

Case Study on a Slum Improvement Project in Dhaka Metropolitan City

Quamrul Islam Siddique

A.B.M. Ashraful Alam

Mohibbur Rahman

Aminur Rahman

Hasin Jahan

Local Government Engineering Department

Ministry of Local Government, Rural Development & Cooperatives

ABSTRACT

The case study on the Slum Improvement Project (SIP) in Dhaka Metropolitan City, by the Local Government Engineering Department (as of 1991), was undertaken to highlight some of the innovative socio-economic programmes implemented for urban slum dwellers, as well as some lessons learned from them. The overall achievement of the SIP is satisfactory, as the model made a breakthrough in providing an integrated package of basic physical, social, and economic infrastructure services to the urban poor. Of all SIP components, the micro-credit programme has been found to be particularly successful and most attractive. Many poor households have increased their incomes using this facility. The SIP has significantly raised levels of health awareness among slum dwellers, resulting in significant reductions in the incidence of numerous diseases. The SIP has empowered poor women through community involvement, particularly through the savings and credit programme, thereby raising the overall status of women in families and communities.

Some of the components of the project were barely able to reach the poorest of the poor, who remain virtually outside the reach of SIP credit and savings programmes. The land tenure issue has not yet been comprehensively addressed by the SIP. With physical infrastructure development, the non-physical needs such as human resource development, social mobilization, community organization, and participation, which are all vital for project sustainability, need to be further developed. Although slums have become an inevitable part of urban life and land use, eviction is still a constant threat to the existence of slum dwellers.

INTRODUCTION

The Global Urban Transformation

The developing world's cities are currently expanding at 62 million inhabitants per year, which is equivalent to adding a country the size of É Turkey or Thailand every year. By the year 2015, urban population in developing countries will double in size and for the first time, will surpass the rural population. Fully 88 per cent of the world's total population growth will be located in the rapidly expanding urban areas and 90 per cent of that urban

growth will be absorbed by the developing world. Table 1 below gives an estimate of increase in urban population during the coming decades.

TABLE 1. ESTIMATED FUTURE URBAN POPULATION

Period	World Population (Billions)	Urban Population (Billions) (percentages in parentheses)		
		Total	Developing World	Industrial World
Year 1975	4.08	1.54 (37.7)	0.81 (52.67)	0.73 (47.4)
Year 2000	6.16	2.92 (47.4)	2.02 (69.2)	0.90 (30.8)
Year 2025	8.29	5.07 (61.2)	4.03 (79.5)	1.04 (20.5)

Source: World Bank, *Livable Cities for the 21st Century*, (Washington D.C., 1995).

Large cities will house an increasing share of urban dwellers; one in four in cities of over 500,000 inhabitants, and one in ten will live in a rapidly growing number of mega cities, of over 5 million residents. Whereas twenty-eight of the world's thirty-eight cities with more than 5 million inhabitants were in developing countries in 1995, by the year 2015 the number will be fifty-nine of seventy-one such cities.

The largest cities are slowing in growth with natural increases predominating over in-migration areas - each one comprising many municipal jurisdictions - the urban peripheries typically grow much faster than the core cities. But the highest urban growth rates are often observed in the secondary cities of developing countries. The fast pace of the growth of intermediate cities of between 500,000 and 1 million population means that many such cities will be transformed into large metropolitan areas within a decade.

Source: World Bank, *Livable Cities*, (1995).

Bangladesh Scenario

With an estimated population of over 120 million, Bangladesh is one of the most densely populated countries of the world. The overall population of the country is growing at 1.87 per cent annually, while the urban population is growing at an even faster rate of 4.9 per cent, due to urban migration and the territorial expansion of existing urban areas.

In 1991, the urban population increased to 22.45 million (from 2.6 million in 1961), and between 1981 and 1991, it is estimated to have increased at an average of 5.4 per cent per annum^{1/}. One estimate suggests that the urban growth rate is not expected to fall below 4 per cent per annum until 2010. Currently, the urban population is 25 million - over 20 per cent of the national population.

With this tremendous rate of urbanization, a substantial urban population increase has taken place, both in absolute terms and as a percentage of the total population, during the past

twenty-five years, as shown in table 2.

TABLE 2. RATE OF URBANIZATION

Year	Urban population (millions)	Percentage of total population
1961	2.6	4.8
1991	22.45	20.15*
1995	25	20.83**

Source: *Bangladesh National Report*.

Notes:* Out of this 20.15 per cent, the female population has been estimated at 14 per cent, adding a new dimension to urbanization.

** Estimated on the basis of 1991 census figures and subsequent annual growth rates.

In terms of the distributions of urban centres, Bangladesh represents a fairly well-balanced spatial pattern, irrespective of size and class distributions. Most of the urban population is concentrated in Dhaka and Chittagong, followed by Khulna, thus accounting for three of the six administrative divisions in the country.

The fastest growing sections of the urban areas are the slums. Migrants seeking shelter in slums do not generally have any other homes to turn to. They are so poor that, at best, they can hire basic accommodation in crowded slums. Limited absorption capacities of the cities, coupled with the low-income status of the majority of migrants, have contributed to the creation of slums.

The overall environmental conditions in slum areas are deplorable. Due to the lack of basic infrastructure facilities, the slum dwellers are living in sub-human conditions. They are usually suffering from diseases due to unsafe water and the unhygienic disposal of sewage. Moreover, the general degradation of environmental conditions within the slums also has significant impact outside the settlement. Providing basic infrastructure facilities to slum dwellers will not only improve the environmental situations in the slums and outer areas, but will also contribute extensively to the reduction of poverty.

Urban Development Projects of the LGED

During the 1960s, the model of "Works Programme" was developed by the Bangladesh Academy for Rural Development, in order to generate employment and income during lean periods in winter. The activities were executed by the Ministry of Local Government, Rural Development and Co-operatives (MLGRDC) through the local government bodies at the union^{2/}, thana^{3/} and district^{4/} levels. For effective coordination, the Works Programme Wing was created in the ministry in 1982, for the implementation of rural and urban infrastructure development, through "Rural Works Programme" and "Urban Works Programme," respectively. The programme had been rejuvenated in 1984, when the Local Government Engineering Bureau (LGEB) was created. The Bureau was upgraded to a Department (LGED) in 1992, and mandated as the technical arm of the MLGRDC, to provide technical services to local government bodies. Such bodies (e.g., district, thana, and union councils) are age-old institutions providing basic municipal services to the population, headed and managed by elected representatives. Presently, the LGED is implementing a number of urban development projects funded by the Asian Development Bank (ADB), World Bank, UNICEF, and other development partners, and is regarded by the World Bank as "the government that works" to provide infrastructure development services.

Slum Improvement Under the LGED

The Slum Improvement Project (SIP) under the LGED began in 1985 in five municipalities, and the first phase ended in 1988. For the second phase (1988 - 1996), the SIP extended its programme to four city corporations and twenty-one municipalities. A follow-up project, the "Urban Basic Services Delivery Project" started in 1996 and will be continued until 2000. Since the SIP model for *in situ* slum improvement has proved to be very successful in the socio-economic context of Bangladesh, several projects within the LGED have adopted slum improvement activities as separate components within their overall operations. Among these projects, the Secondary Towns Infrastructure Development Project, Phase I, (1992-1997), funded by the ADB, saw activities in ten municipalities. The programme has been extended into twenty-two more municipalities for Phase II, and will be continued up to the year 2001. Another project, Secondary Towns Integrated Flood Protection Project, with slum improvement activities as one of its components, began in 1992 and covers one city corporation and five municipalities. This project will be continued until 1998. There are three more projects which will be started soon, namely, the Community Empowerment for Urban Poverty Alleviation Project, (funded by the UNDP for four city corporations), and the Urban Poverty Reduction Project (UPRP) (funded by ADB) for the Dhaka City Corporation (DCC), both of which are entirely slum development projects; and the Municipal Services Project (funded by the World Bank), which also contains slum improvement components. Slum improvement activities of the LGED are summarized in table 3.

DHAKA SLUM IMPROVEMENT PROJECT

Urban Slums in Dhaka

Dhaka, the capital city of Bangladesh, is one of the fastest growing mega-cities in the world. Slums pose one of the biggest problems of the city. Around 12 per cent of the total population of the city live in slum areas, which are very densely populated: in Dhaka city, 750 or more people live per ha of land in the slum areas, and generally three or more adults live in a room of 120 ft². These areas have few or no basic utility services, including potable water, sanitation, drainage, etc.

The total number of slum and squatter settlements (clusters) in the Dhaka Metropolitan Area (DMA) is approximately 3007, as recorded by the UPRP-CUS (Centre for Urban Studies) survey in 1996. Of these settlements, 2328 (77 per cent) are slums located on privately owned land, and the remaining 679 (23 per cent) are squatter settlements on public land (see table 4).

TABLE 3. URBAN DEVELOPMENT PROJECTS OF THE LGED (SLUM COMPONENTS)

Sl. No.	Name of project	Total Project Cost TK ^{5/} (million)	Cost for Slum Improvement Tk(million)	Donor	Implementation Period	No of slums	No of Families	Geographical Coverage
1	Slum Improvement Project-1 (1st Phase)	5.90	5.90	UNICEF	1985-1988	25	2000	5 Municipalities
2	Slum Improvement Project-2 (2nd Phase)	243.40	243.40	UNICEF	1988-1996	200	43000	4 City Corporations & 21 Municipalities
3	Secondary Towns Infrastructure Development Project-1 (Slum Improvement Component)	1900.00	37.08	ADB	1992-1997	43	255	10 Municipalities
4	Secondary Towns Infrastructure Development Project-2 (Slum Improvement Component)	3330.00	77.20	ADB	1996-2001	100	10000	22 Municipalities
5	Secondary Towns Integrated Flood Protection Project-2 (Slum Improvement Component)	1300.00	36.47	ADB	1992-1998	49	8356	1 City Corporation & 5 Municipalities
6	Urban Basic Services Delivery Project	342.00	342.00	UNICEF	1996-2001	-	165,000	4 City Corporations
7	Community Empowerment for Urban Poverty Alleviation	603.00	603.00	UNDP	1996-2001	-	120,000	4 City Corporations
8	Municipal Services Project (Slum Improvement Component)	4000.00	Study on going	WB	1995-2000	-	-	2 City Corporations & 14 Municipalities
9	Urban Poverty Reduction Project	-	Study on going	ADB	1998-2002	-	-	Dhaka city corporation

Source: LGED.

TABLE 4. AREA, POPULATION, AND POPULATION DENSITY IN SLUMS AND SQUATTER SETTLEMENTS

Item	Slums	Squatter Settlements	All Settlements
Number of Settlements	2,328	679	3,007
Percentage	77.4	22.6	100
Area (ha)	222	202	424
Percentage	52.4	47.6	100
Population	559,930	544,670	1,104,600
Percentage	50.7	49.3	100
Population Density Persons/ha	2,522	2,696	2,605

Source: UPRP-CUS, (Dhaka, 1996).

Virtually all of Dhaka's slums and squatter settlements developed over the past twenty years (as shown in table 5). Of the total of 3,007 settlements, 90 per cent (2,692) developed since 1971, and this growth was particularly evident during the 1980s and 1990s.

TABLE 5. DISTRIBUTION OF SLUM AND SQUATTER SETTLEMENTS BY YEAR OF ESTABLISHMENT

Period of Establishment	Number of Slums/Squatters	Percent
Before 1971	315	10.5
1971-1980	782 (average 78 per annum)	26.0
1981-1990	1,369 (average 137 per annum)	45.5
Since 1991	541 (average 108 per annum)	18.0
Total	3,007	100

Source: Ibid.

In Dhaka City, the SIP covered eighteen slums and squatter settlements, and assisted 6,415 families (or about 31,000 people). Geographically, these settlements are concentrated in seven areas, spanning six thanas of the city.

SIP activities in Dhaka started in 1991, and by January 1995, a total of eighteen slums had been selected, mostly on the basis of subjective criteria and the availability of land. All of these slums are located on government land, (mostly DCC land), where employees, their sub-letters, and other tenants live together. The number of households in these slums varies from 130 to over 800, and populations vary from 625 persons to about 4000^{6/}.

Objectives of the SIP

The broad aim of the SIP is to improve the quality of life for slum dwellers, who are the beneficiaries of the project, by providing basic services that improve their living conditions, and by increasing the ability of the government to work with urban poor communities in the planning and provision of basic services.

There are six specific objectives of the project:

- i. to increase the capacities of municipalities and city corporations to work with urban poor communities in planning and providing basic services;
- ii. to promote self-reliant and sustainable community development efforts through the mobilization of community resources and access to government services;
- iii. to involve poor slum women in income-generating activities for their own benefits;
- iv. to improve nutrition and health conditions for children and women through the provision of an integrated basic service package;
- v. to improve overall living conditions in the slums; and
- vi. to develop comprehensive national policies and plans to promote the benefits and possibilities of extending basic services to the urban poor.

Implementation Arrangement of the SIP

The management and implementation structure of the SIP consists of three committees, namely, the Central Coordination Committee (CCC) at the national level, the Project Implementation Committee (PIC) at the municipal level, and the Sub-Project Implementation Committee (SPIC) at the slum community level. The institutional structure for slum activities is shown in figure 2.

At the national level, there is the inter-ministerial CCC, headed by the secretary of the local government division, who advises and assists in the formulation of policies and procedures, and coordinates technical, financial, and policy support for the project at the national level.

At city and municipal levels, there are the PICs, which play the most important roles in the implementation of the project. PICs are responsible for the management and coordination of the project activities, and maintain the linkages between the CCC and the SPICs, which are responsible for project implementation. Within the institutional arrangement of Dhaka at the PIC level, the Chief Slum Development Officer (CSDO), acting as Project Manager, and the Community Organizers (COs) are the key people at the implementation level, through which the activities and concepts take shape. The CSDO, being a core municipal staff member, is responsible for all major development and maintenance activities in the municipality, in addition to his SIP duties.

The SPICs, comprising beneficiaries and headed by an elected official, are responsible for the execution of the project in urban poor communities. The SPICs regularly review progress, maintain records, and handle finances for the project activities in their areas.

For the direct management and coordination of this project, there is a group of project implementation officers in the LGED, made up of a project director, and assisted by one deputy project director, two assistant engineers, one sociologist, and other support staff. The project director maintains close contact with the chairman of the PICs, and with the local project manager. The project director also maintains in close contact with representatives from the development partners, for effective implementation, monitoring, and management of the project. The project director is responsible for supervising and managing the project effectively.

Major Components of the SIP

The main features of the various SIP components, which include group formation and participation, primary health care, water and sanitation, education, upgrading of physical

infrastructure, and savings and credit are outlined below.

Group formation and participation : Ten to fifteen poor families must be organized into an effective group in the selected slum of the project towns. Each group forms a SPIC, electing a chairman and a vice-chairman from the community, one of whom must be a woman. All planning and implementation of activities are done through the SPIC. Teachers and Community Health Workers (CHWs) are selected by each SPIC.

Figure 2. Implementation Structure of Slum Improvement Project

<u>Central Co-ordination Committee (CCC)</u> National level: Local Government Division, M/O LGRD & C	
Chairman	: Secretary, Local Government Division.
Member-Secretary	: Project Director, SIP
Member	: Relevant Agency Head / Ministry Representative (8 nos.)

<u>Project Implementation Committee (PIC)</u> (Local level : City corporation)	
Chairman	: Municipality Chairman / Mayor of City Corporation
Member-Secretary	: Project Manager, SIP.
Member	: Ward Commissioner, District and SPIC Representatives.

<u>Sub-Project Implementation Committee (SPIC)</u> (Community level in each slum)	
Chairman	: Elected from Community
Vice-Chairman	: Elected from Community (one of the two must be woman)
Member-Secretary	: Community Organizer
Member	: Group Leaders

<u>Working Group (Only Women)</u> (Women community group)	
Group Leader	: Elected from Group
Secretary	: Elected from Group
Member	: Women family heads

Primary health care: Each SPIC selects several CHWs from among the slum dwellers. The project manager trains all CHWs, and each CHW is assigned to the public health care of fifty families. The SIP supplies necessary drugs/storage free of charge. Medicines are sold by the CHWs to the beneficiaries, at half of the market price, and the proceeds are deposited into a revolving fund.

Infrastructure development: One shallow tube well (a small-capacity tube well, operated manually) for each group of ten to fifteen families, one Tara pump (a small-capacity tube well, operated manually but able to extract water from below 10 m) for two groups, or one deep tube well (a well of slightly larger capacity) for three groups, are installed. One water-seal latrine for three families, or one community latrine *cum* bio-gas plant is installed, depending on the requirements. Footpaths are constructed, to a maximum extent of 3 m per family, as well as lined drains, to a maximum extent of 2 m per family. One masonry dustbin is established for every 100 families, and one street light is erected for every forty families.

Self-income generation programme^{7/}: Every woman is given credit and skill development training, with the objectives of promoting self-dependence and increasing income. Habits which are conducive to saving are encouraged among all slum dwellers, with a view to generating capital.

Satellite school: A large number of children, especially girls, are not able to attain a basic primary education. Therefore, several programmes have been undertaken as initiatives within the project through the establishment of a satellite school in each slum. First, to assist the children in gaining admission into formal educational institutions, they are provided with classes I and II, free of charge. Second, a teacher (who has received a Secondary School Certificate) is selected from the slums, and appropriate training is provided given for her accordingly. Further, all students are provided with books and materials free of charge.

Skill development training^{8/}: With a view to enabling women to use their credit and savings for income generation through self-employment, skill development is essential. To this end, one woman in each slum receives "training of trainers" (TOT) and, upon completion of this course, conducts training sessions on skill development for selected women within the slum. Areas of training include sewing, embroidery, tailoring, food preparation, house keeping, and other areas depending on local demand.

SIP per capita cost

The reported per capita expenditures on slum improvement programmes may not be very accurate, since the exact mixture of SIP components (including physical and social infrastructure, and credit) varies, and cost estimates are calculated on the basis of entire (i.e., not only beneficiary) slum populations. Unofficial estimates indicate that the per capita cost may be close to US\$40.

THE CASE STUDY

Objectives

The basic objective of this study is to highlight some of the innovative socio-economic programmes implemented for urban slum dwellers under the SIP of the LGED in Dhaka, and the lessons learned from them. Specific objectives are to assess various aspects of the project's

activities, including

- i. the physical and social infrastructure activities;
- ii. the abilities of the infrastructure to meet basic human needs;
- iii. the capacities of basic and socio-economic services to improve the overall living conditions of slum dwellers;
- iv. the impacts of such programmes on the common conditions of poverty;
- v. the innovative policies, approaches, practices, and lessons regarding resource mobilization; and
- vi. the effectiveness and sustainability of cost-recovery techniques.

Background of the Study

This SIP was the first successful model for slum upgrading in urban Bangladesh. It was designed in 1985 to improve the quality of life for slum dwellers by mobilizing community resources and improving their access to government resources.

The SIP accomplished a major breakthrough in providing a basic physical infrastructure system to the urban poor. The underlying philosophy of the project was to establish an integrated economic, social, and physical development programme in urban slums through community organization and the provision of loans for income generation. Other activities like health, education, sanitation, and environmental improvements have been planned alongside the credit operation. Physical and human development are viewed as interdependent, insofar as the sustainability of physical development is contingent upon the success of human development.

This case study, therefore, is based on experiences in Dhaka, since slum problems here are, as in other mega-cities in developing countries, particularly acute. It is for the overall benefit of policy planners and concerned professionals that case studies are undertaken, to discern the inherent capabilities of the model so that it can be developed as a sustained, cost-effective, and replicable model. This study should be of equal benefit to policy planners, professionals, and practitioners, in discerning methods and means to solve common problems in slums.

Purposes of the Study

This study attempts to analyse the operational issues and problems relating to slum improvement interventions in mega-cities. The purpose of the study is four-fold. First, the context within which the interventions were made are established; second, a description of the interventions, the successes achieved, and the problems and constraints encountered, are presented; third, the lessons learned from the experience are discussed; and fourth, the policy and management issues are identified.

The analysis provides a detailed description of the SIP in its origin and growth, approach, technologies adopted, institutional arrangements, costs and financing, and its achievements. The achievements are discussed in terms of government progress towards a sustainable, cost-effective, and replicable slum improvement programme.

Case Study Coverage and Scope

The study covers eighteen slums within the DMA, where improvement activities have been under implementation by the LGED since 1991. The basic information on slums, slum populations, sex-ratios, numbers of families, and coverage under these activities were taken from the 1996 review of the SIP for the UPRP, commissioned by the ADB and LGED.

Methodologies of the Study

Design formulation: To arrive at sound methodologies, major considerations focused on relevance, reliability, accuracy, and cost effectiveness, among other factors. The methodology for this case study was developed with the above considerations in mind, on the basis of recent studies and field observations. The studies consulted were primarily sources from the LGED, ADB, and World Bank, and included printed reports, documents, guidelines, and manuals on the project components, as well as quarterly reports on the various slum activities as secondary data. Primary observations by the study team members focused on group discussions; rapid and participatory appraisals with slum dwellers; discussions with project management and staff, professionals, and practitioners in the field; as well as an Independent Household Survey (IHS) to assess the perceptions and opinions of the beneficiaries regarding project interventions.

Independent household survey: The methodology for this survey focused on specific criteria, so that unbiased opinions were polled through a set of simple, objective, and relevant questionnaires. It was realistically developed and based on standard methods, including physical infrastructure interventions, social and service infrastructure facilities, economic activities, efforts on cost recovery, and the participation of beneficiaries in the slum projects.

Sample size and sampling: The survey covered the populations of all eighteen slums under the SIP in Dhaka, and there are over 6,000 households in these slums. A 10 per cent sampling was done in each of the eighteen slums.

Whilst the UPRP-CUS survey proved useful to the establishment of broader demographic and socio-economic patterns and planning purposes, both focus-group interviews and the IHS also generated useful insights into community dynamics, demographic data, income, expenditure patterns, etc.

The sampling was based on coverage of the total slum area, representing all the occupational groups in the slums, with more weight given to the dominant occupational groups. The representation of women in the survey was 50 per cent.

The questionnaire was developed in accordance with the objectives of the study, and was pre-tested.

Orientation and training of the survey team: The survey team consisted of ten surveyors, and two supervisors were entrusted with the responsibility of conducting the survey. They were provided with an orientation/training session on the methodology of the IHS and the administration of the survey in the field.

Focus group discussions: Five focus group discussions were arranged, with slums grouped for rapid and participatory appraisal. Specific questions were raised and discussed in these appraisals concerning the activities, the participation of slum dwellers in the activities, efforts towards sustaining project activities, resource recovery efforts and problems, and suggestions for improvements were solicited from the slum dwellers.

Organization of data collection: Each survey team member was allotted fifty-five to seventy sets of questionnaires, where each set consisted of a separate questionnaire for all of the components. There were seven female and three male surveyors in the team. The survey

was implemented by two supervisors and the team members. They visited the survey areas to observe the work first-hand and sort out any problems in the field. The survey was conducted in April 1997.

MAJOR FINDINGS OF THE CASE STUDY

Physical Condition and Environment

The upgrading of physical infrastructure included the development of footpaths and drains, and the installation of tube wells, latrines, street lighting, and dustbins. These facilities obviously have a direct impact on the general improvement of the slum environment. They have also indirectly improved the health conditions of the poor and their quality of life. However, it was observed in the field that the improvements are not equal within all SIP slums, and that maintenance, especially of drains and garbage, seems to be poorer in some places (e.g., Khilgaon). Sometimes physical components do not respond to the characteristics of the local land terrain and therefore cause some water-logging and overflow of drains and sewers. For example, in Bauniabad (Mirpur) and Wari, the overall physical and drainage conditions seem to be quite satisfactory, while in Lalbag, four out of five slums remain in poor condition due to water-logging in the wet season, and overflowing drains and sewerage in almost all seasons. Khilgaon Bagicha and City Pally also have water-logging problems. Therefore, it is suggested that the operating procedures for the SIP regarding physical improvements should be made more flexible, and should recognize local people's needs and the peculiarities of individual sites. In addition, low-cost and labour-intensive technologies should be encouraged so that the slum dwellers can participate in construction work and thereby more easily afford the cost of development. To make this component more effective, a government "food for work" programme may also be implemented. Moreover, innovative strategies are needed to ensure long-term and sustainable maintenance for the physical infrastructure.

A common feature found in almost all SIP slums (bastees) is the malfunction of drains due to blockages caused by careless disposal of solid waste into house-side drains instead of the provided garbage bins. This is a very common practice found in almost all poor residential areas, market places, and other congested areas. In fact, this practice is severely obstructing the proper improvement of physical and environmental conditions in these areas, and causing health hazards around the city. Slums and squatter settlements, in particular, are consistently marked by poor living and environmental conditions, and by limited access to basic services through official sources.

Environmental improvement in slum areas depends greatly on the improvement of latrine facilities. The SIP has had success in providing sanitary latrines, but in some cases, due to their poor socio-economic background, slum dwellers showed limited interest in upgrading this particular utility. For many poor families, latrine prices (although subsidized) remain high. To overcome this situation, a latrine subsidy should be flexibly implemented and dependent on the incomes of the beneficiaries.

Most slums are more seriously threatened by natural calamities, heavy rainfall and subsequent flooding, epidemics, and eviction than non-slum households. Women in particular face special difficulties, as victims of violence and sexual abuse by mastaans^{9/} and others. Hence, social mobilization, leadership training for people's organizations, and possible linkages

between women and existing legal aid-related institutions need to be emphasized.

Income and Expenditure Patterns

With limited scope, the IHS (covering eighteen slums in Dhaka) generated some interesting insights into the income and expenditure patterns of male- and female-headed households. The incomes and expenditures of slum dwellers, from the IHS, are shown in tables 8 and 9.

TABLE 8. INCOME LEVELS OF SLUM DWELLERS

Sl.No.	Monthly income	Number of households	Percentage
1	< 1000	20	3.91
2	1000 - 1500	94	18.36
3	1501 - 2000	82	16.02
4	2001 - 2500	114	22.27
5	2501 - 3000	89	17.38
6	3001 - 3500	48	9.38
7	> 3500	65	12.70

Source: IHS, LGED, 1997.

Note: Incomes expressed in Tk (US\$1.00 = 43.00 Tk).

TABLE 9. EXPENDITURE LEVELS OF SLUM DWELLERS

Sl.No.	Monthly expenditure	Number of households	Percentage
1	< 1000	18	3.41
2	1000 - 1500	96	18.18
3	1501 - 2000	107	20.27
4	2001 - 2500	106	20.08
5	2501 - 3000	92	17.42
6	3001 - 3500	47	8.90
7	> 3500	62	11.74

Source: Ibid.

Note: Expenditures expressed in Tk (US\$1.00 = 43.00 Tk).

From tables 8 and 9, above, it can be seen that the predominant range of monthly incomes is between Tk. 1000 and 3000, which constitutes 74 per cent of the total sample of households. Only about 13 per cent of respondents have incomes above Tk. 3,500 per month, and again, about 74 per cent of families spend between Tk. 1000 and 3000 per month. This implies that the lowest income group (74 per cent) exhaust all of their earnings only to survive in the city.

From the IHS it has been found that overall, slum dwellers spend 50 to 60 per cent of their incomes on food. The second highest monthly expenditure is for housing purposes, between 15 and 18 per cent of their total earnings.

Age Structure and Labour Force Participation Rate

The compositions of sample slums are marked by the predominance of children (44 per cent)

in the overall populations, and a higher dependency ratio of about 70 per cent. The higher dependency ratio indicates an overwhelmingly large base of active-age population (54.5 per cent). Subsequently, poorer households are characterized by a higher labour force participation rate than less poor households. About two thirds of men and all working women are engaged in low- or no-skilled, low-paid jobs. The different occupational status of males and females is shown in table 10.

TABLE 10. OCCUPATIONAL STATUS OF SLUM DWELLERS

Sl.No	Occupation	Male (percent)	Female (percent)
1	Rickshaw/Van/Pushcart Puller	27.8	-
2	Auto Scooter/Baby Taxi/Tempo Driver	2.6	-
3	Driver of Other Mechanical Vehicle	0.9	-
4	Helper of Mechanised Vehicle	2.7	0.07
5	Vendor/Hawker	3.9	1.7
6	Petty Trader/Shop Keeper	11.2	2.23
7	Night Guard/Cleaner	5.03	1.15
8	Day Labourer	16.22	7.6
9	Garment/Other Factory Worker	5.94	15.76
10	House Maid/Servant	0.78	12.78
11	Other	13.83	10.23
12	Unemployed	6.56	5.84
13	Housewife	-	38.51

Source: Ibid.

The average monthly wage for female workers (Tk. 1050) is less than half that of male workers (Tk. 2150). The occupational history of the working population reveals that with increases in age, both men and women tend to change from more energy-consuming work (e.g., rickshaw pulling, construction work, factory work, etc.) to relatively less energy-consuming work (e.g., petty trading, house-maid, etc.). However, this horizontal mobility does not necessarily ensure greater income.

Level of Education and Skills

The results of the IHS regarding the educational levels of the respondents are indicated in table 11. Education has been categorized into nine levels. The first group consists of those who can neither read nor write, (more than 40 per cent of the slum population belongs to this group), and about 9 per cent are able to sign their names only.

Technologies Adopted

Technologies introduced in the project were simple and had already been widely used elsewhere in Bangladesh. They included hand-pump tube wells, water-sealed pit sanitary latrines, masonry bins for refuse disposal, surface drains, and footpaths. Public latrine *cum* bio-gas plants proved very successful in improving the sanitation situation, and also provided some respite to energy conservation. Choices of technology were made by the project designers, based on their own perceptions and discussions with the communities regarding what best suited their needs. Options were determined by the budgetary constraints of the project and the availability of the technology.

TABLE 11. EDUCATIONAL LEVELS OF SLUM RESPONDENTS

Sl.No.	Level of Education	Number of Households	Percentage of Households
1	Cannot read or write	202	40.97
2	Can read and write	62	12.58
3	Primary up to Class V	118	23.94
4	Up to Class VII	52	10.55
5	Secondary School	6	1.22
6	Higher than Secondary	5	1.01
7	Graduate	5	1.01
8	Masters	nil	nil
9	Others (able to sign)	43	8.72

Source: Ibid.

For water supply, suction hand pumps were used, which can extract water from a depth of 7 m underground. In low water table areas Tara pumps were used, which can lift water from a depth of 15 m. This technology worked well in smaller urban centres, rather than in Dhaka where the population density and the depth of the water table are both high. In Dhaka, women generally preferred to have piped water connections. The LGED tried to mediate the provision of this service from the Water Supply and Sewerage Authority (WASA) in Dhaka, but faced problems with the legal ownership of the holdings occupied by the slum residents. Apparently, WASA connections are made only in holdings occupied by the slum residents and only in the name of the legal owners of a land holding. Despite these rules, there are numerous illegal water connections in neighbourhoods where slum residents pay much more than the amount charged by WASA for regular house connections. There are middlemen operating these connections, who have managed to obtain them on payment of an illegal service charge.

For solid waste disposal, dustbins were constructed by the project. One large masonry bin was allotted per 100 families at a cost of Tk. 1800. Also provided were: one corrugated iron dustbin for twenty families at a cost of Tk. 930, where users contribute Tk. 2 each; and one pushcart to carry garbage from the dustbins to the masonry bin. Garbage from homes is carried to the dustbins mainly by women and children. Some modifications in the designs were made to cater to local needs and to problems of waste scattering due to birds and animals.

Social Mobilization and Community Participation

The SIP is basically a package programme for the social, economic, and physical improvement of the community. Success in these fields of action depends largely on social mobilization efforts. Raising health and education awareness, and mobilizing resources for socio-economic empowerment and physical improvement require regular interactions (e.g., meetings and discussions) among different groups of people (e.g., CHWs, credit groups, SPICs, COs, PICs, and a wide range of community people). To accomplish the organizational work, COs play a vital role: they are the main links between the communities and the project officials. All physical and social service components of the SIP are channeled through the COs. At the community level, SPICs, CHWs, and credit groups depend greatly on the COs. It has been generally observed in the field that, considering their poor socio-economic background and low level of training and experience, the performance of the COs in organizing slum communities has been appreciable. However, project officials at the policy level sometimes do not want to recognize the central role played by COs. The status of the

COs in the project hierarchy is very low and they have no job security.

The participation of beneficiaries in the project activities can be delineated according to eight distinct categories, as follows:

- i. community group formation: introduction to the community, IHS and base line surveys, group formation, and group meetings;
- ii. slum improvement committees: formation of committees, selection of a chairman and vice-chairman from the community, participation in meetings, dissemination of training information, and representation to higher committees;
- iii. selection of CHWs from the community;
- iv. selection of teachers (preferably from the community);
- v. selection of group leaders;
- vi. savings activities, e.g., establishment of savings targets for all group members, opening accounts in commercial banks, and monitoring savings activities;
- vii. income-generating loan activities: selection of loanees, preparation of budgets, and finalization of the list of loanees to ensure full loan recovery (with a service charge); and
- viii. infrastructure development activities: selection of schemes for each component, establishment of implementation processes, and liquidation of advances.

Sustainability

Guidelines for the SIP identify certain steps to promote sustainability. The revolving fund for the payment of COs' salaries, however, has not yet been fully developed, although arrangements were made with UNICEF to support to the COs' positions for another five years. Arrangements for the utilization of the welfare fund by project authorities are in practice in some slums. Regarding land tenure, it was observed in the field that tenurial security has a profound impact on the sustainability of the SIP. Once tenure becomes more secure, tenants are likely to pay more attention to improving their slums. Furthermore, the level of sustainability will not be the same for all components of slum upgrading. For example, there is strong demand for credit, so it is more sustainable than a savings programme. Similarly, water, electricity, and education are higher priorities to slum dwellers than dustbins, toilets, and drains. The level of sustainability of each SIP component may also vary from one slum to another, depending on the needs of the residents and the topographical and environmental characteristics of the slum.

Credit, Savings, and Recovery of Credit

Of all slum improvement components, the credit facility appears to be one of the most attractive and successful. Many poor families in SIP slums have increased their incomes and earning capacities by investing their loans in various profitable fields. Reasons behind the loans are shown in table 12.

According to table 12, more than 63 per cent of slum dwellers take loans for small trading activities, from which they earn profits.

The recovery of loans was found to be quite satisfactory. In fact, it is the provision of credit programmes which attracts poor families to the SIP for improvements to their living conditions. However, based on field experience, there are several alternative suggestions that can be forwarded for further improvements to their conditions.

TABLE 12. PURPOSES FOR TAKING LOANS

Si.No	Loan item	Number of households	Percent of households
1	Business	74	63.79
2	Housing	13	11.21
3	Land Purchasing	1	0.86
4	Sending Family Members Abroad	2	1.72
5	Wedding	4	3.45
6	Education	nil	nil
7	Religion	nil	nil
8	Illness	8	6.90
9	Household Expenditure	6	5.17
10	Others	8	6.50

Source: Ibid.

First, the criteria for selecting a loanee should be based on both economic and non-economic attributes. To involve a higher number of poor families, preference should be given to low per capita income, female-headed households, and under-privileged or disadvantaged families (such as families with a disabled person and fewer income earners). These measures for loan disbursement are very important, particularly for targeting poorer families who cannot be covered under the existing credit distribution system.

Second, the high rate of loan recovery, along with the ability to pay a high service charge (15 per cent per annum), indicates that slum dwellers are some of the most successful investors. Given this situation, existing loan sizes should be increased to meet the growing demand for credit.

Third, credit management within some SIP slums is not always fair and democratic. Management committees within or outside the slum communities should not select loanees who are not in accordance with SIP guidelines.

In parallel to credit, the SIP mobilizes savings within slum areas. However, unlike credit, only a partial success has been achieved in this sector. Statistics reveal that slum dwellers are willing and able to save more money than the targeted amount. To dispel any doubt about the safety of their hard-earned savings, a strong monitoring capacity with diligent and efficient management is necessary.

Cost Recovery

The SIP did not contemplate any direct cost recovery for the operation and maintenance of infrastructure facilities. It required the beneficiaries to contribute Tk. 500 per tube well and Tk. 500 per latrine to a community fund, to be used to remunerate the CHWs once the UNICEF assistance ended. In addition, the SIP expected the community to supply labour towards other physical improvements. Unfortunately, this plan has been only partially realized.

Generally one tube well was provided for ten families at a subsidized price of Tk. 500 (approximately US\$12), making the contribution per family Tk. 50. In some cases, dysfunctional tube wells were repaired. Here, too, the users contributed Tk. 500, and when the

cost of repair was beyond this amount the project was subsidized. The users contributed to all of the costs for the construction of tube well platforms except cement, which was supplied by the project.

Perceptions and Preferences of Slum Dwellers

Different categories of men and women in the slums and squatter settlements perceived different causes for their poverty, as was revealed during focus group interviews conducted during the survey. The most common perceptions cited included the following: low income or lack of capital, low levels of education and skills, poor living and environmental conditions, high indebtedness, fewer income-generating family members, as well as social factors like insecurity, violence, desertion, polygamy, and dowry.

To redress their problems, they suggested the following: regular income opportunities; access to capital and interest-free credit; education and on-the-job skill development opportunities; entitlement to land and shelter; easier access to water, sanitation, and electricity; and greater security and stability.

ACHIEVEMENTS, IMPACTS, AND CONSTRAINTS

Major Achievements

The key success factors of the SIP relate to its basis in a multitude of beneficial social initiatives. These include community participation, a democratic process of decision making, community involvement in the development of plans and implementation of activities, and the positive involvement of elected representatives at every level of implementation.

The overall performance and achievements of the SIP are satisfactory, although the project has covered only a very small portion of the total slum population. Nevertheless, the model has proven effective, and significant physical, social, and economic improvements are already evident in participating slums. A brief list of major achievements of the SIP is highlighted below.

Although slum development has long been neglected in Bangladesh cities, the SIP model made a significant breakthrough in providing an integrated package of basic physical, social, and economic infrastructure facilities for the urban poor. At present, the SIP is the single largest programme providing service and assistance to thousands of poor urban households in the country.

Of all SIP components, the micro-credit programme was particularly successful and attractive. Many poor households have increased their incomes using this facility.

Empirical studies show that the SIP has significantly raised the level of health awareness among slum dwellers. As a result, within SIP slums, the incidence of environmental diseases (e.g., diarrhoea, respiratory problems, and scabies) has been reduced substantially.

A notable achievement of the SIP is the empowerment of poor women through community involvement, particularly through the savings and credit programme. The SIP has raised the overall status of women in the family as well as in the community, and thus incidences of

divorce and abandonment of women has declined remarkably.

Slums and squatter settlements are usually environmentally hazardous. The SIP has significantly changed this by improving the physical infrastructure and overall environmental conditions in slum areas. People living in SIP slums have more access to basic services than their counterparts in non-SIP slum communities.

As a "pro-poor" programme, the SIP has been able to introduce notions of social development to government officials.

Impacts of the Project

Major impacts which the SIP has effected in eighteen slum areas around Dhaka are here summarized in various categories.

The social sector: A strong mutual respect and sense of unity among slum dwellers has been created, along with an increase in self-confidence and awareness. Respect for women within the family and the community has been dramatically enhanced, and there have been great improvements to the general law and order in the area. Non-social and anti-social activities have declined, with accompanying increases in the development and awareness of education among adults and children. Also, there is a growing awareness of the issues of marriage dowries, child marriages, and family planning.

The economic sector: The encouragement of habits leading to increased savings among poor people has resulted in the creation of funds that can be put to use for the benefit of communities. The credit scheme introduced by the SIP has led to enhanced economic activity among women, and increased incomes for families. Also, facilities have been provided for self-employment through "needs-based" training.

The environmental sector: Many urban infrastructure facilities have been provided for the direct improvement of slum dwellers' environmental conditions. Such improvements include the installation of tube wells for the supply of safe water and the construction of drains to facilitate the removal of contaminated water. Dustbins have been installed to keep the area free of solid waste and bad smells, and footpaths have been built to keep mothers and their children out of damp atmospheres. Sanitary latrine facilities for use by all family members have been constructed, as well as community latrines *cum* bio-gas plants, to promote a more sustainable balance between the environment and the requirements of the population.

The political sector: There have been noticeable improvements in institutional consciousness among women within the project areas, and also in the overall consciousness of civil rights. As well, methods which facilitate the creation and exposure of leadership have been devised.

Major Constraints and Weaknesses

The SIP is a package programme for *in situ* improvements to slum communities. The programme is carried out following SIP guidelines, which in many ways are not flexible enough to meet the differing physical and social characteristics and needs of people living in different parts of the city. For example, under the existing SIP operating guidelines, it is difficult to reach the poorest of the poor (the "hard-core" poor), who remain virtually outside the reach of the SIP credit and savings programme. As a result, their economic conditions have not improved much, even compared to people with slightly higher incomes.

The success of slum upgrading projects depends very much on tenurial security, but land tenure issues are not comprehensively addressed by the SIP. Improvements to livelihood conditions, particularly for floating and homeless populations, cannot be achieved without solving these critical housing needs. To date, the SIP has not addressed this vital housing issue.

Numerous studies indicate that the number of slums on private lands is gradually increasing, while those on government lands are declining. Given this situation, SIP activities should spread to private slums. Unfortunately, due to unattractive or unrealistic terms and agreements, the SIP has given very little attention to private slums.

The SIP emphasizes physical infrastructure development, whereas the slum communities also have critical non-physical needs. This emphasis reflects the traditional strengths of the LGED. Areas such as human resource development, social mobilization and motivation, and community organization, all vital for slum improvement and sustainability, need to be developed further.

Beneficiaries and field-level organizers raised concerns over the local procedures for handling project funds. This points to serious issues concerning a lack of transparency and fiscal accountability in the SIP model.

Although the slum has become an inevitable part of urban life and its landscape, eviction is still a constant threat to the existence of slum dwellers, and thus it is a serious constraint on the improvement of living conditions in slum communities. To combat this constraint, related SIP procedures and policies for the promotion of tenurial security need to be further developed.

LESSONS LEARNED

The proliferation of slums appears to be, at least at present, an unavoidable part of urbanization in Bangladesh. Slum dwellers, recently arrived migrants, and the very poor are all parts of the city's population, and as such, they require infrastructure and services just like other inhabitants. At the same time, they are regarded as a potential human resource for the development of the city; a resource that requires some attention both for social and economic development, and for necessary infrastructure development. The absence of basic support services saps the strength of the urban poor and denies society the full contribution they could make. The paradox is that the slum dwellers, if given a little support, can become worthy citizens and even act as a potential human resource. Further, they can be profitably employed in development work, through community participation, social mobilization, income generating activities, skill training, and adequate credit.

Urban Governance by Decentralized Decision Making

Partnerships and consultations with local communities on major investment decisions help to increase levels of accountability, not only within city management, but also among urban residents, who must ultimately pay for the services they demand. Engaging community groups is effective because it puts decisions in the hands of those who are most motivated and able to ensure a good performance, and who are best placed to see a direct link between their

efforts and community improvements.

There is a need for a more decentralized system with more decision making at community levels. This essentially refers to a situation whereby decision making and planning are not done centrally, but rather at a local level.

The SIP hierarchy of management structures for project implementation is unique and is also the most interesting feature of the approach. This hierarchy has potential for "vertical unbundling," in the sense that it creates structures at community levels and links them to the formal decision-making authorities. However, the management structure in this case could not deliver the desired results, as planning decisions remained centralized, (at the PIC and CCC levels), and community level groups (especially women's groups and SPICs) were basically carrying out what was decided at the higher levels.

Weaknesses of Traditional Urban Financial Institutions

The challenge for cities is to tap into the wealth they generate in order to finance the many common goods (services like water, power, sanitation, and transportation) that are so essential to making them liveable and maintaining their productive potential.

The present institutions lack the capabilities of trained and qualified staff, and are incapable of the financial resource mobilization and management necessary for the delivery of urban infrastructure and services in slum areas. The existing financial arrangements governing municipal finance cannot cope with the increasing demand for basic physical and social infrastructure, especially at low cost, for the poorest people.

Reformations to the Transfer of Resources

If decentralization is to provide opportunities for more sustainable forms of urban financing, then the rules governing transfers of resources between higher and lower levels of government need to be clarified.

Much can be done to install better inter-governmental finance systems. Clarifying functional responsibilities and identifying revenue sources for the provision of local services should occur in tandem. Cities should not only be given access to revenues that they are best able to exploit, (e.g., service fees, property taxes, and betterment charges), but they should also be given the freedom to determine the rates for these charges. At the same time, rules governing the structure of shared revenues should be stable and transparent over long periods. Regulations concerning the transfer of funds to local governments should be stable and transparent as well, and should emphasize, far more than they do, performance in financial management, efficient use of resources, and mobilization of local revenues.

Where direct beneficiaries can be identified, user charges for services such as water and sewerage serve to make households aware of the links between the provision and the cost of those services. Such direct charges can also oblige users to re-examine their behaviour and make the tough choices that are necessary to cut back on their consumption of increasingly scarce resources like water. Where benefits go to the general public, (e.g., local roads and street lighting), local taxes are more appropriate.

Encouragement of Private Sector Participation

The shift to greater private sector participation brings several benefits to service delivery, not the least of which are efficiency in managing investments, reliability of services, lower costs, and greater discipline in assuring cost recovery.

Authorities at national and local levels play critical roles in determining responsibilities concerning the delivery of services, the efficiency of pricing, and the enforceability of contracts.

Public sector interventions to protect the poor must be carefully crafted so as not to distort prices for services and discourage private participation. Subsidized prices for services have been shown to benefit the "better-off" disproportionately, and limit the capacity of infrastructure agencies to extend services to the poor. Moreover, numerous experiences have shown that the poor are willing to pay for reliable services.

Increased Access to Credit

To meet the service responsibilities being shifted to cities, as well as the demands for capital investments generated by the fast pace of urbanization, city governments need to position themselves to get better and greater access to credit.

Effective institutions are fundamental at the municipal level, with credible and intelligible accounting and management systems, independent auditing procedures, transparent procurement arrangements, adequate financial reporting mechanisms, appropriate administrative reforms to control personnel expenditures, and accountable local officials backed by reasonably satisfied tax-payers.

The creation of credit facilities appears to be one of the most attractive and successful elements of slum improvement. This is important as the availability of credit can act as a stimulus in motivating poor families to take part in slum upgrading programmes.

The high rate of loan recovery, along with an ability to pay high interest (15 per cent or higher), shows that slum dwellers are some of the most successful investors in the growing urban informal sector. The potential credit market among the urban poor is large and growing very fast. The poor generally know in advance how they want to apply credit funds, so the limit or size of credit should be flexible and based on the merit of the submitted project.

Clear strategies are needed for both communities and service providers to ensure the operation and maintenance of physical infrastructure and the continuation of group activities. Cost-sharing arrangements need to be specified. An effective process of social mobilization is essential to create the climate of community "ownership" necessary to sustainability.

Skilled and Vocational Training

The SIP tried to ensure the delivery of materials for numerous provisions, rather than arranging for their manufacture within the community. However, the service delivery package included technical training for the maintenance and repair of these provisions. Although the maintenance and repair of the tube wells, latrines, drains, footpaths, and dustbins were assigned to the users, and contributions were made, no system was devised for the use of the contributions collected.

Not only in the SIP, but generally speaking, the present approach to urban sanitation seldom considers any technological options between conventional sewerage and the "pour-flush" latrine. Very few urban centres can afford a conventional sewerage system due to its high cost. Yet the pour-flush variety, being an on-site option, cannot be used where population densities and waste water quantities are high, or where soil permeability is low. With many technological advances made in recent years, numerous alternative sewerage systems are now available in various countries, which are just as effective as conventional sewerage at a fraction of their cost. Attempts to replicate the SIP model would benefit from these technical breakthroughs in options for sanitation.

Women's Participation Necessary for Sustainability

Women's participation in water and sanitation programmes is indispensable to the promotion of safe water and safe latrines. Their involvement has increased due to their empowerment in management activities, and has thereby increased their social status. In contrast, the current domination of men in the WSS programme is not conducive to gender issues and inhibits women's broader participation.

NOTES

- 1/ Ministry of Housing and Works, Government of Bangladesh (Bangladesh National Report submitted to United Nations Conference on Human Settlements (Habitat II), 1996).
- 2/ Union: lowest unit of local government usually consists of ten to fifteen villages.
- 3/ Thana: lowest unit of administration usually consists of ten to fifteen unions.
- 4/ District: Tier (above Thana) usually consists of five to ten thanas.
- 5/ Current exchange rate is 1US\$ = Tk. 43.00
- 6/ Asian Development Bank and Local Government Engineering Department (Urban Poverty Reduction Project, Final Report , 1996).
- 7/ Under SIP, income-generating loans are given to those group members (i.e., women) who satisfy certain conditions. Before sanctioning a loan, the SPIC (established at the community level to process IGA activities by the beneficiaries themselves) evaluates the individual loan proposal, taking into consideration viability of trade, skill of loanee, and status of her regular savings. The woman/group member qualifies for a loan after due scrutiny of the proposal.
- 8/ Skill-development training is generally given on-site. On-site training programmes are conducted for those women who are interested in different trades (such as block batik prints, embroidery, etc.) and for women who are self-employed. Under the skill-development training activities, a provision for "training of trainers" in different trades has been designed, taking participants from each slum. Participants are given three weeks of basic skill-development training by a reputable agency or NGO with proven expertise in this field. After receiving the basic skill training, each participant is instructed to train at least 70 women within the slum.
- 9/ "Mastaans" means "touts" in Bangladesh.

COMPOSITION OF THE CASE STUDY TEAM

1. **Quamrul Islam Siddique**, a policy planner, innovator, and practitioner of rural and urban development interventions with thirty years' experience, is presently Chief Engineer of the Local Government Engineering Department (LGED), Government of the Peoples. Republic of Bangladesh.
2. **A.B.M. Ashrafal Alam**, a Professional Engineer with fifteen years' experience in infrastructure development projects under the LGED has been responsible for implementing, supervising, and monitoring environmental and urban infrastructure development projects for five years.

3. **Mohibbur Rahman**, an academician with more than twenty- five years' experience in training, research, and project activities in various rural and urban development interventions, has been a BME Specialist with an LGED/ADB project for three years.
4. **Aminur Rahman**, an architect/planner with over six years' experience in the field of physical planning development of human settlements, has been employed as a physical planner (both urban and rural) with an LGED/Sida project since mid-1996.
5. **Hasin Jahan**, a technology specialist with a World Bank project for one year and four years in the field of urban development with environmental and gender issues.

REFERENCES

- Asian Development Bank (ADB) and Local Government Engineering Department (LGED), *Urban Poverty Reduction Project, Draft Interim Report*, (1996).
- ., *Urban Poverty Reduction Project, Final Report*, (1996).
- Alam, A.B.M. Ashraful, "Current Urban Development Issues in Bangladesh," (Paper submitted at the UMP-Asia Regional Network of Experts Meeting for UMP Phase 3, Manila, Philippines, 1996).
- Alam, A.B.M. Ashraful, *et al*, "Public-NGO Partnership to Sustained Municipal Services," (Dhaka: 1997).
- Bangladesh Bureau of Statistics (BBS), *Statistical Pocket Book of Bangladesh*, (1995).
- ., *Statistical Pocket Book of Bangladesh*, (1994).
- Centre for Urban Studies, *Study of the Urban Poor in Bangladesh*, (1989).
- Government of Bangladesh (GoB) and United Nations Development Planning (UNDP), *Bangladesh Urban Sector National Programme Document*,(1994).
- LGED, *Slum Improvement Project Reference Manual*, (1997).
- Ministry of Housing and Works, GoB, *Bangladesh National Report*, (Submitted to United Nations Conference on Human Settlements (Habitat-II), (1996).
- Planning Commission, Government of Bangladesh , *Study of Urban Poverty in Bangladesh, Final Report, Volume 1, Survey Result*, (ADB and the Government of Bangladesh[GoB], Dhaka: 1996).
- Rahman, Mohibbur, "LGED Experience in Sanitation and Waste Disposal," (Presented at ITN/World Bank Workshop, Dhaka, 1997).
- UNDP and GoB, "Bangladesh Urban Sector Strategy Study," (1995).
- United Nations International Children.s Emergency Fund (UNICEF) and LGED, "Report on the Evaluation of the Slum Improvement Project," (1994).
- World Bank, "Livable Cities for the 21st Century," (1996).

Annex (Presented Material)

**A CASE STUDY ON
SLUM IMPROVEMENT PROJECT OF
LGED IN DHAKA METROPOLITAN CITY**

GLOBAL URBAN TRANSFORMATION

- By the year 2015, urban population in developing countries will double in size and for the first time, will surpass the rural population.
- 28 of the world's 38 cities with (more than 5 million inhabitants) were in developing countries in 1995, by the year 2015, the number will be 59 of 71 such . Mega Cities. .

PROJECTED POPULATION IN URBAN AREA IN THE COMING DECADES %

Year	Rural	Urban	Industrial	Developing
1975	62.3	37.7	47.4	52.6
2000	52.6	47.4	30.8	69.2
2025	38.8	61.2	20.5	79.5

(Source: Livable Cities for 21st Century, WB 1996)

BANGLADESH SCENARIO

- The overall population of the Bangladesh is growing at 1.87% annually.
- Urban Population is growing at a rate of 4.9%.
- Reasons are rural-urban migration and territorial expansion.
- Currently urban population is 25 million which is over 20 percent of the national population.
- The fastest growing sections of the urban areas are the slums.
- Limited absorption capacity of the city, coupled with low income status of the migrants has created slums.
- Lack of infrastructure causes slum dwellers to live in a sub-human condition: diseases, unsafe water, and unhygienic disposal of excreta .

SLUM IMPROVEMENT UNDER LGED

- SIP under LGED began in 1985 in 5 municipalities with UNICEF assistance.
- The first phase ended in 1988.
- In second phase, the SIP had extended its program to four city corporations and twenty-one municipalities during 1988-1996.
- Besides SIP, a number of projects within LGED has adopted slum improvement activities as a separate component.

DESCRIPTION OF URBAN SLUMS IN DHAKA

- Dhaka city is one of the fastest growing mega-cities of the world.
- There are eighteen slums under SIP and all the slums are located mostly on Government land.
- The slum areas have little or no basic utility services such as potable water, sanitation, drainage etc.
- Around 12 percent of the total population of Dhaka city live in slum areas.
- Number of house holds varies from 130 to over 800, and population size varies from 625 persons to about 4,000. (ADB & LGED, UPRP, 1996)

OBJECTIVES OF SIP

General Objectives

- To provide basic services that improve living conditions.
- To increase the ability of government to work with the urban poor communities.

Specific Objectives

- To increase the capability of the municipalities/city corporations to work with the urban poor communities.
- To develop comprehensive national policies and plans to promote the benefits and possibilities of extending basic services to urban poor.
- To promote self-reliant and sustainable community development efforts through mobilization of community resources and access to government services.
- To involve poor slum women in income generating activities for their benefit.
- To improve the nutrition and health condition of children and women.

IMPLEMENTATION OF STRUCTURE OF SIP

- **Central Coordination Committee (CCC)**
(National level: Ministry of LGRDC-LG DIV)
- **Project Implementation Committee (PIC)**
(Local level: City Corporation)
- **Sub-Project Implementation Committee (SPIC)**
(Community level in each slum)
- **Working Group (Only Women)**
(Women Community Group)

APPROACH AND STRATEGY OF SIP

A community based effort to provide

- Environmental Improvements
- Primary Health Care
- Empowerment of Poor Women Living in Slum Communities

OPERATIONAL STRATEGIES

- Community organization
- Enhancing role of women
- Inter-agency collaboration

- Environmental promotion

OBJECTIVES OF THE CASE STUDY

General objective:

- Highlight some of the innovative socio-economic programs implemented for the urban slum dwellers under the SIP of LGED in Dhaka.

Specific objectives are to assess

- Physical and social infrastructure activities of SIP
- Impact of infrastructures to meet basic human needs
- Impact of basic and socio-economic services in improving the overall living condition
- Impact of such programs in reducing poverty
- Innovative policy, approach, practice and lessons in resource mobilization
- Cost recovery and sustenance

METHODOLOGY OF STUDY

- Design formulation
- Recent studies on slum improvement activities by LGED, ADB, World Bank etc. are major secondary sources of information. Primary data was collected by various methods, e.g. field observation, rapid & participatory appraisals, discussions etc.
- Sample size and sampling
- Orientation/training of the survey team
- Independent household survey
- Focused group discussion
- Organization of data collection
- Data analysis and report writing

MAJOR FINDINGS

1) Improvement of physical infrastructure and environment

- Upgrading of physical infrastructure by developing footpaths and drains, installation of tube wells, latrines, street lighting and dustbins.
- Physical components sometimes ignore the local land terrain causing water logging and overflow of sewers.
- Operating procedure for SIP should recognize the local people.s need and peculiarities of individual sites

- Made good success in sanitation

2) Age structure and labor force participation rate

- Out of overall slum population, 44% are children
- The poorer households are characterized by higher LFPR than non-poor
- Two-thirds of men and all working women are engaged in no-skilled and low-skilled jobs.
- With increase in age both men and women tend to change from more energy-consuming to relatively less energy consuming jobs.

3) Educational level of respondents in slums

Cannot write or read	41.00%
Can read or write	12.60%
Primary up to class V	23.90%
Up to class VIII	10.60%
Secondary and above	3.20%
Others	10.60%

4) Social Mobilization and community participation

SIP is a package program for social, economic and physical improvement of the community. The success of these fields of action mostly depends on social mobilization efforts.

Raising health and education awareness, social mobilization for social economic empowerment and physical improvement, requires regular interactions (meeting/discussions) of different groups of people (e.g. CHW, credit group, SPIC, CO, PIC and a wide range of community people).

To accomplish the organizational work, community organizers (COs) play a vital role. They are the main link between the community and the project officials.

PARTICIPATION OF THE BENEFICIARIES IN THE PROJECT ACTIVITIES

Community Group Formation

- Formation of Slum Improvement Communities
- Selection of Community Health Worker (CHW) from the Community
- Selection of Teachers (preferable from the community)

- Selection of Group Leader

Area of Participation of the Beneficiaries

- Saving Activities
- Income Generating Loan Activities
- Infrastructure Development Activities

TECHNOLOGIES ADOPTED

Technology used in the project was simple and had been widely used elsewhere in Bangladesh. It included suction hand pump tube wells, water sealed pit sanitary latrines, construction of masonry garbage bins, surface drainage, footpaths and public latrine cum bio-gas plants.

Sustainability

- Provision of revolving fund for activities
- Utilization of welfare fund by project authority
- Land tenurial security for the tenants
- Increased income generating activities

SLUM DWELLERS PERCEPTION ON CAUSE OF POVERTY

- Low income and lack of capital
- Low or no education and skills
- Poor living and environmental conditions
- High indebtedness
- Less number of earning members
- Insecurity, violence, desertion, polygamy and dowry

PREFERENCES TO REDRESS THESE PROBLEMS

- Regular income opportunities
- Access to capital and interest free credit
- Education and on job skills development opportunities
- Entitlement to land and shelter
- Easy access to water, sanitation and electricity, security and stability.

CREDIT AND SAVINGS

- Members of low income female headed households and disadvantage families should be preferred for a loanee
- Existing loan amount should be increased

COST RECOVERY

- Contribution from the beneficiaries
- Community to provide labor

MAJOR ACHIEVEMENTS OF SIP MODEL

- Integrated package of basic services
- Micro-credit program for urban poor
- Health awareness among slum dwellers
- empowerment of poor women
- Notion of social development among government officials

IMPACT OF SIP

Environmental

- Safe water from tube wells
- Sanitary latrines and drainage facilities
- Footpaths preventing damp atmosphere
- Dustbins keeping free from bad smells of solid waste and health hazard
- Latrine cum bio-gas plant has decreased pollution

Social

- Mutual respect and unity among slum dwellers
- Respect of women in the family
- Improvement of law and order in the area

Political

- Institutional consciousness among the women
- Facilities, creation and exposure of leadership
- Consciousness of civil rights

Economic

- Creation of fund through savings
- Economic activity of women by credit scheme
- Self-employment through need based training

LESSONS LEARNED FROM SIP

- Urban governance by decentralized decision making
- Encouragement of private sector
- Need for skilled and vocational training
- More access to credit
- Traditional institutions have weaknesses
- More rational form to transfer of resources
- Women.s participation for sustainability