to employ unskilled labourers from the immediate area. DSK strictly supervised the entire construction process.

### **Technical characteristics of the water points**

The current design for the water points is simple and low-cost. It is the product of trial and error: users have helped to modify the original design. The metered DWASA water line is connected to a covered, shallow underground reservoir. One or more suction handpumps are used to draw up the water from the reservoir. The pumps are surrounded by a platform for water collection, washing and bathing. To control water use, and in the interests of privacy, the platform is fenced in with bamboo matting. Where latrines are provided, these are twin pit latrines with two stalls.

### **Water point management**

#### **Management committees**

As women in Bangladesh traditionally take responsibility for obtaining water for their households, DSK wanted to involve women in the management of the water points as much as possible. Originally, mixed management committees were formed. However, gender relations in Bangladesh tend to be highly unequal, and men usually dominated these mixed committees. All-women management committees were considered, but it was thought that they would face too many difficulties to be able to work effectively. In the end, women-only water management committees were set up in each community, assisted by separate advisory committees consisting of men. This is seen as a compromise, until such time as the women's committees are able to consolidate their strength and act alone.

#### **Charges**

The levels at which water charges were set took into account:

- ◆ Prices in local water markets, which is determined by the number of illegal connections available for public use
- ◆ The amount to be paid back to DSK to cover its capital investment

- ◆ DWASA's charges
- ◆ The availability of water at each water point

In some areas, user households who regularly use the water points pay a fixed monthly rate, depending on the number of household members; for instance, a four-member household might pay Tk 50 (US\$0.90) per month, with Tk 10 (US\$0.18) for each additional member. Alternatively, users pay a small fee for each use: about Tk 0.5 (US\$0.01) for a bucket of water, Tk 1-2 (US\$0.02-0.04) for bathing and Tk 1 (US\$0.01) for toilet use, where toilet facilities are provided. One-off payments raise more income than fixed monthly charges.

#### **Caretakers**

The caretakers collect fees from users and hand this over to the cashier when the water point closes at night. A DSK representative calls every day to collect the money and pay it in the bank. Caretakers are paid between Tk 500-1000 (US\$9-18) per month, depending on the profitability of the water point and the decision of the committee members.

DSK has encouraged the appointment of women caretakers on a rotation basis from the water management committee, but this has not always been possible for various reasons. Sometimes, families who have made land available for the water point do so in return for holding the caretaker job.

#### **Donor costs**

The total capital cost of constructing forty water points and two latrines amounted to Tk 1,507,725 (US\$26,986) in February 1999. An estimated 6000 households have benefited. WaterAid Bangladesh calculates that the overall cost per beneficiary (also taking into account recurrent costs such as those related to community mobilisation, training, project staff salaries, etc) has been approximately Tk 726 (US\$13).

### **Lessons learnt**

#### **Low-income urban residents are willing and able to pay for water**

The project has demonstrated that even those on a very low income are willing to pay for the capital and recurring costs of a reliable water service. This counters official claims that providing water supplies to the urban poor would require prohibitive subsidies.

In fact, DWASA's increased revenue has proven to be a motivational factor in their continued support for the initiative and DWASA has even launched its own *Urban Water and Sanitation Initiative for Dhaka's Urban Poor*, to be implemented in collaboration with local NGOs with financial support from Plan, UNICEF, WaterAid and DfID. This initiative lays good foundations for the future, where it is estimated that the demand for water from informal

settlements will escalate further.

### **Mediation is an effective mid-term strategy**

Without DSK's mediation, DWASA would not have sanctioned the provision of water points in these poor urban settlements. This innovative role for NGOs has been one of the keys to the project's success.

### **Secure and sustainable provision will only come through policy change**

As a result of DSK's mediation, and the realisation that poor urban communities are able and willing to pay water bills on time, DWASA has responded positively to the demands of slum and squatter settlements for water and sanitation. However, this change is still an informal one, based on the good will and commitment of individual officials. There has been no corresponding change in DWASA policy, without which Dhaka's urban poor cannot have secure access to water and sanitation.

DSK sees no legal barriers to providing water and sanitation to non-land owners. The relevant ordinance is quite flexible, allowing the utility to enter into any contract it deems necessary to fulfil its aim of providing water and sewerage services.

### **Community ownership is vital to success**

Good management of the water points, and effective cost-recovery, is closely linked to a community's sense of project ownership. This is

particularly so in view of the dominance of the *mastaans* in these settlements. DSK's experience is that it is hard for an outside agency such as an NGO to intervene against these powerful and unscrupulous local figures unless the community feels strong enough to resist them. Mobilising these urban communities requires intensive involvement from the implementing agency, and DSK has found it to be a slow process. DSK has also found that prior community exposure to a credit repayment culture, for instance through savings and credit schemes, is conducive to the timely payment of loans and bills.

Gradually, DSK hopes to transfer responsibilities to communities themselves, including approaching and negotiating with DWASA and DCC. Introducing the communities to these agencies may help to establish their right to water and sanitation services. Also, DSK has decided that only through devolving responsibilities to the communities can the programme achieve sustainability.

### **The co-operation of field level government officials is vital**

Clearly, a project like this depends on the commitment of senior managers in key agencies - in this case, DCC and DWASA. It is also essential that field-level officials cooperate in any such initiative. This group of actors is very important both for developing the project strategy and for timely implementation.

## **WaterAid – water for life**

WaterAid is an international non-governmental organisation dedicated exclusively to the provision of safe domestic water, sanitation and hygiene education to the world's poorest people. These most basic services are essential to life; without them vulnerable communities are trapped in the stranglehold of disease and poverty.

WaterAid works by helping local organisations set up low cost, sustainable projects using appropriate technology that can be managed by the community itself.

WaterAid also seeks to influence the policies of other key organisations, such as governments, to secure and protect the right of poor people to safe, affordable water and sanitation services.

WaterAid is independent and relies heavily on voluntary support.

## **For more information about WaterAid please contact:**

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