

SOCIAL INTER-MEDIATION

Towards Gaining Access to Water for Squatter Communities in Dhaka



Nilufar Matin

WSP-Safety Studies



Water and Sanitation Program-South Asia
Swiss Agency for Development and Co-operation
WaterAid
Dushtha Shasthya Kendra



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May 1999

**UNDP-World Bank Water and Sanitation Program-South Asia
Swiss Agency for Development and Cooperation
WaterAid and
Dushtha Shasthya Kendra**

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LIST OF ABBREVIATIONS AND ACRONYMS

ADB	:	Asian Development Bank
BBS	:	Bangladesh Bureau of Statistics
BCL	:	Bangladesh Consultants Limited
CUS	:	Centre for Urban Studies
DCC	:	Dhaka City Corporation
DPHE	:	Department of Public Health Engineering
DSK	:	Dushtha Shasthya Kendra
DWASA	:	Dhaka Water Supply and Sewerage Authority
GOB	:	Government of Bangladesh
IDSS	:	International Development Support Services
NGO	:	Non Government Organisation
PDF	:	Participatory Development Fund
PKS	:	Pani Kal Samity (Water Hydrant Association)
PRA	:	Participatory Rapid Assessment
SDC	:	Swiss Agency for Development and Co-operation
UNDP	:	United Nations Development Programme
UNICEF	:	United Nations Children's Fund
UPRP	:	Urban Poverty Reduction Project
WSP-SA	:	Water and Sanitation Program - South Asia
<i>Kutcha</i>	:	Temporary construction made of impermanent materials
<i>Mastaan</i>	:	Influential local power holder with a distinct social leadership

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FOREWORD

This report grew out of the desire to document an innovative and promising model for water supply and sanitation for slum communities. During the pilot project described here, the changes that took place in the power relationships between the slum dwellers, the landlords, the water utility and the city authorities were as significant as the improvements achieved in infrastructure. We believe that we are witnessing a process of true development as slum communities organise and take responsibility for their water supplies. We are very pleased, as donors and intermediaries, to have supported the slum people in this process.

We would like to acknowledge the hard work of Nilufar Matin on this document. She worked tirelessly to cover all the aspects of the project, and to analyse thoroughly the social and political implications.

Our thanks are also due to DWASA and DCC without whose support and cooperation the pilot project would not have been possible. Finally, our thanks to the residents of the squatter settlements who explained in detail the problems of their lives and the dynamics of the power structure around them.

Babar N. Kabir, WSP - SA, Dhaka
Walter Meyer, SDC, Dhaka
Clarissa Brocklehurst, WaterAid, Dhaka
Dibalok Singha, DSK

May 1999

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Finally, I would like to acknowledge the patience, trust and enthusiasm shown by the residents of squatter settlements who explained in detail the problems of their lives and the dynamics of the power structure around them. Thanks are also due to the PRA Facilitators, Ms. Hasina Begum and Ms. Delwara Khanom, who worked on this study. I, however, remain solely responsible for the inadequacies and errors that may remain.

Nilufar Matin
May 1999

EXECUTIVE SUMMARY

1. Introduction

- 1.1 The study describes experiences with social inter-mediation as an enabling strategy in gaining access to water for the low income communities of Dhaka. Essentially, it documents a process initiated by Dushtha Shasthya Kendra (DSK), a non-government organisation in Bangladesh, for planning and implementation of a water supply programme through inter-mediation between the communities residing in poor squatter settlements and the formal agency for water supply, Dhaka Water Supply and Sewerage Authority (DWASA). The mediation became imperative as the existing legal and procedural requirements of DWASA would not allow communities without land title to have formal access to water and sanitation services. The institutional denial of services to the urban slum and squatter residents has encouraged a parallel growth of an informal water market where the consumers pay an unregulated price as dictated by the supplier of the services. DWASA is deprived of the revenue and the illegal operators make large profits. As the project developed, through the mediation of DSK, people, who did not have legal access to safe water prior to the intervention, gained access to reliable water supply services.
- 1.2 The study assesses the project experience in relation to the role and importance of advocacy and inter-mediation between formal service agencies and prospective user communities. It also documents the need for capacity building within the user community for management, operation, and maintenance of a sustainable system of water supply.

2. History of the Initiative

- 2.1 Dushtha Sashthya Kendra (DSK), an initiative of a group of doctors and social activists, has worked among the slum and squatter neighbourhoods of Dhaka since 1988. When DSK started working in the area, availability of safe water was limited, as there were no public hydrants, and even access to polluted surface water for domestic use was restricted. DSK approached DWASA for connections to the piped water system, and tried to convince the authorities that provision of community taps to slum residents was an economically viable project. They also offered to mediate as guarantor for the security deposit and regular payment of water bills on behalf of the community. DWASA finally agreed to make an exception and sanctioned two water points to DSK for collective use by the community.
- 2.2 The first water point of DSK was commissioned in October 1992. The responsibility for running the services was delegated to a group of enthusiastic young men from the community. DSK signed an agreement with this group making them responsible for payment of water bills and weekly repayments of capital costs, operating a bank account and maintaining regular liaison with DSK. Unfortunately, this group very soon became dominated by a local influential *mastaan*. He appropriated the water point, ignored the

- 1 agreement with DSK, and stopped paying the weekly instalments. However, the main objective was still achieved. The community of about 200 households was still using the water point with prices at a much lower level than what they were paying earlier to illegal alternate service providers.
- 2.3 The second water point was installed in April 1994. Based on the previous experience, intense discussions were held with the community on the modalities of operation and their responsibilities, and a more rigorous procedure was followed to organise a water management group. Two caretakers were also appointed to run the water points. This project was a success. The community was satisfied with the service, DWASA bills were paid regularly and DSK has fully recovered their investment cost. The significant lesson learnt by DSK was that user groups have to be organised, oriented to assume the responsibility, and involved in planning, implementation and management of the water point in order to instil a sense of community ownership and thereby ensure sustainability.
- 2.4 Encouraged by the above experience, the UNDP-World Bank Water and Sanitation Program, the Swiss Agency for Development and Co-operation (SDC) and later WaterAid collaborated with DSK to further test the approach and develop a replicable model for sustainable water supply for the urban poor. DSK led the project while the donor partners provided guidance, technical support, and strategic supervision.

3. Objectives of the project

- 3.1 The *general* objective of the project was to evolve a replicable model for water supply to the urban poor, based on management at the lowest appropriate level.
- 3.2 The *specific* objectives were:
- To build bridges between water utility agencies and user communities through advocacy and intermediation of non-government organisations;
 - To initiate changes in the local institutional environment to facilitate water supply to the urban poor;
 - To help build capacity within user communities for operation, maintenance and management of water supply facilities; and
 - To provide facilitation to communities and water utility agencies in establishing water connections and ancillary facilities as desired by the communities.
- 3.3 The project started its activities in May 1996 and has succeeded in providing water and sanitation services to an estimated 6,000 squatter households of Dhaka city. DSK has managed to install 20 water points with assistance from the UNDP-World Bank Water and Sanitation Program and SDC, and another 10 water points with assistance from WaterAid. The WaterAid programme has now entered a second phase, and work has begun to install another 30 water points by DSK and 36 by other NGOs. Apart from its own water and

sanitation programme, DSK is also providing advisory services to other NGOs who were inspired by DSK's experience and would like to take up similar programmes.

- 3.4 The project approach relied on a process of mediation by DSK and active community participation to construct, maintain, and pay for shared water facilities in slum communities in Dhaka. Once an agreement was reached with the communities, DSK approached DWASA for necessary approvals. Dhaka City Corporation was also approached for permission for road cutting and siting of water points on slums located on land owned by them.
- 3.5 The approach of DSK has been flexible and evolved throughout the project cycle to accommodate the needs of particular communities. DSK also realised the importance of approaching the community simultaneously with other services such as skill training programme for income generating activities.

4. Project Cycle at Community Level

4.1 *Selection* of slum communities and sites for water points was an important first step in the project cycle. The community selection criteria included:

- expressed community demand and willingness to pay for services; and
- proximity of DWASA water mains to the community being considered for selection.

Communities used to free water and sanitation services and those dominated by *mastaans* were usually avoided.

4.2 *A community survey* was initiated to collect information from the selected communities. This was basically done to make a needs assessment and included information on the name and location of the settlement, approximate area and population, district of origin of the residents, profession and income level, period of existence, type of habitat, health, water supply and sanitation conditions, and exposure to group-based activities through NGOs. After the initial selection, projection meetings were held in these communities to discuss the basic methodology and principles of the approach and management procedures.

4.3 *Community preparation* included detailed discussion of the duties and responsibilities of the communities and DSK. These were discussed and agreed upon in the projection meetings. The community committed to ensuring regular payment of water bills, repayment of investment costs to DSK, and operation and maintenance of the water points. For DSK the responsibilities included mediation with DWASA on behalf of the community for obtaining legal access to water supply and sanitation, building community capacity, helping with the formation of water management committees (consisting of women) and advisory committees (consisting of men), and providing training to the committees in management, operation and maintenance. DSK would maintain continuing liaison with the community for a period of two years (or until the completion of the repayment of capital

expenditure) in order to provide supervision of the water point management. After the supervisory period, the water points would be handed over to the communities.

- 4.4 *Construction* was done by DSK with selected skilled masons. DSK staff closely supervised the entire process to ensure quality. Procurement of materials available locally and employment of unskilled labour for earthwork were done in the area.
- 4.5 *Operation, maintenance, and revenue collection* were undertaken by the community. DSK organised meetings with the water committee and the advisory committee to decide on the revenue collection procedure, the appointment of a caretaker, and payment of the official water charges of DWASA. DSK promoted the appointment of women caretakers on a rotation basis from within the water committees.
- 4.6 *Water charges* were of two types. In some areas, the user households who regularly used the water point paid a fixed rate on a monthly basis. The rate of payment depended on the number of family members. Alternately, the users paid for the amount of water fetched or for bathing or toilet use. The latter resulted in higher revenue collection. This money was used to pay the water bill, to repay the capital investment DSK made in the water point, and for payment to the caretaker.
- 4.7 *Monitoring* was ensured by regular visits by the project personnel to the selected communities and water points in different stages of construction and operation. Regular monthly meetings were organised with the committee members to review progress and resolve issues on management.

5. Technical Characteristics

The design of the water points has undergone much trial and error. The metered DWASA water line is connected to a covered shallow underground reservoir. Users use suction mode hand pumps to access the water collected in the reservoir. The irregular flow of water in the DWASA mains makes the underground storage reservoir imperative. A platform around the hand-pumps facilitates water collection, washing, and bathing. Some sites have latrines on them, and where possible, DSK intends to connect the latrines to the DWASA sewers. Recently, non-return valves were placed in seven water points to prevent loss of water during periods of low water pressure in the water mains and to prevent back-siphonage.

6. Lessons Learnt

- 6.1 At the community level, capacity building of the community members has been the most formidable task and is likely to remain so for any future programme. Proper management and cost-recovery for the services seem to be contingent upon a community acquiring a *sense of ownership*.
- 6.2 The presence of *mastaans* as mediators of power in the squatter settlements has brought a new dimension to the problem of slum improvement and was found to be a formidable source of resistance to the project. Collective resistance through capacity building of the

community seems to be the only way to confront the problem. The NGOs can play an important role in preparing the community protect their interests in the confrontational socio-political culture of the slums.

- 6.3 The other brokers of power, particularly important for the water projects, are the field level employees of DWASA and DCC. The DSK experience shows that it is imperative to recognise the importance of this group both for the project strategy and for timely completion of the project cycle.
- 6.4 The role of DWASA has undergone a major change. Initially negative, DWASA has gone through a process of accepting and responding positively to the demands of the squatter residents for water connections. The response, however positive, has remained an informal one and needs to be formalised within the DWASA structure. Given the experience of the project in successful cost recovery from the water points, it is now possible to recommend a change in DWASA policies, and policies of other utility agencies, whereby the right to utilities is recognised separately from title to land.
- 6.5 One of the major problems in collection of water charges and clientele coverage is the presence of illegal water points in and around the area. Low water flow in many of the water points has also served as a disincentive for the clients to use the points. The other problem is mismanagement and misappropriation of funds by members of the water management committees. The above would require, on the one hand, improved efficiency on part of DWASA management and, on the other hand, more staff and time commitment from DSK to build the strength of the groups, and the development of accountability and a sense of ownership to the project.
- 6.6 Generally, the community members expressed satisfaction in the project performance and expressed willingness to be involved in project design and implementation. They recommended extended DSK mediation for other services, such as garbage collection, toilet facilities, electricity and gas supply.
- 6.7 Given the sensitive power structure in the slum and squatter settlements, the strong competition for scarce resources, and the continuing community demand for DSK's services, projects in future should allow sufficient staff and time for developing a sustainable community- managed and community owned programme. The present project has sufficiently highlighted the need for a participatory development process and recognised the importance of empowering the poor for sustainable community-based water and sanitation projects.
- 6.8 The innovation of the project lay in the social intermediation whereby the community-based non-government organisations successfully acted as mediators in helping the poor to access the government agencies. However, while social inter-mediation is an important strategy for gaining access to basic services by the poor, it must remain as an intermediate solution - the poor have to be recognised in their own right as equal partners in city development.

CHAPTER I

BACKGROUND TO THE PROJECT

1.1 Overall context

In the rapidly growing cities of Bangladesh, a large number of urban residents live in overcrowded, makeshift squatter settlements where basic services and utilities are either absent or grossly inadequate. The incidence of squatter settlements on public land is increasing as access to suitable and affordable land is beyond the means of the majority of the urban population. According to the UPRP-CUS 1996 survey, the number of people then living in slum and squatter settlements was 1.1 million; this was approximately 20 per cent of the population of Dhaka Metropolitan Area. Among this population, 49 per cent lived in squatter settlements on public land and 51 per cent lived in slums on private land. The squatter settlements show a slightly higher population density of 2,696 persons per hectare, compared to the slum areas, which have 2,522 persons per hectare.¹

The inadequacy of urban utilities and overcrowding are reflected in the high levels of urban deprivation in Dhaka, characterised by poor levels of public health, education, shelter, and infrastructure provision. In the slums, occupied by 22% of urban inhabitants, less than one-third of the people have access to a public water supply and less than one-fifth to proper sanitation.² Another report notes that sanitation coverage is 63.9 per cent (12.4 water-sealed and 51.5 pit latrine)³ for the Dhaka metropolitan slum population and 93.2 per cent (52.6 water-sealed and 40.6 pit latrine) for the Dhaka metropolitan non-slum population.⁴ Only 50 per cent of all garbage (21.6% from poor households) is collected.⁵ In general, environmental conditions in the slums are deplorable and deterioration of the urban environmental sanitation situation is foreseeable.

The above situation assumes further significance as the provision of utility services, including water supply, sewerage, drainage, electricity, gas, and telecommunications, is not equitable or uniform over the urban area. Deprivation, as in the case of any other adverse economic phenomenon, falls inevitably on the urban poor, who form the majority of the urban population. Recent policy documents also recognise that lack of utility services in Dhaka is income-related, rather than spatially related.⁶

1 ADB/GOB 1996 *Urban Poverty Reduction Project Final Report*, Prepared by IDSS, BCL and Proshika. pp 12-21

2 Black, Maggie 1997 *Rivers of Change*, UNICEF/DPHE, Dhaka The study, however, reported all Bangladesh data

3 The difference in data may be due to different definitions used in these studies to define 'sanitation' or 'pit latrine'

4 BBS and UNICEF 1997 *Progotir Pathay, Dhaka July*

5 GOB 1995 *Dhaka Metropolitan Development Plan (1995-2015) Vol -I Dhaka Structure Plan*. p 30, and Islam, N., N Huda, Francis B Narayan and Pradumna B Rana 1997 *Addressing the Urban Poverty Agenda in Bangladesh: Critical Issues and the 1995 Survey Findings* p 214 Dhaka University Press Limited

6 GOB 1995, *ibid*, p 101

Often the residents in low-income communities do not have right of tenure on the land they occupy. In Dhaka, 97 per cent of the poor households do not own the plot on which they live.⁷ Significantly, this lack of right to land determines access to other utility services. Because of this, the formal policy domain that governs public utility agencies has so far excluded the urban poor without title to land from the process of planning and allocation. The lack of housing right makes the poor vulnerable to exploitation by "protectors" and informal private landlords. The resultant denial of legal access to water, sewerage, gas and electricity also forces the poor to turn to more expensive alternatives and spend more for equivalent services than is required of their middle class counterparts.⁸

Access to scarce resources is a recurring source of conflict in a slum and often provides a power base for a distinct social leadership, which dictates the terms and conditions under which the residents of a particular neighbourhood have to live. This power group, locally known as *mastaan*, may be seen as performing key functions which link the socially excluded urban poor to a series of livelihood requirements such as employment, shelter, residential security, essential services and food security, through a process of 'adverse incorporation' wherein the excluded and marginalised poor are integrated into the pervasive system of clientelism and dependency.⁹ In exchange, they collect rents and tolls, and also arbitrate in the case of disputes and social mediation. Poor men and women are particularly vulnerable as victims of intimidation and abuse by the members of this power group. They also become easy victims to social and political pressures, economic insecurity, and cultural domination.¹⁰

Recent experience shows that strategic interventions can bring about a shift in the parameters defining the lives of the urban poor and make possible infrastructure development programmes that are feasible, affordable and adhere to acceptable minimum standards of provision. These interventions emphasise active participation of the community in decision-making, planning and implementation of development programmes. The policy barriers are overcome by social mediation provided by the non-government organisations that act as a guarantor to large formal urban utilities. This has ushered in a new institutional arrangement for service delivery that allows cost-recovery, reduction of system loss, and improvement in service coverage and quality. This paper describes how people living in the squatter settlements of Dhaka secured their right to safe water against a background of formidable legal, institutional and financial barriers through the mediation of Dushtha Sashthya Kendra (DSK), a national level NGO based in Dhaka.

7 Islam, N., N Huda, Narayan, Francis B and Rana, Pradumna B 1997 op cit , p 198

8 Alam, Sultana 1987 *Vote Blocks Without Citizen Rights Community Structure and Relations in a Squatter Slum Dhaka* Bangladesh Institute of Social Studies Also Haaga, Eln 1992 *A Case Study of the Slum Improvement Project, Bangladesh Dhaka, (mimeo)*.

9 Wood, Geof 1998 *Investing in Networks. Livelihoods and Social Capital in Dhaka Slums* Paper presented at the ENBS workshop 16-18 April, 1998 at the University of Bath, U K

10 Hossain, Hameeda et al 1996 *Towards Violence Free Cities A Study of Two Slum Communities in Dhaka A Report on Bangladesh*. Dhaka Ain O Shalish Kendra (ASK).

1.2 Genesis of the project

DSK, an initiative of a group of doctors and social activists, has worked in the slum neighbourhoods of Dhaka since 1988. Initially, DSK's central concern was primary health care. Over the years, in response to the demands from the community, it expanded its programmes to evolve an innovative approach to supply safe water and sanitation services. Since 1991, DSK has mediated between the communities residing in slum and squatter settlements and the formal water utility agency, Dhaka Water Supply and Sewerage Authority (DWASA). The mediation became imperative as the existing legal and procedural requirements of DWASA would not allow households without land title legal access to water and sanitation services. Also, Dhaka City Corporation (DCC), which has overall authority over the urban development, had to be approached. With DSK's mediation, DCC has allowed necessary road cutting and siting of water points on settlements located on DCC land. DWASA has formally approved 32 water connections to be used by the slum communities. DSK, on their part, mobilised, organised and prepared the communities to manage the services, bear the capital cost, and regularly pay the water bills on a community basis. People now have a legal access to safe water, via DSK mediation.

The question of legal access has a broader meaning attached to it in the context of urban squatters. The institutional denial of services to the urban slum and squatter residents has encouraged the parallel growth of an informal water market. The local power holders, or *mastaans*, manage to get illegal water connections, with the connivance of DWASA staff, in return for some form of compensation, and sell water at a much higher price than charged by DWASA. In this market, though the consumers pay a high price as dictated by the supplier of the services, DWASA is deprived of the revenue and the illegal operators make large profits. The profit is not limited to economic benefits only. Control over this scarce resource is often used to manipulate power in the social structure of slums. Parties involved in this illegal water market are a formidable source of resistance to the project, as we shall see below.

1.3 Objectives

The *general* objective of the project was to evolve a replicable model for water supply to the urban poor, based on management at the lowest appropriate level, and considering water not only as a social but as an economic good as well.

The *specific* objectives, as agreed upon by the participating organisations, were:

- To build bridges between water utility agencies and user communities through advocacy and inter-mediation of non-government organisations;
- to initiate changes in the local institutional environment to facilitate water supply to the urban poor;
- to help build capacity within user communities for operation, maintenance and management of water supply facilities; and
- to provide facilitation to communities and water utility agencies in establishing water connections and ancillary facilities as desired by the communities.

DSK implemented the project which provided water and sanitation services to an estimated 6,000 squatter households of Dhaka city. The collaborating donor partners in this endeavour were the UNDP-World Bank Water and Sanitation Program, the Swiss Agency for Development and Co-operation (SDC) and WaterAid. The project started its activities in May 1996 and succeeded in siting 32 water points and 5 latrines by April 1998. The SDC, WaterAid and the Participatory Development Fund (PDF) at the World Bank HQ funded the project.

1.4 The stakeholders

The communities are generally low-income squatter residents in Dhaka. They live on land owned by various government agencies, and also on vacant private land. Contrary to conventional notions of squatter settlements as a "floating" population, most of the settlements where DSK works have a history of existence ranging from 11 to 30 years; only two peripheral communities have been in place for only four to five years. In terms of physical characteristics the settlements are made up of *kutcha*¹¹ huts made of bamboo, wooden boards or plastic, *kutcha* roads, *kutcha* or open latrines and *kutcha* drainage. Often houses are placed on bamboo stilts in the low lying, flood prone locations.

People work as transport workers, day labourers, garments workers, vendors, petty service holders in the public and private sectors and as domestic maids. The average monthly income varies between Tk. 2,000 and Tk. 3,000¹². Communities have shown an interest in working as active partners in development, and are willing to and capable of paying for services that rely on cost recovery, taking on responsibilities as managers of provisions and protecting their ownership when threatened by outsiders or by opportunist moves from within the community.



WSP-SA/Guy Stubbs

11 Temporary construction made of impermanent materials

12 Rate of exchange US\$ 1 00 was approximately equivalent to Taka 47 00 in 1996

DSK's initial focus was on the health care needs of the urban poor. As they gained experience, they found that improvements in health were intricately related to income as well as environmental sanitation. DSK responded to this realisation by expanding its programme to blend health care with income generating activities, especially among women. The other major focus became provision of water and sanitation services to the poor. DSK has evolved an innovative approach to mediate between government utility agencies and the poor in channelling services where they are needed the most. In general, DSK aims at building strong community organisations which will eventually be able to plan, prioritise and implement development programmes through mobilisation of their own resources, or resources of the government and society upon which they have a legitimate claim. The activities of DSK include non-formal primary education, provision of water and sanitation, primary health care, a revolving credit programme, income generation in the fisheries sector and skill development training. Presently, DSK's staff strength is 261 with 140 female and 121 male workers.

Dhaka Water Supply and Sewerage Authority is a statutory body responsible for water supply, water borne sewerage and sub-surface drainage of Dhaka city. DWASA plans, implements, operates and manages these services in Dhaka.¹³ DWASA extends services only to people/organisations having legal tenure to premises, with the consequence that services largely elude the poor in squatters and slums. Such being the condition, DWASA support is crucial for the success of water and sanitation service provisions that targets the urban poor. DWASA has been, and in all probability will be supportive of these initiatives.

UNDP-World Bank Water and Sanitation Program assists the poor in rural and marginalised urban areas gain access to water and sanitation services and assesses the policy and institutional environments that must be in place to support this goal. Capacity building is central to the Program's strategy for action. In co-operation with government, external support agencies, NGOs and private sector partners, the Program promotes innovative solutions tailored to local needs and conditions. It was in this spirit that the Program along with SDC initiated the support for DSK to test and fine-tuning the innovative approach to water supply for the urban poor into a replicable model.

Swiss Agency for Development and Co-operation is a specialised agency established in 1961 by the Government of Switzerland. It provides technical and financial assistance as well as humanitarian aid to developing countries. SDC focuses on activities that contribute to self-reliance of economy and state; supports the poorer sections of the population; helps developing countries master their environment, develops productive resources; and develops human resources. Since 1972, SDC has developed a wide-ranging and rewarding programme of co-operation with its partners in Bangladesh. SDC's support and assistance to UNDP-World Bank Program and DSK in testing an innovative approach to supplying water to the

13 For the mandate and responsibilities of WASA, see Annex I

very poor is only a reiteration of its commitment to improving the conditions of the poor. **WaterAid** is an independent British charity working since 1981 with people in developing countries to improve their quality of life through lasting improvements to water, sanitation and hygiene using local skills and practical technologies. WaterAid works through partner organisations and helps develop their capacity to undertake integrated water projects. WaterAid is funding both a rural and an urban programme in Bangladesh. The urban slum water supply and sanitation programme started in 1996 and funded DSK for construction of 10 community-managed water points. This programme has now entered a second phase which includes support to DSK for 30 additional water points; funding other NGOs to replicate the DSK model in other areas of Dhaka; and support to capacity building, coordination and collaboration among NGOs working in urban water supply and sanitation. The programme has also included commissioning research on water supply and sanitation problems in the slums of Mohammedpur.

CHAPTER II

HISTORY OF THE PROJECT

2.1 Inception

DSK initially started working with the people of Koiler Bustee and Begunbari Bustee in the Tejgaon area of Dhaka. The area is densely populated by low-income families who live in ramshackle structures on land owned by the Bangladesh Railway. The residents of the slum do not have title to the land they occupy and thus are not eligible for utilities from the government. When DSK started working in the area, access to safe water was limited, as there were no public hydrants. Women had to fetch water from illegal sources at much higher prices than official rates and suffered great hardship in terms of time and labour. Water was collected through negotiations with gatekeepers or messengers of the nearby factories and government offices, and, for obvious reasons, had to be done at odd hours. Even access to polluted surface water for domestic use was limited. Koiler Bustee had access to a pool of wastewater from a chemical industry.¹⁴



WSP-SAGuy Stubbs

In this background, it was only natural that, in their initial contacts with DSK, the slum residents prioritised their need for safe drinking water. DSK first tried out a hand pump but the idea had to be soon abandoned, as the groundwater level was too low to make it a feasible

¹⁴ Rashid, Haroon Ur and Haider, Iftekhar, Social Intermediation Water Supply Provision for the Urban Poor *The Bangladesh Observer*, Friday, November 17, 1995

option. DSK thus approached DWASA for a connection to piped water. But, as the squatter residents did not own the land, they could not fulfil the requirements of DWASA. DSK tried to convince DWASA that provision of community taps to the slum residents was an economically viable project and volunteered to mediate as guarantor for the security deposit and regular payment of water bills on behalf of the community. Finally, DWASA agreed to make an exception and sanctioned two water connections for DSK for the collective use of the community. This was a major breakthrough in the system of utility provision for the urban poor and opened up an opportunity for sustainable services for the urban poor under the following conditions:

- Formal institutions bring about legal and procedural changes to respond to community initiatives and demand for services; and
- Intermediaries such as community based organisations are available to organise the slum residents and mediate with formal institutions to provide access to utilities.

2.2 First implementation experiences

The experiences gained from the initial operation of community-based water and sanitation services were of a mixed nature and they provided DSK with deeper insights for formulating future strategies

The first water point in Koiler Bustee was commissioned in October 1992 with a total capital cost of Tk. 70,000. The responsibility for running the services was delegated to a group of enthusiastic young men of the community who appeared to be helpful and committed to the cause. DSK signed an agreement with this group making them responsible for payment of water bills, weekly repayments of capital costs, operating a bank account and maintaining regular liaison with DSK. The water point was accessible to all on payment of Tk. 0.50 for a pitcher of water and Tk. 1.00 for bathing and washing.

The water management group was very soon dominated by a local influential *mastaan*. He appropriated the water point, ignored the agreement with DSK and stopped paying the weekly instalments. The water bills were being paid regularly to DWASA, but the bill amounts showed unusually low figures indicating collusion between the group and the DWASA meter readers. Thus the *mastaan* was siphoning off a large proportion of the sale proceeds. The main objective, however, was still achieved. The community of about 200 households was still using the water point with prices at a much lower level than what they were paying earlier to illegal alternate service providers. The significant lesson learnt by DSK was that user groups have to be formed, oriented to assume responsibility, and involved in planning, implementation and management of the water point in order to instil a sense of community ownership and thereby ensure its sustainability.

The second water point was installed in Begunbari Bustee and started running in April 1994. Here DSK made a smaller capital investment of Tk. 20,000 and made a simpler structure

for bathing and washing facilities. Learning from the experience in Koiler Bustee, intense discussions were held with the community on the modalities of operation and their responsibilities. Two 40 member groups, named *Pani Kal Samuty* (PKS), were formed, one with men and the other with women. These groups together elected a 19 member executive committee for a one year term responsible for managing and maintaining the water points, collecting water charges, paying the DWASA bills, appointing and paying the salary of the caretaker, and payment to DSK. Two caretakers were engaged for the collection of water charges on a monthly salary of Tk. 500. Later on, the executive committee was renamed as a Water Management Committee and the number of members was reduced to 8, of which 5 were female and 3 were male. In place of two caretakers, one male caretaker was engaged. The water charges were the same as in Koiler Bustee. Four years later, the community is satisfied with the service, DWASA bills are paid regularly and DSK has fully recovered their investment cost.

Encouraged by the above experience, the UNDP-World Bank Water and Sanitation Program, the Swiss Agency for Development and Co-operation and WaterAid collaborated with DSK to further test the approach and develop a replicable model for a sustainable water supply system for the urban poor. DSK led the project while the donor partners provided guidance, technical support and strategic supervision.

The pilot project began in May 1996. The approach relied on a process of mediation by DSK and active community participation to construct, maintain and pay for shared water facilities in slum communities. DSK started by carrying out a needs assessment survey of various slum and squatter communities in Dhaka. Based on this information, 12 communities were selected for initial intervention. Projection meetings in all these communities were held in July 1996. In these meetings, the communities and DSK staff discussed in detail the basic methodology and principles of the approach and management procedures. Once an agreement was reached with the communities, DSK approached the government agencies for necessary approvals.

2.3 Negotiation with government agencies

Negotiation with DWASA started with a meeting in July 1996. In this meeting, DSK reiterated the demand of the community, explained their approach based on complete cost recovery and expressed their willingness to continue working as a guarantor on behalf of the community. The Managing Director of DWASA and his colleagues expressed their commitment to responding to the needs of slum residents, and agreed in principle to grant permission for 12 water connections provided the cost for delivering the services could be recovered within the existing institutional framework. It may be mentioned here that the initiative of DWASA in helping DSK to provide water to the squatter settlements has been an 'irregular' *ad hoc* measure of a few committed individuals, not an institutional norm of the structure.

Dhaka City Corporation was also approached for permission for road cutting and siting of water points on slums located on land owned by them. The Mayor and his senior officials have shown keen interest in the programme and committed to provide help and co-operation.

In order to promote the approach and gain support, an orientation workshop for mid-level officers of DWASA, DCC and elected commissioners of respective wards of Dhaka City was held in August 1996.

2.4 Modifications to the approach

The approach of DSK has been flexible and evolved throughout the project to accommodate the needs of particular communities. However, based on the initial experiences, the major emphasis was laid on capacity building of the community and preparing them to operate a community service based on accountability and transparency. DSK also realised the importance of approaching the community simultaneously with other services such as credit and a skill-training programme for income generating activities.

Apart from the organisational modifications, the technical design was also modified. In Koiler Bustee, water flowed into a sunken water reservoir (3.0m x 1.5m x 1.0m). On the surface, around the tank, a cemented platform and bamboo mat fencing were constructed for bathing and washing purposes. In this version there was no cover slab on the tank and water was drawn out of it using buckets. Later the design was modified to include a cover slab on the sunken tank and one or two suction mode hand pumps to lift water from the tank. Recently, non-return valves were placed in seven water points to prevent loss of water during periods of low water pressure in the water mains, and to prevent back-siphonage.

The earlier DSK designs included toilet facilities for common use. Later this could not be sustained for two reasons. First, the space requirement for the twin pit latrine was difficult to meet in the high-density squatter settlements. Second, where possible, the toilets were connected to the sewers. This solved the space-related problems but, in accordance with DWASA policy, doubled the DWASA bill. The community found this rate too high. There was also concern that close proximity of a latrine pit or septic tank to the water reservoir could lead to contamination of the stored water. Thus only 5 latrines (1 septic tank and 4 double pit) have been constructed so far as opposed to latrines on all 32 water points.

2.5 On-going activities and future plans

DSK undertook to provide 20 water points with assistance from the UNDP-World Bank Water and Sanitation Program, out of which 19 water points are in operation. Another 10 water points were completed with assistance from WaterAid. The WaterAid programme has now entered a second phase, and work has begun to install another 30 water points by

DSK and 36 by other NGOs. The new NGOs are being provided with technical support by DSK.

Apart from its own water and sanitation programme, DSK is also providing advisory services to other NGOs who were inspired by DSK's experience and would like to take up similar programmes.

Since other NGOs and UNICEF have already started replication of the model, the UNDP-World Bank Program and SDC have shifted their focus to new initiatives in municipal services particularly waste management.

CHAPTER III

PROJECT CYCLE AT COMMUNITY LEVEL¹⁵

3.1 Initial community survey

Selection of slum communities and sites for water points were an important first step in the project cycle. Community selection criteria followed were:

- Expressed community demand and willingness to pay for services;
- Age of settlement; preference was given to communities that have been in existence for a long period of time and were exposed to a group-based participatory development approach through DSK or any other organisation;
- Proximity of DWASA water mains to the community being considered for selection; and
- Communities used to free water and sanitation services and/or dominated by *mastaans* were avoided.

Based on the above criteria, a community survey was initiated to collect information from the various communities. The survey format was simple and provided information on the name and location of the settlement, approximate area and population, district of origin of the residents, profession and income level, period of existence, type of habitat, health, water supply and sanitation situation, and exposure to group based activities through NGOs. The initial survey was followed by a joint reconnaissance by DSK and the donor partners to make the final selection.

3.2 Community preparation

After a selection was made, projection meetings were held with interested community members, loosely termed *Pani Kal Samity*¹⁶ (PKS). The formation of the PKS did not follow a uniform approach or procedure for all water points. In some cases, the PKS had a distinct structure, which also undertook savings and credit activities, and health and hygiene training programmes. In other cases, the entire community who used the water point was referred to as PKS.

In the projection meetings, DSK explained the detailed methodology and principles of the approach. The duties and responsibilities of the communities and DSK were discussed and agreed upon. The principles established in the meetings were:

¹⁵ This section is based on a DSK report titled "*Panikal Bastobayan Kaushal*" (Manual for a Water and Sanitation Programme in the Urban Slum and Squatter Settlements), April 1998

¹⁶ Water Hydrant Association

- DSK would mediate with DWASA and facilitate the community in obtaining legal access to water supply and sanitation;
- DSK would facilitate building community capacity through organisation of women's groups for savings and credit as well as formation of Management Committees (with representation from the women's groups) for water points and latrines; it would also provide training to the committees in management, operation and maintenance of the services established;
- The community would have the following responsibilities:
 - collection of fees and maintenance;
 - regular payment of water bills;
 - appointment of and regular payment to caretakers;
 - minor repair and periodic maintenance;
 - repayment of investment cost to DSK; and
 - operation and maintenance of water points.
- DSK would maintain continuing liaison with the communities through regular monthly meetings and would supervise the installation of the water points and management for a period of two years or till the completion of repayment of capital expenditure, whichever was longer. After the supervisory period the water points would be handed over to the communities.



WSP-SA/Guy Stubbs

From the projection meetings with PKS, a water management committee was selected based on the members' interest, management capabilities and social acceptance. The committee consisted of 8 women members; 1 president, 1 secretary, 1 cashier and 5 general members. Additionally, an advisory committee was also formed with 5 men to assist the

women's group in management of the water project, but more particularly, to tackle the problems of social intimidation.

The above composition of management structure presented a noticeable change from the initial system developed by DSK. Earlier, the PKS would form an executive committee comprised of both women and men. Experience, however, showed that this committee was totally dominated by the men, and the women were seldom allowed to make a decision. Given the wider environment of male domination, this was hardly surprising. Thus, to create an enabling space for women, DSK decided to form all-women water management committees. In the intimidating social structure of the slum and squatter settlements, however, assigning a small group of women the responsibility of managing the delivery of a public good like water was not without its problems. An advisory committee of men was thus deemed strategically important until women's groups gathered sufficient strength of their own.

The PKS took on the responsibility of finding a suitable site for the water point. This posed a serious problem in most of the neighbourhoods. In highly congested settlements, it was difficult to find vacant space for installation of the underground water reservoir, platform for bathing and washing, and, in some cases, toilets. The water committees tried to resolve this on a voluntary basis, and in most cases, some group members offered their houses or part of their houses for the purpose. The compensation paid for such collective use of the land varied widely. In some cases the occupant of the house was offered the paid position of caretaker. In other cases, the occupant of the land was paid in cash as agreed upon by the group. In these cases, usually the community provided this payment; in a few instances DSK made partial compensation. It needs to be pointed out here that usually the occupant of the land is not the legal owner but retains an occupancy right recognised by the slum society. Obtaining permission from the legal owner, who in most cases is the government or a private agency, has been impossible except in cases where the owner is DCC. However, DCC do not yet have a clear policy on the issue of slum communities' right to housing and other related services, although they have expressed their commitment to the improvement of the living conditions of the urban poor. DCC have allowed DSK to undertake their project activities.

3.3 Construction activities

Once the PKS was ready and the necessary approvals from DWASA and DCC had been obtained, DSK discussed the design and technical aspects of the programme with the group. All procurement of construction material was done by DSK. In keeping with the idea of involving the user community at every stage of planning and implementation, DSK made efforts to employ masons and labourers available from within the community in the construction of the water points. In reality, however, the aspects of quality control in construction and problems of labour management prompted DSK to operate mostly with

selected skilled masons recruited from outside. Procurement of materials available locally and employment of some unskilled labour for earthwork, however, were made from the area. DSK staff strictly supervised the entire process. Community vigilance to supervise and monitor the quality of construction is yet to emerge.

3.4 Technical characteristics of the water points

The design of the water points has undergone much trial and error. The current design incorporates the inputs of users, and combines simple functionality at low cost. The metered DWASA water line is connected to a covered shallow underground reservoir. Users use suction mode hand pump(s) to access the water collected in the reservoir. Irregular flow of water in the DWASA mains makes the underground reservoir imperative. A platform around the hand pumps facilitates water collection, washing and bathing. To control water use and in the interest of privacy the platform is fenced in with bamboo matting.



WaterAid/Liba Taylor

3.5 Technical characteristics of the latrines

The sanitary latrines included with some of the water points are essentially twin pit latrines with two stalls. Where possible, DSK intends to connect the latrines to the DWASA sewers.

3.6 Community management

Once the water point was installed, the community took on the responsibility for operation, maintenance and revenue collection. DSK organised meetings with the water management committee and the advisory committee to decide on the revenue collection procedure and the appointment of a caretaker. The water prices were set taking into account the following:

- the price levels prevailing in local water markets determined by the number of illegal connections available for public use;
- the amount to be paid back to DSK for capital investment;
- the official water charges of DWASA; and
- availability of water at the water points.

Two types of water charges are prevalent. In some areas, the user households who regularly use the water points pay a fixed rate on a monthly basis. The rate of payment depends on the number of family members. For example, the current standard is Tk. 30.0 per household per month for a 5-member household and an additional Tk. 10.0 per month per person for each additional household member. Recently, as the water meters have been in place since March 1997 and the bills seem higher than originally expected, DSK and the communities have decided to revise the rates. The new proposed rate is Tk. 50.00 per household per month for a 4-member household and additional Tk. 10.00 per month per person for each additional household member.

Alternately, the users pay for the amount of water collected or for bathing or toilet use. The rates are Tk. 0.50 for a bucket/pitcher of water, Tk. 1.00 to Tk. 2.00 for a bath and, where there is a toilet facility, Tk. 1.00 for toilet use. This system of payment has been found to be more profitable than the fixed monthly rate and has resulted in higher revenue collection.



WaterAid/Liba Taylor

The appointment of a caretaker was done on the basis of a consensus of the water management committee and the advisory committee. Ideally, as a principle, DSK promotes appointment of women caretakers on a rotation basis from within the water management committees. In practice, however, many factors intervene to frustrate this principle. Sometimes the slum environment is not conducive to having a woman to perform the public responsibility of revenue collection. Sometimes there are pressures from the advisory

committee to appoint a male caretaker. In other cases, when a family has provided the land for the water points, compromises are made such that they retain the position of caretaker for an indefinite period. Apart from these problems, personal leadership qualities, organisational strength of the particular water committee and its support have been found to be important criteria for a woman caretaker to assume her role and retain it for the prescribed period. Presently, for the 28 water points, there are 14 female caretakers. On paper, the number of female caretakers is 17, revealing the fact that 3 positions initially assigned to women have been *de facto* transferred to men.

The caretaker collects the water charges from the users and keeps it in a small locked wooden box secured for the purpose. Every night, after the water point is closed at around 10 p.m., the caretaker hands over the money to the cashier in the presence of the president of the committee. The next day, a DSK representative comes to collect the money in order to deposit it in the bank. This money is used to pay the water bill, to repay the capital investment DSK made in the water point, and to pay the caretaker. The payment of the caretaker varies between Tk. 500 and Tk. 1,000 per month. The rate depends largely on the profitability of the water point but, to some extent, also on the generosity of the committee members.

3.7 Monitoring and support

Following its commitment to facilitate building strong community organisations, DSK has so far provided monitoring and other related support to the management of the water points. The donor partners provide guidance, technical support and strategic supervision. Project personnel regularly visit selected communities and water points in different stages of construction and operation. Continual interaction and training support are provided to prepare the communities for management, operation and maintenance. Regular monthly meetings are organised with the committee members to review progress, and resolve issues related to the management of the water points such as water rates, collection, bank deposits, payment of DWASA bills, water reservoir maintenance and cleanliness, effect of surrounding illegal points, conflict resolution within the community and external interference.

A training workshop was also organised with the presidents and secretaries of the water management committees in October 1997. The objective was to discuss the role of water management committees in proper management and maintenance of water points, repayment of DSK's capital investment and payment of DWASA bills; to impart knowledge relating to safe water and hygiene practices; and to highlight the role of women leaders in water management committees.

3.8 Gender aspects

As mentioned above, control by a few power holders and *mastaans* is a key aspect of slum organisation and relations. This social structure results inevitably in the intimidation of women. Tensions are induced by inadequate housing, community frictions over tenancy

rights, rental collection, use of scarce common provisions like fuel, water and sanitation facilities, and political aggression expressed in rioting and terrorism. These intimidating and threatening experiences often have far reaching consequences for women in restricting their access to social and economic opportunities and excluding them from decision-making processes. Against this background, DSK's programme to involve women as managers and caretakers of the water points is indeed a step towards women's empowerment. DSK, however, is aware of the gravity of the problems and has devised a strategy of non-confrontation by keeping men involved in the advisory roles, and at times also providing them some concessional roles in management, while women gain strength. According to DSK, gender conflict has not surfaced so far since women in the project areas have not yet emerged as a conscious for-women-only group. Though women are formally the water managers, they are yet to consolidate their position in the community, and, in carrying out their responsibilities, they largely rely on male protection from the advisory committee.

CHAPTER IV

SUMMARY AND LESSONS LEARNT

4.1 Institutional aspects

At the community level, capacity building of community members has been the most formidable task and will remain so for any future programme. Proper management and cost-recovery for the services seem to be contingent upon the sense of ownership that a community has acquired and community exposure to credit-repayment culture. Community ownership has not been a norm in the urban culture of Bangladesh and DSK's approach should be viewed as an innovative experiment. Though scarce resources have made communal use of facilities imperative for gaining access to some basic services, the establishment of community management and shared responsibility will require an intensive programme of motivation, mobilisation and a continuous justification of the approach. This is a gradual process; and programmes which intend to instil a sense of community ownership will need to accommodate this hard fact

Box 1: Role of Local Power Holders - Central Industrial Area.

About 200 families live in this squatter settlement located in the industrial area of the city. The sources of water, prior to DSK intervention, were the street hydrants located in the nearby market. Women used to wait in long queues at odd hours to collect water and suffered verbal abuse from the market people. Thus, in their initial interaction with the community, DSK found them very keen to co-operate in establishing a water point in their neighbourhood. DSK therefore organised a projection meeting and explained the rules and responsibilities of the community members. After this meeting, it appeared that the community was forced to retreat, and would not discuss the proposal further. Finally, some of them suggested that DSK discuss the proposal with their 'leaders' first as they could not act without their approval. DSK did accordingly, but the leaders, who were local *mastaans*, were ready to co-operate only if the proposal followed their own terms. The two *mastaans*, named, Salam and Selim, demanded that the water point be handed over formally to them, and they would manage the affair, pay back DSK's investment cost and sell the water to the community as a private business. They refused to allow any water management committee or any monitoring from DSK.

Five months went by. As the community members could not gather sufficient strength to take a stand against Salam and Selim, DSK followed the strategy of mobilising popular support from the area. The local political leaders were approached and they finally managed to diffuse the opposition from the *mastaans*. Salam and Selim agreed to allow DSK to complete their procedure. An 8-member water management committee of women and a 5-member advisory committee of men were formed, and a caretaker was appointed on the understanding that the position would be rotated every month to give an opportunity to all the members. Soon, however, Masuma, the caretaker, faced intimidation and was forced to step down. Selim and Salam took over as the de facto caretakers and ignored the system of rotation. They have, however, proven efficient in the collection of water charges and have paid DSK regularly making this water point one of the most profitable.

As mentioned earlier, the emergence of *mastaans* as mediators of power in the city slums has brought a new dimension to the problem of slum improvement. Experience shows that it is difficult for an outside force, such as NGOs, to intervene if the community is not prepared to take risks. It is only the community, who, though trapped in the culture of violence perpetrated by the *mastaans*, is capable, through collective resistance, to confront them. The NGOs can play an important role in preparing the community to protect their interests in the confrontational socio-political culture of the slums.

Box 2: Community Resistance- Phultala Bustee

As in many squatter settlements in Dhaka, this is an area with substantial *mastaan* influence. It took DSK a long time to find vacant land suitable for the site of the water point, and even to organise a water management committee as the local *mastaans* were against the initiative. Confronted with these problems, DSK concentrated on community mobilisation and group solidarity. A skill development and credit programme was also started for women and was running well.

As soon as the new water point started running, a local *mastaan*, Rashidul, came to Nasima, the chairperson of the water management committee, and demanded a daily subscription of Tk. 50.00 from the water proceeds. He declared that this was only a normal procedure in the area and all shopkeepers and traders paid their due share regularly to him and to his group. Nasima explained that the water charges were community collections to be paid to DSK and DWASA, and thus she could not meet his demand. Rashidul left only to come back next morning with his ringleader, Ahmed, to raid the water centre. They started yelling at Nasima, snatched the cash box, and attempted to assault her. The community people gathered quickly in support of Nasima, circled the *mastaans*, and asked them to leave immediately and never come back again to disturb the World Bank -NGO led project. They demanded that Rashidul and Ahmed apologise for harassing Nasima or be ready to face the consequences. Faced with such a strong opposition, the *mastaans* left. The community kept on the pressure and continued mobilising against them. Eventually the *mastaans* came back to apologise to Nasima.

The other brokers of power, particularly important for the water projects, are the field level employees of DWASA and DCC. They in fact control and dictate the implementation of DWASA activities relevant to the project. DWASA policies or the well-intended gestures of senior level decision-makers are indeed important, but equally important is the co-operation of the field level officials. The DSK experience shows that it is imperative to recognise the importance of this group both for the project strategy and for timely completion of the project cycle.

A significant demonstration effect of DSK's programme is already noticeable among the organisations working in Dhaka slums and also within the communities. A number of NGOs have become interested in adopting similar programmes and are following the DSK model to gain access to water for the urban poor. In a few instances, communities themselves have taken initiatives to organise themselves for this purpose and have applied for assistance to DSK and also to DCC. This process has been furthered by linkages with the Coalition for the Urban Poor (an umbrella group of some 40 NGOs working in the urban sector) and by opportunities for interested urban NGOs to apply for funding from WaterAid and UNICEF to replicate the DSK model.

Box 3: Opposition from other agencies- Shilpa Nagar Bustee

This is a high-density settlement with a number of illegal water connections. These water connections are basically street hydrants with no facilities for bathing or washing. Thus when DSK discussed the proposal of a legal water point with community ownership that would reduce the cost of water for the users and also help WASA reduce its system loss, the community was happy to co-operate. Opposition, however, came from the local factories. The community located a vacant space next to a fabric factory for the site of the water point. The land belonged to DCC. When they went to start work on the land, the factory labour union opposed the move saying that the land could not be spared as they had planned to build their union office on this spot. Negotiations failed and the community had to find a new location. Eventually a community member, a rickshaw puller by profession, agreed to allow part of his house for the purpose.

When the construction of the water tank and bathing space was complete, the DSK construction engineer and the labourers tried to establish the connection to the WASA mains. The point was located next to the gate of a milk factory, again on DCC land, but on which the milk factory had made a small garden. DSK faced stiff resistance there. The factory management called the police who immediately arrested the DSK staff and the labourers. The community members, however, quickly gathered and followed the police jeep demanding their release, and the police let them off before reaching the police station. Later, the DSK engineer met with the factory management and explained that they had all the legal papers and the factory could in no way prevent them from getting connection to the WASA mains. They also promised to re-establish the garden after the necessary digging for the connection. Finally, the factory management was convinced and the work could proceed.

The role of DWASA has also undergone a major change. Initially negative, DWASA has gone through a process of accepting and responding positively to the demands of the squatter residents for water connections, albeit backed by DSK. The response, however positive, has remained an informal one pursued by a few individuals converted to and motivated by the cause of the urban poor. Given the experience of the project in successful cost recovery from the water points, it is now possible to recommend a change in DWASA policies, and policies of other utility agencies, whereby right to utilities is recognised separately from title to land. In fact, a close examination of the WASA Ordinance of 1996 reveals a flexible structure for service provision with sufficient power to enter into any contract or undertake any liability that may deem necessary to fulfil its aims and objectives of water supply and sewerage provisions for the area under its jurisdiction¹⁷. It is encouraging that, following the project experience, DWASA has recognised the need for changes in its institutional procedures and is actively considering these changes.

The attitudes of other agencies, however, are still not sufficiently responsive to the problems of the squatter population. The project has often experienced a rather negative stand taken by the agencies that own the land on which the settlement is located (with the exception of DCC). Even agencies located nearby have often acted against any physical improvement programmes in the squatter settlements on the grounds that these might eventually result in formal recognition of the squatter communities on these lands, thereby making the urban poor their lifelong neighbours.

¹⁷ WASA Ordinance 1996, Article 17 (2) and 17 (7)

4.2 Appropriateness of design

Technically the design seems appropriate given the constraints of funds and space. In many cases the users would prefer to have a larger reservoir so that water is available all the time, but the major problem was lack of space. Water taps and reservoir tanks are mostly located along the roads next to a drain. These locations are generally available for construction and have an advantage - no additional cost is incurred for constructing a drain. This, however, poses the problem of possible contamination of the reservoir water through seepage. Regular water tests should be carried out to ensure water quality and to take measures against contamination, if needed. There is some evidence that latrines on the sites may also contaminate the reservoirs, and in the future either regular chlorinating of the reservoirs or removal of the latrines may be considered.

Recently, non-return valves were placed in 7 water points to prevent back-siphonage. This has an advantage of retaining water in the reservoir during periods of low pressure, and DSK may consider using them for all of their reservoirs.

4.3 Cost recovery

One of the major problems in collection of water charges and clientele coverage is the presence of illegal water points in and around the area. Low water flow in many of the water points has also served as a disincentive for the clients to use the points. The other problem is mismanagement and misappropriation of funds by members of the water management committees.

Taking measures to stop illegal connections is the responsibility of DWASA. The current "system loss" of DWASA is estimated at 56%¹⁸. Improvement in water flows is inversely related to the number of illegal connections. DSK has lobbied against illegal connections and there have been declarations and notifications from DWASA in this respect.

Incidences of mismanagement of water funds by the caretakers and committee members have been one of the major foci of DSK's supervision and monitoring programme. This problem is related to the strength of the groups, development of accountability and a sense of ownership of the project. This is a long-term process, as DSK has realised, and will require more time and staff commitment than was provided in the past. DSK is working to identify inefficient caretakers and to replace them, with the consensus of the community, with more efficient and honest members. The trans-sectoral approach was found an effective strategy as DSK has been more successful in communities exposed to credit or other programmes.

Despite the above problems, the programme has proven replicable in a background where public utilities, almost without exception, suffer from gross system loss and are characterised by incomplete and inadequate provision and poor cost-recovery.

18 Dhaka Metropolitan Development Plan 1995-2015 Vol-1 , p.30

The financial statements of the water points funded by the UNDP-World Bank Program and WaterAid are provided in Annex-II. It is, however, difficult to draw a precise conclusion about cost recovery at this stage as the water bills have not yet been paid due to the delayed installation of the water meters. However, the community has started paying for the investment costs of the project as scheduled. The total revenue collected so far has resulted in a surplus, after payment of instalments for investment costs, but some of this will be used to cover the water charges to be paid to DWASA.

4.4 Community mobilisation

The DSK strategy basically relies on community mobilisation to help articulate community demands, capacity building to manage and ensure sustainability of services and provisions, and the ability of slum dwellers to protect what they own. The experiment has brought positive results and it may now be possible to introduce some modifications in the approach for a more responsible community response.

- In the formal mediation, i.e., processing of applications to DWASA and DCC, it may now be possible to introduce the communities to the agencies. A gradual transfer of responsibilities to the communities may help in realising their entitlements as entities in their own right in the eyes of the officials. The communities, or their representatives, may now start to apply jointly with DSK for DWASA connections or DCC permission, operate bank accounts and pay the DWASA bills themselves. However, given the sensitive environment in the slum settlements, the steps have to be carefully planned and monitored. Nonetheless, it is imperative that this process of devolution to community management be undertaken, otherwise the project cannot be deemed to be truly sustainable.
- Acquiring a space for siting communal facilities and, in some cases, payment for the use of land, has been a major problem. The nature of the problems was found to be unique to particular settlements; thus specific solutions had to be worked out for specific situations. Although it may not be possible to have a generalised approach in this respect, it is important to reach an agreement beforehand to prevent any future misunderstanding regarding the amount and nature of payment. Transparency promotes accountability for both the parties involved.
- Often it is found that institutions, office establishments and middle and high income communities create obstacles to the siting of communal water points. DSK's experience shows that, in a few cases, substantial time and effort was spent to motivate the larger community. It seems important for a future strategy to accommodate these problems. Media advocacy and lobbying for slum residents' rights may help.
- Men totally dominate committees comprised of men and women. On the other hand, all-women committee in an intimidating social structure of slums and squatter settlements also runs into problems. To maintain the balance, two separate committees,

one of men and the other of women, are necessary till women's groups gather sufficient strength.

Box 4: Resistance from Middle Class Neighbours- Lake View Residential Area

This squatter community is located opposite the road along a middle class government staff quarter. The community has suffered from water scarcity for a long time and made a request to DSK for a water point. Based on the initial needs assessment, a projection meeting was organised and the community agreed to proceed according to the DSK manual. A savings and credit group was also formed at the same time to facilitate more group interaction.

The community selected a vacant space close to the staff quarter boundary. As the construction started, the residents of the government staff quarter immediately sent a written complaint to the local police. The police intervened on their behalf and ordered DSK to stop their construction activities. The construction engineer of DSK, along with the labourers, was arrested by the police. A group from the community went to the police station and got them released. While this was going on, the staff quarter residents fenced in the entire open area, which was outside their boundary and belonged to DCC. They also demanded that the squatter community be removed from the area.

The community started mobilising the relevant authorities in their favour, and met the local Ward Commissioner, Officer-in-Charge of the Police and the Central Command of the *Bastuhara Samiti* (Homeless Society). The Police and the Ward Commissioner came to the area. They suggested that the parties find a mutually acceptable solution. A site was found on this basis, located on another side of the staff quarter. However, no sooner had the construction begun than another senior officer again called the police and ordered the labourers to stop construction. DSK was convinced that continuing like this would result only in waste of time and effort, so they suggested that the community find a place in their neighbourhood by vacating a house. The community still tried for a while to get hold of some space in the vacant land next to the staff quarter, and lobbied the political parties through their own social network. However, nothing could be done to remove the fence around the staff quarter. Finally, they persuaded one of their community members to move from his home and site the water point there.

4.5 Community perception¹⁹

Generally, community members expressed satisfaction about the project performance. Now they have a reliable source of water, and the payment, in many cases, is lower than they used to pay earlier. In cases where they pay the same amount as before, the project intervention is still attractive as they feel ownership over the water supply point. They are also free from harassment by waterlords and the consequent insecurity. The other positive aspect of the project has been the provision of a bathing and washing space, which is largely non-existent at the illegal points. Experience also shows that even the very poor are willing to pay for the capital and recurring costs for reliable services. This runs contrary to official claims that services for the poor would require subsidies which have adversely influenced policies for provision of public utilities to the poor. The project experience thus has implications not only for the sustainability of the project, but also for the wider policy debates for reform in the public utility agencies to make them more responsive to the needs of the poor.

¹⁹ This section is based on focus group discussions with members of 10 water management committees and the users

The communities also suggested a number of issues for improvement in future interventions. These included:

- organise strong lobby against the illegal water connections to make the community provisions more profitable;
- involve the community members more in design and implementation stages;
- arrange separate bathing spaces for women and men;
- conduct more regular meetings to consolidate group cohesion and solidarity;
- promote horizontal interaction workshops to discuss success and failure among the communities;
- extend the project to include their other needs like health care, credit and skill training;
- make clear agreements with respect to proper payment for land offered by the community members for common use; and
- extend DSK mediation for garbage collection, toilet facilities, electricity and gas supplies.

Given the flexibility and strength of the project approach, DSK could respond to many of the above points. It seems, however, that DSK has worked with only a skeletal staff and set an ambitious target in relation to their capacity. At the beginning of the project in May 1996, DSK had only 3 full time staff, 1 manager, 1 construction supervisor and 1 field worker (programme supervisor). Only in September 1997, did DSK add 1 co-ordinator and 8 community health workers to the team. The total strength is now expanded to 12 staff who are assigned to organise the entire programme, i.e., 30 on-going and 30 planned water points. Given the sensitive power structure in the slum and squatter settlements; the strong competition for scarce resources; and the continuing community demand for DSK's services, projects in future should allow sufficient staff and time for developing a sustainable community managed and community owned programme. DSK has also been contracted by WaterAid to play a role as a Technical Support Provider to new NGOs working in the sector, and resources are also required for them to be able to carry this out.

4.6 Risks

Understanding the power structure in the slum and squatter settlements and applying a flexible strategy have been the most important challenges for the community and DSK. The power structure is important in all the stages of the project cycle. Initial planning may be frustrated by non co-operation of the power holders, but they may come back during implementation to try to reap benefits from the project without making any contribution. Finally, once the project is completed, there is still a risk that the project may be appropriated from the community and replaced by private management claimed by the power holders.

A greater risk appears in the form of eviction of the squatter settlements and dismantling of the facilities of the water centres, as has happened recently in case of a neighbourhood

in Shyamoli. A group of powerful people claimed ownership over the entire land on which the squatter settlement was located, paid nominal compensation to the residents coupled with threats, and hung up a signboard with their names on it as owners. The hand pumps were pulled out and the water point facilities were buried. Eviction of this nature goes clearly against the declared policies of the government and a more concerted effort by all concerned agencies needs to be taken against the perpetrators of such gross violations.

Another risk is that true devolution of management to the community may not take place, and that DSK and the other NGOs replicating the model may have to continue to manage, indirectly, a larger and larger number of water points.

CHAPTER V

OVERALL LESSONS

The DSK experience has contributed to the growing consensus that participation of the poor majority is an essential condition for ensuring sustainability of development interventions. Empowerment of the poor is being recognised both as a means and an end to all development efforts. The major issue now is to promote the participation of community groups in improving access to basic services, and to formulate appropriate institutional responses to tackle the barriers to increased levels of participation²⁰.

The project described here was devised to emphasise the participatory aspects of the development process and recognise the need to empower the poor to participate in the planning, assessment, designing and implementation of community based water and sanitation projects. It has also brought forward the need to build capacity of the utility agencies to be more responsive to the needs and interests of the poor.

More specifically, the twin steps required to achieve the strategic objective of meeting the needs of the urban poor are identified as:

- Social mobilisation and formation of community groups: it is also important to exchange experiences among community groups to share innovations, reflect on their experience and expand the organisation and unity of the urban poor; and
- Capacity building for the utility agencies: this requires a clear commitment and the necessary policy guidelines to include the majority of the urban population in planning and resource allocation; plus orientation and training of staff to be able to respond to the needs of the urban poor.

However, the innovative nature of the project stems from the use of the community-based organisations or NGOs to act as mediators in helping the poor to access government agencies. On a general level, it is encouraging that this experience on the ground is being reflected in national policy documents related to other sectors as well. The Dhaka Metropolitan Development Plan recognised the increasing importance of community-led initiatives and participation in the land development process, which gave priority to the basic needs of the urban poor, and of mobilising the efforts and resources of the informal private sector. It further recommended that a similar approach could be used by the utility companies in determining their priorities. While social mediation has been found to be an important strategy for gaining access to basic services by the poor, it must remain as an intermediate solution - the poor have to be recognised in their own rights as equal partners in city development.

²⁰ Cotton, Andrew, Sohail, Muhammad and Taylor, Kevin 1996 *Community Initiatives in Urban Structure*, ODA, WEDC, GHK Training, London

Annex I

Excerpts from the Water supply and Sewerage Authority Act 1996

Chapter IV Powers and Duties of the Authority

16. Authority to be guided by Government directions on questions of policy:

- (1) The authority, in discharging its functions under this Act, shall be guided, on questions of policy, by a general policy statement to be issued by the Government.
- (2) Subject to the provision of sub-clause (1), the Authority shall formulate schemes, determine the programme of works, and authorise expenditure in connection with the affairs of the Authority.
- (3) The Authority shall sign an annual performance contract with the Government defining specific targets to be achieved by the Authority in the coming year.

17. General powers and duties of the Authority:

- (1) Notwithstanding anything contained in any other law for the time being in force, the Authority may take up all or any work specified in sub-section (2) and realize, in the prescribed manner, rates or charges thereof from the beneficiaries.

Provided that the Authority, if it deems fit, may impose and collect a sewer surcharge at a rate not exceeding the normal sewer rate from a holding the owner of which has failed to take sewer connection within six months of the commissioning of sewerage system in the area.

- (2) The Authority may frame a scheme or schemes for the area within its jurisdiction or any part thereof providing for all or any of the following matters, namely:
 - (a) construction, improvement and maintenance of water works for collecting, purifying, pumping, storing and distributing potable water;
 - (b) discontinuance of any existing drains which has, in its opinion, become useless or unnecessary;
 - (c) construction and maintenance of drainage works for drainage facilities including storm water drainage.
- (3) Every scheme prepared by the Authority under sub-section (2) shall be submitted by the Managing Director, for approval, to the Board with the following information:
 - (a) a description of the scheme and the manner of its execution;

- (b) an estimate of costs and benefits, the economic and financial justification, the allocation of costs to the various purposes to be served by the scheme, method of cost recovery and the amounts to be paid by the beneficiaries; and
 - (c) a statement of the proposal by the Authority for the resettlement, if necessary, of persons likely to be displaced by the execution of the scheme.
- (4) Notwithstanding anything contained in sub-section (3) where any scheme prepared under sub-section (2) is required to be financed by the Government directly or where funding for such scheme is obtained under the guarantee of the Government, the scheme shall be submitted by the Board to the Government for approval with the information specified in sub-section (3)
- (5) The Board of the Government, as the case may be, may sanction, or may refuse to sanction, or may return for re-consideration any scheme submitted to it under sub-section (3) or sub-section (4) as the case may call for such further details or information about the scheme as it may consider necessary.
- (6) The Authority shall render its services as efficiently as possible and take all measures necessary to recover fully the cost of such services.
- (7) The Authority may for the attainment of its purposes and objectives:
 - (a) own, purchase, exchange, lease, mortgage, sell encumber or otherwise dispose off property, both movable and immovable;
 - (b) enter into any contract and undertake any obligation;
 - (c) formulate policies, consistent with public interest and requirements and execute them, and revise or repeal them, if necessary;
 - (d) exercise such powers and perform such other functions as may be directly or indirectly necessary for the aforesaid purposes.

Annex – II

Financial Statements of the Water Points as of February 1999, Dushtha Sashtya Kendra (DSK)

Sl. No.	Name of water point	Opening Date	Repayment Start date	Capital Fund	Monthly Installment	Collection		Expenditure				Repayment Cumulative		Cash at Bank
						Current month	Cumulative	Current month		Cumulative		Due	Paid	
								DWASA bill	Maintenance	DWASA bill	Maintenance			
01	Bash Ban	12/12/96	11/07/97	31,652 00	1,318 83	3,183 00	78,276 00	2,431 49	2,797 00	31,735 62	23,962 00	25,717 18	22,578 38	(3,138 80)
02	Shaymoli **	6/12/96	5/06/97	28,496 00	1,187 33		23,027 00				4,466 00	24,933 93	18,561 00	(6,372 93)
03	Dhamal Cot (East)	15/02/97	15/09/97	33,176 00	1,382 33	1,152 00	40,141 00		500 00		13,688 00	24,190.77	24,190 77	2,622 23
04	Dhamal Cot (West)	15/02/97	15/09/97	29,714 00	1,238.08	780 00	38,720 00		500 00		14,263 00	21,666 40	21,666 40	2,790 60
05	Pantha Path **	18/08/97	18/03/98	43,492 92	1,812 21		33,123 00	2,819 00		19,155 00	7,790 00	20,840 41	6,182 00	(14,658 41)
06	Padma Slum	18/09/97	18/04/98	43,807 00	1,825 29	2,178 00	43,188 00	11,977 00	646 00	23,139 00	11,302 00	19,165 54	8,747 00	(10,418 54)
07	Mohakhali Sattala	14/10/97	14/05/98	29,703 00	1,237 63		10,348 00	588 00		2,221 00	6,249 00	11,757 48	1,878 00	(9,879 48)
08	Dhamal Cot (North)	10/09/97	10/04/98	39,408 00	1,642 00		11,277 00				6,827 00	16,967 00	4,450 00	(12,517 00)
09	Lala Sarai	10/09/97	10/04/98	39,903 00	1,662 63	950 00	34,260 00		840.00		15,738 00	17,180 51	17,180 51	1,341 49
10	Power House	10/09/97	10/04/98	36,153 00	1,506 38	860 00	14,583 00		540 00		3,709 00	15,565 92	10,874 00	(4,691 92)
11	Pike Para	11/09/97	11/04/98	36,188 00	1,507 83	3,020.00	47,350 00		530 00		11,274 00	15,580 91	15,580 91	20,495 09
12	Ansar Camp	11/09/97	11/04/98	36,755 00	1,531 46	3,135 00	54,112 00		700 00		12,584 00	15,825 09	15,825 09	25,702 91
13	Balur Math (Kalsi)	10/09/97	10/04/98	35,485 00	1,478 54		9,793 00				2,517 00	15,524 67	7,276 00	(8,248.67)
14	South Vasantek	10/08/97	10/03/98	35,996 00	1,499 83	570 00	15,295 00		139 00		8,045 00	17,248.04	7,250 00	(9,998 04)
15	Tejgaon Truck	1/12/97	1/06/98	40,078 00	1,669.92	1,693 00	12,096 00			5,385 00	3,691 00	15,029 28	3,020 00	(12,009 28)
16	Dhamal Cot (South)	19/03/98	11/10/98	37,789 00	1,574 54		6,686 00				5,905 00	7,085 43	781 00	(6,304.43)
17	Kallyanpur Pora Basti	1/03/98	1/09/98	38,646 00	1,610 25	618 00	12,774 00		500 00		7,684 00	9,661 50	5,090 00	(4,571 50)
18	Magh Bazar Wireless Gate	1/06/98	1/12/98	30,234 00	1,259 75	1,527 00	18,182 00		630 00		4,779 00	3,779 25	3,779 25	9,623 75
19	Kallyanpur Pora Basti			38,295 00	1,595 63									
20	Dilu Road Slum													
21	Textile (Latrne)	12/02/98	12/08/98	20,242 00	843 42	560 00	9,353 00				808 00	5,482.23	5,482.23	3,062.77
22	BRTC (Latrne)	6/03/98	6/09/98	19,412 00	808 83	1,500 00	17,548 00				716 00	4,852 98	4,852 98	11,979 02
	Total			724,624 92	30,192 71	21,726 00	530,132 00	17,815 49	8,322 00	81,635 62	165,997 00	308,054 52	205,245 52	(25,551 14)

Sl. No.	Name of water point	Opening Date	Repayment Start date	Capital Fund	Monthly Installment	Collection		Expenditure				Repayment Cumulative		Cash at Bank
						Current month	Cumulative	Current month		Cumulative		Due	Paid	
								DWASA bill	Maintenance	DWASA bill	Maintenance			
01	Nakhal Para	1/04/97	1/10/97	35,634.00	1,484 75	3,000 00	111,890 00	11,511 00	6,115 00	43,979 00	29,351 00	25,240 75	25,240 75	13,319 25
02	Milk Vita	2/04/97	2/10/97	29,981 92	1,249 25	1,043 00	33,878 00	8,415 00		24,392 00	7,105 00	21,237 25	2,381 00	(18,856 25)
03	Nurani	26/04/97	26/11/97	33,030 00	1,376 25	1,261.00	53,961 00	11,954 00	877 00	32,120 00	19,542 00	20,643 75	2,299 00	(18,344 75)
04	Textile LMSS	15/09/97	15/04/98	37,730.00	1,572 08	3,395 00	49,939 00	13,852 00	800 00	29,415 00	13,605 00	16,506 84	6,919 00	(9,587 84)
05	BITAC	23/09/97	23/04/98	34,617.00	1,442.38	3,933 00	52,873 00	5,279 00	1,049 00	25,999 00	12,426 00	14,423.80	14,423 80	24 20
06	BRI	15/09/97	15/04/98	37,462 00	1,560 92	348 00	24,281 00	3,575 00		7,386 00	9,859 00	16,389 66	7,036 00	(9,353 66)
07	Settlement Press	15/09/97	15/04/98	38,285 00	1,595 21	4,160 00	73,900 00	12,749 15	3,350 00	31,933 53	18,232 00	16,749 71	16,749 71	6,984 76
08	Central Press	10/09/97	10/04/98	38,547 00	1,606 13	979 00	69,300 00	13,482 00	55 00	45,603 00	20,435 00	16,864 36	3,262 00	(13,602 36)
09	BRTC	18/09/97	18/04/98	35,734 00	1,488 92	3,249 00	55,927 00	4,863 00	812 00	17,431 00	10,952 00	15,385 52	15,385 52	12,158 48
10	CNB	17/09/97	17/04/98	34,010 00	1,417 08	2,107 00	36,184 00	7,954 00	500 00	18,361 00	9,087 00	14,879 34	8,736 00	(6,143 34)
11	TTC Slum	08/07/98	8/01/99	46,777 00	1,949 04	5,450 00	39,057 00		807 00		7,621 00	4,547 76	4,547 76	26,888 24
12	Tiger	18/12/97	18/06/99	34,898 00	1,454 08	1,200 00	2,800.00		500 00		1,150 00			1,650 00
13	TCB	04/09/98	4/03/99	43,284 32	1,803 51	1,307 00	11,996 00		560 00		3,794 00			8,202 00
14	Rahim Metal	04/09/98	4/03/99	44,868.32	1,869 51	1,974 00	8,227 00		560 00		3,557 00			4,670 00
15	Ramna Cigarettee	15/09/98	15/03/99	47,112 72	1,963 03	1,429 00	7,100 00		560 00		2,755 00			4,345 00
16	Omar Sons			41,353 32	1,723 06						60 00			(60 00)
17	Progoti	10/11/98	10/06/99	48,755 32	2,031 47	1,273 00	1,966 00		315 00		595 00			1,371 00
18	Bitac-2	07/12/98	7/06/99	42,670 25	1,777 93	868 00	1,894 00		300 00		300 00			1,594 00
19	Boot Factory	27/02/99	27/09/99	41,060 25	1,710.84	93 00	93 00							93 00
20	Northern Marble	22/02/99	22/09/99	37,289.25	1,553 72	112 00	112 00							112 00
	Total			783,099 67	32,629 15	37,181 00	635,378 00	93,634 15	17,160 00	276,619 53	170,426 00	182,868 74	106,980 54	5,463 73

** Shyamoli and Panthapath Water Point Slums were evicted and therefore, the water points in the two slums were closed

N B All water points get a grace period of six months, after which the capital cost will be repaid within next 24 months in 24 equal installments.

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