WATER FOR LIFE ASSESSMENT

BANGLADESH

December, 2014

Organizational Evaluation of Dushtha Shasthya Kendra, DSK Health Center for the Poor

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FINAL REPORT

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EXECUTIVE SUMMARY

The positive impacts of water and sanitation interventions cannot be realized if services don't continue over time. Unfortunately funding decisions are rarely made based on an organization's ability to support long-term solutions, as independent evaluations of service longevity are typically unavailable. The Water for Life Rating System expects to provide to funding organizations reliable information from an independent source to help them direct funding to good organizations and at the same time to promote organizational learning based on the findings.

The Water for Life Rating System focused on the evaluation of Dushtha Shasthya Kendra (DSK), a local NGO in Bangladesh registered with the social welfare ministry and NGO Affairs Bureau in that country. DSK has been working for over 25 years since it started as a health program after the devastating Bangladeshi floods of 1988.

During one week in December 2014, two independent evaluators conducted an assessment on DSK based on 22 criteria of likelihood of long-term service provision and sustainability. It is the third WfL evaluation, following two assessments conducted in Latin America, but constitutes the first in Asia and also the first in highly dense urban areas that characterizes the slums. The evaluation included programmatic and organizational criteria. For the program evaluation, the assessment visited six slums selected randomly from a variety of projects implemented by DSK since his inception in addition to the exemplary project selected by DSK for the initial field work. The overall organizational evaluation included review of their plans, financials, and reports, as well as direct interview with his executive director and also primary information obtained from interviews with community-based organizations (CBOs), local water committees (CMCs), focus groups with water users and also a sample of household interviews in each water system.

DSK has shown good work in a complex environment such as slums and also in the challenging water and sanitation sector. Based on the criteria used in the WfL rating system DSK fulfilled basic expectations for sustainability in six out of 22 categories and remarkably met high expectations in thirteen of these. In the other side some observations were identified regarding water quality monitoring, water metering and some minor construction recommendations for flood protection were made. Regarding sanitation, projects are in progress but there are still more unhygienic latrines than good septic tanks due to population reluctance for cost sharing payments. Additionally observations were made on proper conveyance and wastewater treatment as well as sludge treatment from on-site facilities and waste management. Based on 66 possible points if all exceptional expectations are met in all categories and 44 points if basic expectations are met in all categories, DSK received **54 points equal to 82%.** According to the criteria established, the scoring represents highly above the average, and thus highly recommended to donor organizations.

DSK staff attributes their success to good governance tools through the process of empowerment as well as some principles, good technical standards and basic criteria established by the organization, independent of financial conditions occasionally imposed by donors.

Though there were many successes observed, there are some areas that need to be addressed. Water quality is a sensitive matter, especially in Bangladesh with particular concerns regarding arsenic and other metals. Hence, a comprehensive water quality analysis of the aquifer or the main water source should be part of all the projects as well as good monitoring with some specific parameters that could be conducted by the organization or in alliance with local governments additionally to the accustomed bacteriological analysis. Regarding sanitation, septic tanks are part of the solution but it is desirable to complete the sanitation ladder by adequate fecal sludge collection and disposal, as well as support for wastewater treatment either by means of decentralized plants or conveyance to proper main sewers with final destination to wastewater treatment.

Some slums have no access to legal water and it represents a higher and much more complex challenge. DSK has been lobbying local authorities to create bulk water points for further distribution to the neighborhoods (as Korail slum). However, this approach has not been feasible in all cases. In some areas, DSK has been supporting only with on-site sanitation projects such as septic tanks connected to main sewers belonging to Water Utilities, but the interdependence with water is undeniable (on health, sanitary education, finance on services and O&M). It would be desirable to address both projects at the same time to increase the likelihood of sustainability.

Bottom line: future funding to DSK is highly recommended, due to a good combination of hardware and software processes to make projects sustainable as well as the commitment encountered in its staff.

CONTENT

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1. INTRODUCTION

Dushtha Shasthya Kendra (DSK) is a development non-governmental organization (NGO) registered with the social welfare ministry and NGO Affairs Bureau in Bangladesh. DSK started out by initiating a health program, undertaken after the devastating Bangladeshi floods of 1988. Although informally, a core group of DSK started work in the mid-eighties but the formal work did not begin until 1989. The main aim of setting up DSK was to develop a health delivery system for the poor that would be self-sustainable in the long run.

DSK is committed to address various social and economic problems of the economically depressed and vulnerable groups in general. Women are particularly at risk and are specifically targeted by DSK's programs. Empowerment of communities is a central focus issue of all DSK's development initiatives. Over the years, the organization has extended its geographical, beneficiary and programmatic coverage quite significantly. The long-term development program now includes education, health, microfinance, agriculture, water supply and sanitation. All this work is aimed at supporting disadvantaged poor people. After 25 years, DSK continues to expand and diversify its program to address development problems in Bangladesh.

Water for Life Assessment is a global initiative with background on the Accountability Forum held on December 2011 in Lempira, Honduras, where independent evaluators and organizations who support water and sanitation projects met to conduct an organizational assessment to a local NGO based on 22 criteria.

Water for Life Assessment is an initiative born from Water 1st's belief that until long-term functionality of interventions affects organizations' ability to find future funding, monitoring and evaluation activities are unlikely to be a high priority for many organizations. It aims to encourage strong projects implementation from a holistic perspective. The assessment includes objectives within this overarching aim:

i) Motivate and incentivize monitoring and evaluation of projects using a common framework;
ii) Provide independent evaluation to donors that focuses on programming, not simply finances;
iii) Provide a platform for cross-organizational learning and networking for field staff and
iv) Help organizations learn how to monitor and evaluate;

2. SCOPE OF THE EVALUATION

The main objective of the evaluation is to determine if the organization has been using funding to support water and sanitation projects that are providing long-term services and based on good practices.

The assessment aims to gain insight about the organization from the basic question: “Based on their existing body of work, is funding this organization a good investment?” It is important to notice this is not an impact or sustainability study, though insights into these themes emerged during data collection.

Survey questions and evaluation criteria are based on Water for Life Rating System tools and input from multiple implementing organizations in the water and sanitation sector.

Criteria are grouped into eight main categories which will be described in detail in Section 6. These categories are the following:

A. Internal in-country partner structure
B. Community Commitment and Local Project Management
C. Sanitation
D. Water Supply and Hygiene Education
E. Project Design and Construction
F. Water System Long-term Operation and Maintenance
G. Water Source Protection
H. Environmental Impact

3. OVERVIEW OF BANGLADESH

Bangladesh is one of the most densely populated countries in the world, exceeding 158 million inhabitants in 2014 (JMP, 2014) living in a surface of 144.000 km^2. It consists of seven divisions, which are further subdivided into 64 districts, and the districts into 482 upazilas (subdistricts). Upazilas are divided into 4,498 unions.

Bangladesh is categorized as a medium human development country with HDI of 0.558. Between 1980 and 2013, Bangladesh's HDI value increased from 0.336 to the current value, which means an increase of 66.0 percent. Life expectancy is 70.7 years when it was 54.9 in 1980. Gross national Income (GNI) of 2,713[1]. In Bangladesh 49.5% of the population are multidimensionally poor[2] while an additional 18.8% are near multidimensional poverty. The breadth of deprivation (intensity) in Bangladesh, which is the average of deprivation scores experienced by people in multidimensional poverty, is 47.8% (HDR, 2014). The Income Gini coefficient is 32.1 (WDI, 2013). It is estimated that 40% at the bottom of the pyramid received only 14% of the total income whereas the top 5% received nearly 27% of the total income in 2005. Various studies indicate that the extreme poor are mainly women. Regional disparities in poverty also remain: poverty is higher in the western region of the country and lower in the eastern region.

The country has over 30% of urban population whilst in 1980 was 15% and has become the country with the fastest urbanizing rate of the world (WB, 2014, ONU-Habitat, 2014). Urban population is expected to increase sharply, due mainly to high migration from rural areas. In general cities are important drivers of development and poverty reduction in both urban and rural areas, as they concentrate much of the national economic activity, government, commerce and transportation, and provide links with rural areas. The total population of the country in the next year tranches is projected to be 172 million (2020), and 183 million (2025) with 40% of population living in urban cities.

As a result of the low-lying topography, about 26,500 km^2 or 18% of the country is inundated during the rainy period each year. During severe floods, the affected area may exceed 53,000 km^2 or 37% of the country (UN, 2012). That is one of the reason Bangladesh is widely recognized as one of the countries that is most vulnerable to climate change. However, over the years Bangladesh has been successful in reducing the impact of disasters due to risk management and long-term vision of the country. Currently the Government has adopted a Perspective Plan of Bangladesh 2010–2021 with five priority areas: (i) maintenance of macroeconomic stability and control over commodity prices in the face of the global economic crisis; (ii) effective action against corruption; (iii) power and energy; (iv) elimination of poverty and inequality; and (v) establishment of good governance. Within the elimination of poverty goal, it could be argued that access to water and sanitation constitutes one of the major measure to achieve.

[1] GNI is expressed in 2011 PPP

[2] The 2010 Human Development Report introduced the Multidimensional Poverty Index (MPI), which identifies multiple deprivations in the same households in education, health and living standards.

Bangladesh has three main cities over 1.0 million inhabitants: Dhaka, Chittagong and Khulna. Dhaka is the capital and the largest metropolitan area in the country, with more than 13.0 million people. The second largest city is the port city of Chittagong, which has around 4.0 million inhabitants and Khulna is over 1.5 million. The process of rapid urbanization is due to multiple factors, among them vulnerability to floods in almost 40% of the country, river erosion, droughts in some areas of the country and saturation of agricultural lands.

Rural population migrates to towns and cities in search of employment and for safety from natural disasters, generating a link between rural poverty, migration and urbanization. Therefore, the urban poor are largely rural migrants who find shelter in overcrowded areas with inadequate basic services, denominated slums[3]. There are 309 Pourashavas (municipalities) in the country.

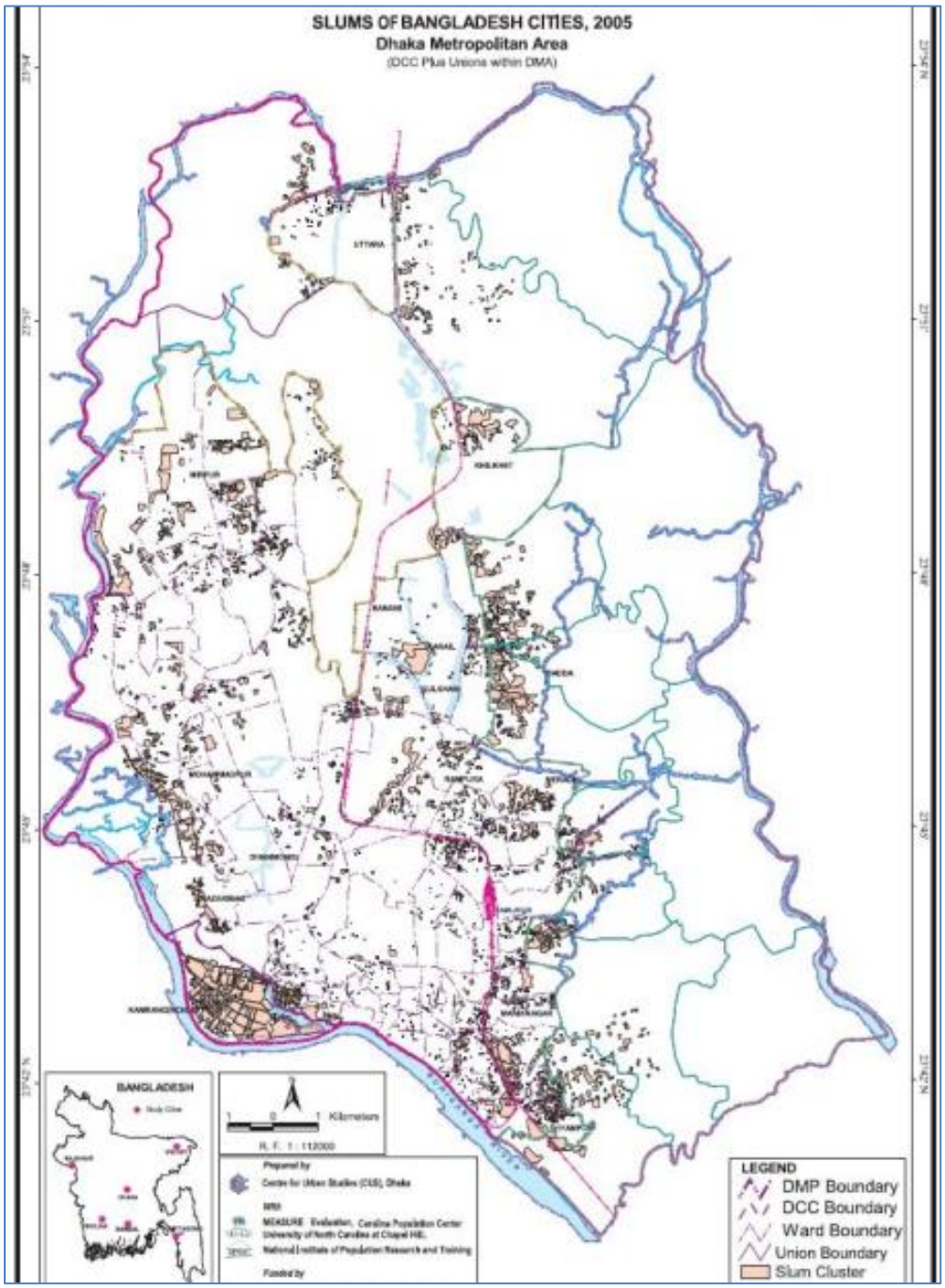
The Dhaka Metropolitan Area (DMA) comprises Dhaka City Corporation area and adjoining areas totaling 306 km^2. The 2005 Slum Census of Urban Bangladesh identified almost **5,000 slum clusters in DMA** with a total population of 3.4 million (30% of the total population in DMA at that time, more than double the slum population counted in 1996). The 2005 slum survey also identified conspicuous growth of slums in peripheral and suburban areas of Dhaka city (ICDDR, 2010). Slums have been developed at a rapid rate by a combination of rapid rural-to-urban migration, exponential urban poverty, the inability of the urban poor to access affordable land for housing and insecure land tenure.

In DMA, slum settlements tend to be built on vacant government land or private vacant land located in low-lying areas vulnerable to flooding and other natural disasters. The poor mainly live in slums scattered throughout the city, with close to 80% of slums located on privately owned land creating considerable institutional challenges in terms of basic service provision (Binte Razzak, et.al., 2014).

This report focuses on water and sanitation status on slums of Dhaka city and the periurban slums nearby the city. **Figure 1** shows the slums in the DMA. The slums visited were: Korail; Demra; Vhangadewell; Ali Nagar (Kamrangir Char); South Rashulpur (Kamrangir Char); Shibpur (Amin Bazaar) and North Bishil (Mirpur-1). The most significant slum visited is Korail comprising 84 acres (34 hectares).

[3] A survey report that was conducted by the World Bank in collaboration with the Housing and Settlement Directorate, Government of Bangladesh and Centre for Urban Studies, defined a Slum as: a residential area where more than three hundred people live in one acre (0.405 hectors) of land; an average of more than three adults live in a single room.

Figure 1. Slums in Dhaka Metropolitan Area



Source: Centre for Urban Studies, Dhaka

4. WATER AND SANITATION IN BANGLADESH

Bangladesh lies across the delta of four major rivers: the Ganges-Padma, the Brahmaputra-Jamuna, the Meghna, and the Teesra.

Surface water is characterized by the following: (i) varying water availability during different seasons as well as its irregular occurrence; (ii) an intricate network of alluvial rivers carrying a huge annual discharge and sediment load, which is also unstable in nature causing embankment erosion; (iii) withdrawal in upstream areas, which has a serious effect on socioeconomic growth, the environment and ecology, and threatens fish habitat; (iv) inland navigation blockages; (v) increased water demand for domestic use; and (vi) an increase in salinity in the coastal belt. Additionally surface waters are substantially polluted by diverse activities: agricultural, industrial, domestic, and municipal sources. Unsanitary practices contribute significantly to the deterioration of surface water quality (WSP, 2014).

Due to high contamination of surface waters, groundwater accounts for over 90% of the drinking water supply in the country. According to data, only 9% of groundwater withdrawals are used for water supply, 12% for transportation, and the remaining 79% is used for agriculture.

In urban areas, there are two types of local government for water services: eleven City Corporations for large and metropolitan cities and 308 Pourashavas (municipalities) for smaller entities. In the six largest cities, the Government established City Corporations and four water and sewerage authorities (WASA) with similar functions corresponding to Dhaka, Rajshahi, Chittagong and Khulna city, but only Dhaka WASA provides also sewerage services.

While Dhaka Water Supply and Sewerage Authority (DWASA) covers water services for 89% of its residents, Rajshahi Water Supply and Sewerage Authority (RWASA) covers 67%, Chittagong Water Supply and Sewerage Authority (CWASA) covers 40%, and Khulna Water Supply and Sewerage Authority (KWASA) covers only 24% (WSP, 2014). At the national level water coverage in Bangladesh is almost 98% based on national statistics offices (BBS, 2014) but due to differences in the definition of “improved sources,” the percentage differs from the United Nations and the World Health Organization estimates.

Indeed the major concern regarding water access is quality of water due to arsenic presence in shallow aquifers. A quality standard for drinking water was issued in 1997 under the provision of the Environment Protection Act 1995 based on the 1993 WHO Guidelines for Drinking Water Quality. The standard includes 55 physical, chemical, and microbiological parameters but some standards are different from the WHO guideline values. Furthermore the national government adopted the National Policy for Arsenic Mitigation in 2004 and the Implementation Plan for Arsenic Mitigation in Bangladesh the same year. The policy provided guidelines for arsenic mitigation in the drinking water, health, and agriculture sectors.

Nevertheless the most updated estimate from a survey by Bangladesh Bureau of Statistics and UNICEF in 2009 found there was an estimated **22 million** people in 2009 (around 13% of total

population) consuming drinking water above the Bangladesh national standard for arsenic 0.05 mg/L)[4]. Of those, 5.6 million were exposed to more than 0.2 mg/L and were in extreme health danger (BBS, 2011). Other findings from the survey showed although 93% of deep tube wells met the Bangladesh standard for arsenic, only 60% of deep tube wells met the Bangladesh standards for arsenic, manganese and iron.

Adjusting the "improved source" statistically downward to account for the arsenic presence, the Joint Monitoring Programme (JMP) considers that 85% of total population has access to improved water sources, mainly due to other improved sources rather than piped water (JMP, 2014). **Table 1** presents the evolution since 1990 for urban and rural areas.

Table 1. Urban and Rural Water coverage 1990-2012

URBAN WATER					
Estimated coverage 2014 update					
Year	Total improved	Piped onto premises	Other improved	Other unimproved	Surface water
1990	81%	23%	58%	17%	2%
1995	82%	25%	57%	16%	2%
2000	83%	27%	56%	16%	1%
2005	84%	29%	55%	15%	1%
2010	85%	31%	54%	15%	0%
2012	86%	32%	54%	14%	0%

RURAL WATER					
Estimated coverage 2014 update					
Year	Total improved	Piped onto premises	Other improved	Other unimproved	Surface water
1990	65%	0%	65%	28%	7%
1995	69%	0%	69%	25%	6%
2000	74%	0%	74%	22%	4%
2005	78%	1%	77%	19%	3%
2010	83%	1%	82%	16%	1%
2012	84%	1%	83%	16%	0%

Source: JMP, 2014

However, the Human Right to Water entitles everyone to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic use.

According to the water quality survey, other parameters must be considered for monitoring, especially from aquifer sources. For instance Manganese is essential for humans, but exposure to high levels in drinking water can lead to adverse neurological effects, particularly in children. Concentrations below 0.05–0.1 mg/L are usually acceptable to consumers from a taste perspective but may sometimes still give rise to the deposition of black deposits in pipes. Bangladesh has a limit of 0.1 mg/L. Based on the Survey more than 60% of the population were consuming drinking water above the Bangladesh limit (one third of the population exceeding the less stringent WHO Guideline Value of 0.4 mg/L) (BBS, 2011).

Another parameter is Iron: Bangladesh standard sets 1.0 mg/L but iron also stains laundry and plumbing fixtures at levels above 0.3 mg/L. Based on the Survey high levels of iron were found with approximately 40% of the population exposed to more than the Bangladesh limit.

Other parameters into consideration to guarantee water quality to population should be Zinc and Phosphorus. The Bangladesh standard for phosphate is 6 mg/L and for Zinc is 5 mg/L, both are usually present in aquifers.

[4] 52 million inhabitants considering the WHO standard of 0.01 mg/L

Water systems have other challenges to contend with apart from water quality. For instance, large WASAs are characterized by extreme density overloading already underdeveloped systems: 3,000 or more people per kilometer of network exceeds parameters for countries such as China and Brazil, where there are rarely more than 1,500 people per km of network (WSP, 2014). Outside WASAs around 100 Pourashavas out of the 308 provide intermittent piped water supply serving very limited households and water coverage is around 39% (WSP, 2014).

One important consideration in regards to water and sanitation services to slums is that a majority of slum people use tube well water for drinking while significant amount of open defecation is also found. Normally slums have pit latrines, which are only partially hygienic. The drainage system is the most neglected sector in the slums and human excreta pollutes the nearby water bodies and drains causing severe water pollution. Besides, solid waste management and drainage system are totally unsatisfactory.

Dhaka's population including surrounding area is likely to increase from 15 million people (2014) to 27 million by 2030 (UN, 2014) and has currently almost 5,000 slums. It represents a big challenge in terms of basic services due to existing constraint of irregular land tenure. DWASA was not been able to supply water services and sanitation if land tenure was irregular. Under this complex scenario some solutions were emerging with NGOs participation starting from bulk water points provided by DWASA in the periphery of some slums. Currently, DWASA is providing legal water supply to 64.000 families of 300 slums through almost a thousand connections including 15,600 families of Korail Slum through 226 connections (DWASA, 2013). Nevertheless most slums still have no legal access to water from DWASA.

Sanitation is another basic service needed to be fostered to comply with the Human Right to Sanitation as well. It entitles everyone to get sanitation services with privacy and ensuring dignity, physically accessible, affordable, safe, hygienic, secure, and socially and culturally acceptable.

Conventional sewer systems are only present in Dhaka, where about 30% of the population is served by a sewer network and the remaining population uses on-site options such as septic tanks, pit latrines, unhygienic latrines, or still open defecation. The amount of sewage that is collected in Dhaka is three times higher than the capacity of the only wastewater treatment plant reducing severely its efficiency (WSP, 2014). The sanitary conditions of urban slums are deplorable; only 8% to 12% have hygienic latrines. Most slum dwellers have no other options than to dispose of waste in drains, open fields, roadsides, or riverbanks.

National Statistics reports sanitation coverage of 64% while JMP percentage is 57% (2012) as **Table 2** shows for urban and rural areas. It has to be noted that shared facilities represent 28% more but JMP does not accept this type of solution as "improved". Nevertheless it is the most common and likely solution for slums where space is very limited and cost of individual latrines will be unaffordable.

Table 2. Urban and Rural Sanitation Coverage 1990-2012

URBAN SANITATION				
Estimated coverage 2014 update				
Year	Improved	Shared	Other unimproved	Open defecation
1990	46%	25%	19%	10%
1995	48%	26%	18%	8%
2000	50%	27%	17%	6%
2005	52%	28%	17%	3%
2010	54%	29%	16%	1%
2012	55%	30%	15%	0%

RURAL SANITATION				
Estimated coverage 2014 update				
Year	Improved	Shared	Other unimproved	Open defecation
1990	30%	15%	15%	40%
1995	36%	18%	14%	32%
2000	43%	21%	13%	23%
2005	49%	24%	12%	15%
2010	55%	27%	11%	7%
2012	58%	28%	11%	3%

Source: JMP, 2014

Based on the consideration of MDGs to halve water and sanitation services considering 1990 as the baseline, Bangladesh is far from achieving the goal for sanitation.

The necessity to doubling efforts is important for the development and public health of the nation. Recent studies suggest poor sanitation is more strongly correlated with stunting in urban than in rural areas (Spears, 2013). Stunting primarily affects children and is irreversible. This effect is virtually independent of income and related variables, so all residents are at risk from poor urban sanitation, not just the poorly served low-income communities. Hence, open defecation should be eradicated, as proposed in the Sustainable Development Goals for 2030.

5. BACKGROUND OF DSK

Dushtha Shasthya Kendra (DSK) is a development non-governmental organization (NGO) registered with the social welfare ministry and NGO Affairs Bureau in Bangladesh. DSK started in 1988 but the formal work did not begin until 1989. The main aim of setting up DSK was to develop a health delivery system for the poor that would be self-sustainable in the long run.

DSK has a Strategic Plan (2013-2018) for the organization including the corporate identity of DSK, strategy development process, strategic priorities for the period 2013-2018, budget projections and implications of the strategy on future directions. It also has priority guidelines on water and sanitation.

Vision: DSK seeks a country of social justice, where poverty has been overcome and people live in dignity and security. DSK aims to be a partner of choice within a worldwide movement dedicated to ending poverty.

Mission: DSK aims at building strong community based organizations (CBOs) which will eventually be able to plan, prioritize and implement their own development programs through mobilization of the following combination of resources:

- CBO's own
- Government
- Donor agencies
- Concerned civil society

5.1 Organizational Model

DSK initially started with the program of primary health care in some of the slums of Tejgaon area in Dhaka City. Over the years, in order to be more responsive and effective to the needs of rural and urban poor, it has diversified its program interventions and increased its geographic coverage.

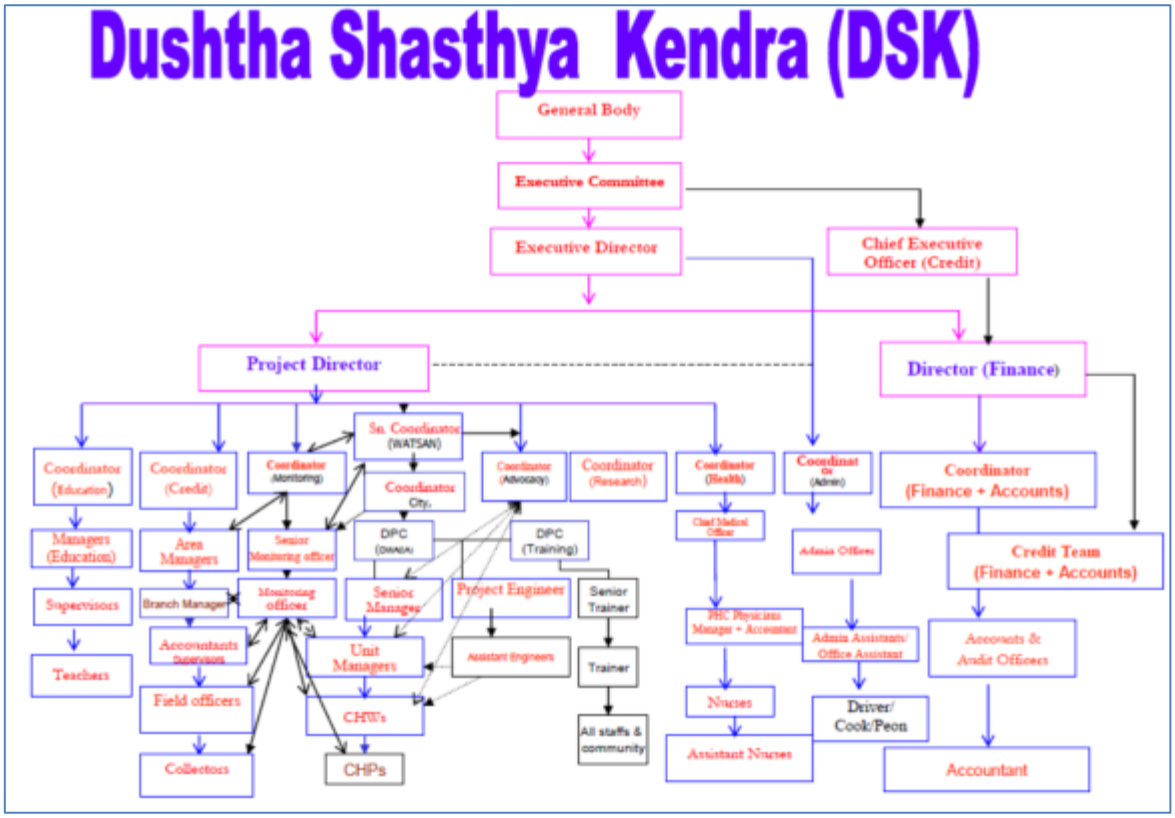
Over the years, DSK has developed relationships with many donors. The active ones in this reported period are:

- BRAC
- Christian Aid
- Dan Church Aid/ECHO
- Dutch reproductive rights alliance/The Netherlands Government
- ICDDR, Bangladesh
- Plan International
- PKSF
- SIMAVI
- Shiree/DFID
- UNICEF

- Water Aid
- Water 1st International
- Water.Org
- Water Supply and Sanitation Collaborative Council (WSSCC)

The organogram of DSK is presented in **Figure 2**.

Figure 2. Organogram of DSK



It can be appreciated Water and Sanitation Projects belong to a Project Director as well as education, health credit projects. **Table 3** shows the Thanas in the three urban cities where DSK is currently working.

Table 3. DSK Urban Geographical Coverage

Urban Cities	Thanas	Wards
Dhaka	Cantonment, Kafrul	15, 16
	Tejgaon, Ramna, Dhanmondi, Mohammadpur, Adabar	20, 36, 37, 38, 39, 46, 47, 48
	Lalbagh, kamrangirchar	Sultanganj 58, 59
	Gabtali, Mirpur, Pallabi	2, 4, 5, 6, 8,10,11,17
	Uttara	1,Uttarkhan, Dhakhinkhan, Hariram pur
	Gulshan, Baddah, Khilkhet	15, 17, 18, 19
	Khilgaon, motijheel, sabuzbagh	24, 54, 55, 57, 58
	Demra , shampur, sutrapur	79, 80, 81, 82, 83, 84, 85, 86, Sharulia, Tarabo, Kanchpur
Khulna	Dawlatpur, Dumuriya, Dighalia	3, 4, 5 wards, Dighalia & zabdipur union
	Khalishpur	14
	Sonadanga	16, 17, 18, 24, 25, 27
	Rupsha	22, 27, 28, 29, 30, 31
Chittagong	Halishahor	11, 23, 24, 26, 38
	Dampara	8, 13, 14, 15
	Khulshi	9, 10, 11, 12
	Kotoali	16,17,18,19,20,34
	Chandgaon,Shitakonda	4, 5, 6, 17, 18
	Kumira	Kumira union

Table 4 presents the number of Branches/Projects where DSK is currently working depending on the type of project. Water and Sanitation Projects are present in Dhaka and Chittagong. Recently it was informed they broadened their scope to Khulna.

Table 4. DSK Geographical Coverage according to program

Programs	Number of Branches/Projects										
	Urban				Rural						
Districts	Dhaka	Chittagong	Khulna	Gazipur	Narsingdhi	Narayangonj	Kishoreganj	Netrokona	Jessore	Shunamganj	Total
Primary Health Care	9	4	2	4			5	3			27
Micro Finance	29	6	7	15			14	13			84
Water And Sanitation	9	3									12
Non Formal Education		1						1			2
Training Cell	1			1							2
Hospital	1										1

DSK staff is composed by 43 people from mid-level or senior staff and also 16 engineers. Among them 18 people work for water/sanitation projects (PEHUP, Water First and Water.org). **Table 5** presents the description according to the Section/Project.

Table 5. Senior /Mid Level Staff of DSK

Name of Section/project	Name of designation	Total no	Engineer
Head office	Sr. Coordinator-Finance-1, Coordinator-R &Rehabilitation-1, Coordinator-Admin-1)	03	
Micro credit	Join Director-2, Coordinator-Credit-2, CoordinatorLaw-1, Coordinator-Finance-1, Coordinator Audit-1, Coordinator-Monitoring-1, Coordinator-Admin-1)	09	
Shiree	Project Director-1, Coordinator training-1, Coordinator Monitoring- 1 Coordinator Research-1, Coordinator Business Development-1, Coordinator Finance & Admin-1, Coordinator Nutrition-1	07	
PEHUP	**Sr. Project Coordinator-1 Project Manager-2**	**03**	**05**
Water 1st Project	**Project Coordinator-1** Deputy Project Coordinator -1 Deputy Project Coordinator (Finance)-1 Senior Training Officer-1 Training Officer-1 Monitoring Officer-1 Audit Officer-1	**07**	**06**
Water.org	**Deputy Project Coordinator-1**		**01**
Mamoni HSS	Project Director-1, Coordinator training-1, Coordinator Finance- 1 ReferalCoordinator -1	04	
WOP	Project Coordinator-1	01	02
ICCO	Project Coordinator-1	01	01
Urban Resilience project	Project Coordinator-1	01	01
DSK Hospital	Project Coordinator-1	01	
UBR	Sr.Project Coordinator-1 Project Manager-2	03	
SCOPE	Project Coordinator-1	01	
Food Security	Deputy Coordinator-1	01	
KNH	Project Manager	01	
CBDRR	Area Manager	01	
DIPICO	Deputy Coordinar	01	
CMHC	Project Manager	01	
DSK-Sattola	Project Manager	01	
	Total	47	16

5.2 Water and Sanitation Model for Slums

DSK has been working since 1992 on the development of a water supply program that is referred to as the "DSK model of water supply to provide water to slum communities." This is an alternate model of supplying water legally to slum communities.

DSK began implementing several Water Points (WPs) with active participation of the slum community. This was sponsored by funding from an external donor. For overall management of the water point, a committee consisting of women members and an advisory group comprising male members was formed for each of the WPs. To date 120 WPs are in operation, with many more in the pipeline. DSK is also implementing sanitation and hygiene promotional activities in the urban slums (DSK web page, 2014). Following the receipt of permission from City Corporation and DWASA the Water Point (WP) is constructed and connected with the WASA mains. The community itself is assigned to manage the WP and bear the cost of capital, operation and maintenance. According to the model, the communities by themselves form a group and DSK facilitates training on management, maintenance of water and sanitation facilities, health hygiene and behavioral change practices. DSK also encourages community participation in planning, designing, selecting location, and formulating water and latrine use rules.

DSK has undertaken innovative community-based hygiene promotion activities along with water supply and sanitation facilities. Hygiene Promotion is considered as a key factor for demand creation, sustainability, as well as health improvement as a whole of the target communities involving women, children, adolescents and men.

DSK implements four major principles for Water and Sanitation Projects, matching with the following national policies: i) Poverty reduction; ii) Participation; iii) Good governance and iv) Community Capacity Building.

DSK follows a chain of activities to strengthen the above process:

a) DSK provides formal training to community leaders and members of the Water Point management committee;
b) Water Pint committee meets in regular monthly intervals where health hygiene issues are regularly discussed;
c) Community health workers visit registered households on a regular basis imparting messages on health/hygiene behaviors;
d) In addition, community meetings are organized to stress the need for behavioral changes and to learn about community aspirations and comments. The field workers collect information for the activities related to "software" as well as "hardware".

DSK has also a strategy for water and sanitation projects based on experiences, guiding principles and national policy formulated by the national government.

Strategy for hygiene promotion and behavioral change. DSK runs its hygiene education and promotion through the following strategies.

- Participatory and small hygiene group based education through courtyard session.
- Nine key hygiene messages are clustered into three section: i) use safe water for all purpose, ii) safe sanitation by all family members and iii) hand washing in 6 critical times;
- Different hygiene promotion for different groups: a) Adult female group through courtyard session, b) CtC for child group, c) School hygiene education for school children, d) tea stall session for man customer and service-man.
- Health promotion by community volunteers
- Participatory rural appraisal approaches and tools re-used for message dissemination
- Popular media is used for creating awareness
- Participatory monitoring by the used group to collect data of practices and follow-up and feedback mechanism.
- Special hygiene promotion for differently able person(disable)

Sanitation Strategy. DSK is also working to achieve the target through community led process.

- Community driven universal sanitation access to the project participants.
- Institutions/ City Corporation/ Municipality is the key agency to be involved to reach the target
- Community Management Committee is formed for O&M of community based sanitation options;
- Promote school sanitation with gender and child friendly technology;
- Promote to proper utilize 20% of the Annual Development Programme (ADP) allocation for UP to the poorest people;
- Special emphasis on O&M of the sanitation facilities;
- Innovation of sustainable and environmentally friendly low cost technology

Community-led total sanitation (CLTS). Community-led total sanitation (CLTS) involves facilitating a process to inspire and empower periurban/rural communities to stop open defecation and to build and use latrines, without offering external subsidies to purchase hardware such as pipes. It may combine with credit support.

- Ignition process using Participatory Rural Appraisal
- Facilitation – the key to achieving participation
- Exploration of innovative models of toilets
- Community catalysts
- Community consultants
- Social dynamics and group formation
- Declaring villages as 100 per cent sanitized

Strategy for Water supply. Over the period DSK has develop a model for community based water supply for the urban slums based on the following:

- Increase access to safe water to 100% of target population;
- Community driven water supply system is being implemented and system implemented, run and managed by community as a whole;
- Cost sharing mechanism in place according to the economic category and ability to pay of the user families;
- Provide training to the CBOs and Caretaker for operation and maintenance;
- 100% communities are operating and maintaining their water points;
- 100% site selection by the community user group particularly by women and local bodies;
- Carry out water quality surveillance by implementing Water Safety Plan and Safe Water System following the WHO and National Guideline water quality monitoring.

Strategy for capacity building. Build capacity both for community and service provider for DSK Watsan project for sustainability.

- Form CBO and empower them via training, meeting exposure visit, dialogue, lobby, advocacy and network.
- Engagement of Local Government Institutions as the focal point for Watsan initiative and enhance their capacity through training, meeting, exposure visit and dialogue
- Training on O&M to the caretaker and local mason.
- Function linkage between community and service providers in general, Local Government Institutions in particular.
- Facilitate to develop and empower community based local entrepreneurship, masons, private suppliers, contractors etc.
- Provide adequate information to the community and other stakeholders

5.3 Innovations for Water and Sanitation Projects

DSK has been developing innovation to customize technology to urban needs. Examples of these innovations are presented in the following.

Up-flow affluent system for community latrine. This is a modified septic tank based community latrine. The septic tank design has been modified with additional chamber having capacity of filtration of affluent; so that wastewater could be safely discharged onto normal without minimal chance of pollution.

Network Based Community latrine. This is also a new innovation for community latrine. This was piloted in the densely populated areas particularly in urban slums. Where the space constrains to set up adequate latrines or the houses are scattered located; this option is suitable for the

community particularly women and adolescent girls considering their privacy and security. The septic tank is connected with chambers located in different houses.

Community latrine with Menstrual Management facilities. It is a female friendly socially acceptable community latrine with menstrual management facilities without extra cost. The design was finalized and implemented having detail consultation with women groups.

A mechanized human sludge discharging and emptying machine called VACUTUG. It is a machine of a motorized tank on wheels which creates a vacuum within the tank and through a plastic hose sucks the human waste sludge from the pit or septic tank. The tank is then wheeled to an end disposal site. DSK has been running three units of VACUTUG with capacity of 500-2000 Liter.

Mobile toilet. DSK designed and manufactured the mobile toilet as part of the water and sanitation project supported by Water 1st International. Two mobile toilets are providing services in the streets of Dhaka city. One mobile toilet has started in 2010 and another in 2011. They move to different places to identify in which location community people's demand is high for such service. The user fee of mobile toilet has been set at taka 2 for urination and taka 5 for defecation.

5.4 Systems Design for Water and Sanitation Projects

DSK has installed different type of water and sanitation infrastructure. **Table 6** shows the items, number of hardware installed and the location.

Table 6. DSK systems design for water and sanitation projects

	Name of Items/ Hardware	Number of Hardware (HW) Installed	Location of the HW
1	Water Point	198	Dhaka and Chittagong city
2	Deep set hand TW	256	Dhaka: Mirpur , Mohamamd pur , Uttra, Gulshan Demra, Kamrangir char, Kerinigong
3	Piped Water supply system	4	Dhaka : Haripumpur Union, Demra, Mohammdpur
4	Mobile Water Van	7	Dhaka and Chittagong City slums
5	Submersible Pump	2	Dhaka city slums
6	Rain water Harvesting	3	Dhaka : Mirpur
7	Slab latrines	1276	Dhaka: Demra, Kamrangir Char(92 slums) Chittagong : City slums [52 slums]
8	Cluster latrines	198	Dhaka : City slums Chittagong : City slums
9	Twin Pit Latrines	84	Dhaka and Chittagong city slums
10	Biogas Plant	2	Dhaka : Mirpur
11	Community Sanitation block	6	Dhaka: Harirampur Union and City slums
12	Barrel composting	142	Dhaka city slums
13	Solid waste collection van	5	Dhaka city slums
14	Vacutug system device for empting pit and septic tank]	3	Service provides to -Dhaka: Amin Bazar Union, Savar Union, Harirampur and Dhaka city dwellers.

6. AREAS VISITED

The slums visited were: Korail; Demra; Vhanga Dewal; Ali Nagar at Kamrangir Char; South Rashulpur at Kamrangir Char; Shibpur (Amin Bazaar) and North Bishil (Mirpur-1).

In general, slums at the Dhaka Metropolitan Area (DMA) have similar socioeconomic status and characteristics. The most recent study on slums at Dhaka offers the following description (Binte Razzak et.al., 2014): Around 30% to 40% slum dwellers are small job holders. Most of the people are illiterate and only 25% dwellers have primary level education. Most of the family is single unit and about 20% to 50% houses are constructed bamboo frame; fencing and roof. About 10% to 30% people live in temporarily made earthen hut. Most respondents do not have hygiene education and few of them do not have the knowledge of hand wash before taking food.

In early 1990 majority of the slums at DMA were located on public lands and later 90s the government started to evict many slums from public properties. After that, private land owners started to rent out the lands to slum dwellers as the return on these lands were attractive because of high densities. Consequently in 2006, 77% of slums were on private lands. These pressures intensified the price of land and also have created unplanned development in Dhaka city (Sinthia, 2013).

Korail Slum. The Korail slum began in 1961, during Pakistani governance. The area was designated for the Department of Telecomm by its original owner and the condition of the purchase was to be used only by T&T. The area of the slum is roughly between 180 to 220 acres (72-88 Ha). In 1990, 90 acres of the land were allocated to the Public Works Department (PWD), modifying the agreement with the original vendors. When the previous owners took legal action against T&T for unilateral change of the contract, T&T reclaimed the 90 acres of land given to PWD. At this stage, three parties became clear stakeholders in today‘s Korail slum area: T&T, PWD and the former private landowners. In 1990‘s, unoccupied pieces of land, slowly became illegally captured by various people. These individuals then began to rent out land and housing to low-income and impoverished populations at low rates. As a result of the growing demand for inexpensive housing, these inhabitants slowly expanded to create Korail slum as it is today (ICDDR, 2009, Sinthia, 2013).

Most of the houses are made by corrugated iron. The houses are overcrowded; in most of the households there are more than 5 to 6 members. Monthly rent for houses ranges between Tk 900 to 1,200 (USD 11.7 to USD 15.6). Houses having higher rent are more spacious, situated in better locations, have cement floors, better drainage, and water supply. The range of total population as estimated by the slum dwellers is around 100,000—120,000. There is a diversity of occupations among men, women and even children to generate income. Men‘s roles include masons, carpenters, wheelbarrow pushers, day laborers, garments workers, T&T employees, businessmen, and boatmen. Women‘s professions include housemaids, garments workers, cooking firewood (locally known as *lakri*) vendors, and grocery store owners. Children are also involved for domestic work, scavengers or restaurant employees. Begging is also a popular livelihood for children as well (ICDDR, 2009).

There is no legal supply of electricity, government health, educational and social security facilities are non-existent. These are the main reasons NGOs are working on some relevant issues like health, economic and education. There are 31 schools by 14 NGOs in Korail. There are also micro-credit programmes. There are a few NGOs working on environmental development, and around 10 NGOs working on health sector (ICDDR, 2009).

Due to a long negotiation with DWASA Korail slum has water supply provided by the Water Utility by means of bulk water in some specific water points outside the slum. An estimation established (Sinthia, 2013) a coverage of 60% provided by DWASA and the remaining 40% has to buy water from particulars under a monthly payment basis. Very few people used lake water for daily activity but not for drinking. Water sources are limited and they have to make queue to collect water for daily necessities. There are electricity and gas services available in this area but not continuous and adequate. The sanitation facilities are unhygienic. In 2013 the numbers of water seal latrines were 359, bucket latrines were 250 and hanging latrines were 520 (Sinthia, 2013).

Demra Slum: Located at the South-Eastern part of the Dhaka City. Historically, people started living in this area since 1800 century but the slum has 25 years. The river Shitalakkha is near to the area which has been gradually increasing population due to its proximity to Dhaka. Majority of people has moved to Demra Slum from Kishoreganj, Comilla, Barisal, Chandpur and Nowakhali districts. The area is adjacent to garment industries and therefore major occupations are directly and indirectly related with the industry sector activities along with rickshaw pullers, small businessman, boatman and similar activities. The location is famous for producing 'Jamdani Sharee', a very famous traditional cloth in Bangla culture. A large number of people are involved on this activity due to this product is not produced only to meet the national demand but also to export to nearby countries.

It is estimated 580 households live in the area with population around 2670. The slum is situated under Tarabo Pourasava (Municipality). Around 208 land owners are registered. Monthly house rent is at the minimum level, i.e. within the range of Tk 1000 – Tk 2000 (USD 13 – USD 26). Houses are constructed with corrugated iron with roof (42%), all-sides brick with corrugated iron roof (38%), bamboo structured side-walls with corrugated iron roof (14%) and buildings (6%). There is a primary school and a Madrasa in the area. People have legal electricity facilities and some parts of the area have also gas connection. Road communication within the area is inadequate with narrow roads with no concrete. During rainy season people use boats as the common transport. Overall situation is improving after NGOs have taken different development initiatives in the area.

Vhanga Dewal Slum: Located at the eastern part of Dhaka City adjacent to Banani and Gulshan under DCC Ward no. 20. The area is around 10 acres and belongs to Bangladesh Telecommunications Company Limited (BTCL). There are BTCL administrative offices, T&T Girl High School and BRCL around the area. The land occupiers pay rent to the landlords. Present population is around 6500 inhabitants. Major occupations of the people are rickshaw pullers, van drivers, day laborers and water vendors. Females work on garment industry or as maid servant or for small traders. Houses are constructed on temporary structures like corrugated iron with roof and

bamboo structures. Monthly house rent is within the range of Tk 2000 – Tk 3000 (USD 26 – USD 39). Family size is comprised with 5 members in average. Utility connections are illegal like water, electricity and gas. However, people have received sanitary latrines from the government and NGOs as a way to increase health. There are three pre-primary schools in the area. Irregular road communication exists in the slum. In rainy season, road becomes mud and impossible to move within the area. Sometimes, roads have gone under water due to heavy rain. However, overall situation of slum areas has just started to improve due to important support of some NGOs.

Kamrangir Char. This slum is situated in a Peninsula. An estimated 400,000 people live in the slum that has an area of only 3 km^2. Previously it was a dumping ground for Dhaka's waste, it is now a highly populated area where inhabitants live in houses made from wooden sticks. Families share rooms with up to ten people, mostly comprised by migrants from other areas of Bangladesh. Waste from Dhaka's industries is still directed into the river as daily life in the Kamrangir char Peninsula continues. Two sites of this slum were visited: **Ali Nagar** and **South Rashulpur.**

Regarding South Rasulpur, this area is an island which was under developed for longtime. The community has been established in 1978. Name of the area was selected through religious faith of Islam as the name of the Prophet of Islam is Rasul (SWT). Rasulpur is a vast area, which was divided into four parts and one of them is known as "South Rasulpur". The area coverage is around 25 acres (10 Ha). Around 12,500 households are living in the locality. It is an extremely overcrowded area. All the areas are private lands. The land owners have built houses in highly congested ways and rented to poor people. The inhabitants are involved with low income professions like day laborers, small business, vegetable shoppers, plastic goods sellers, rickshaw & van pullers, tea stall and similar activities. House construction is based on brick walls with corrugated iron roof tops (65%), bamboo walls with corrugated iron rooftops (25%) and both side-walls and roof with corrugated iron (10%). The monthly household rent is within the range of 1000 to 4000 Tk (USD 12.80 to USD 51.30) depending on the number of rooms. On average, family size is 5 having 7 members also in large scale. There are 2 Primary Schools and 12 Madrasas in the entire areas along with 15 kinder garden pre-schools. Overall internal road communication situation is problematic. A large portion of road communication has no concrete roads and just a few portions are covered with road construction. Therefore, people suffer during monsoon (rainy) season. Recently, the government department has taken the initiative on road construction due to the area is included within the Dhaka City Corporation.

Shibpur (Amin Bazaar). Shibpur is situated in a remote area beside River Turag under Amin Bazaar adjacent to the Dhaka City Corporation area. People started living in the area since 1939. A famous and influential person, namely Mr. Shibu, contributed for the development of the area. Therefore, local inhabitants renamed the areas as 'Shibpur' as an honor to the person. Most of the people shifted into these areas to have better economic opportunities. These are entirely private lands. The area coverage is approximately 20-25 acres (8-10 Ha). The inhabitants are involved with low income professions like day laborers, drivers, helpers of vehicles, motor mechanics, small business, rickshaw pullers and garment workers. Different types of house patterns are seen in the areas like buildings with bricks and concrete roofs (5%), all-side bricks with corrugated iron roof (80%), all-

side with roof built with corrugated iron (10%) and houses with bamboo construction (5%). The house rent is variable based on the number of rooms. In general, monthly household rent ranges between 1000 Tk to 8000 Tk (USD 12.80 to 102.60). Electricity and gas connection are available since the independence of the country in 1971. However, pending services are safe water and improved sanitation. There is a Primary School and a Madrasa in the community. At present, four different NGOs are working in the area. A total of 16 DSK staff is working to provide WASH related support to the inhabitants.

North Bishil (Mirpur-1). Uttar Bisil is situated at the north-west of Dhaka city with 100 years of tradition. People were shifted from different parts of the country including Rangpur, Gaibandha, Nilfamari and Mymensingh. Major causes of shifting in the city were as directly affected by natural disasters like river erosion, excessive flooding, extreme dryness on agriculture lands. People who live in North Bishil are extreme poor and disadvantaged. The area is approximately 3 acres (1.2 Ha). It is a private land having 22 owners in total. Population is roughly 2100 and households are around 420. Major occupations are day-laborers, small business, garment laborers, rickshaw pullers, vegetable sellers and beggars. Hence, labor opportunities through these jobs are very limited. Most of houses are made of bricks with available corrugated iron roof, which represents 80% and the remaining 20% have corrugated iron with rooftops. The areas are overcrowded and family size is more than five members, in some cases, there are seven members per family. Due to economic constraint, one family usually lives in one room where monthly room rent is 1000 to 2000 Tk (USD 12.8 to 25.60).

One decade back, there were serious lacks of basic services. There were no electricity and no gas connections. People used to collect water from contaminated canals nearby and open defecation practice was very common. Previously, people of the community used to have water from different sources illegally or by paying high charge for it. Slum dwellers were dependent on using nearly pond water for taking bath and for washing clothes. In general, people, especially children, were always sick with water borne diseases including high level of diarrhea epidemic.

At present, more than 90% houses have electricity and gas. DSK provided cooperation to the community in the creation and implementation of the Community Based Committee (CBO) based on an election process to choose the committee members. Since the beginning CBO and DSK continuously communicated and advocated DWASA to provide legal water supply connection into the slum areas. Nowadays they have succeeded under the Citizen Charter and the slum dwellers are getting legal water supply connection from DWASA. Community based initiatives work at the entire area after DSK intervention; as a result, all the households are enjoying legal utility service connections of all kinds. However, road communication within the areas is still a serious problem. There are two primary schools within the areas and children have practice to go to the schools on a regular basis. Overall socioeconomic conditions of the people are improving rapidly due to enhancement of knowledge and facilities through different NGOs and support from other social organizations. At present, five NGOs are serving in the entire area by micro credit and other types of social services. DSK has engaged 16 staffs under a project to provide adequate cooperation among the inhabitants.

7. ASSESSMENT METHODOLOGY

Survey questions and evaluation criteria are based on the Water for Life Rating System, resulting from the collaborative efforts of a consortium of different WASH NGOs.

7.1 Description

The assessment includes different aspects:

- Review of documents from DSK (legal and financial statements, technical plans, organizational structure, budget etc.)
- Visit to local offices to know working conditions that influence execution and monitoring;
- Presentation by and detailed interview with the Executive Director and managers/coordinators of the implementing organization (DSK),
- Site visit to a community DSK has selected as exemplary of its work (Korail Slum)
- Selection of other six communities at random;
- Interviews with CBO and CMCs in each community;
- Focus groups with dwellers in each community;
- Inspection of the water service infrastructure (e.g., water points, septic, etc.) in each community
- Visits to several homes in each community to observe household infrastructure and discuss water and sanitation services.

Criteria are grouped into eight main categories as described before. The process was the following: All the participants would visit the exemplary community selected by DSK to harmonize procedures during the evaluation and to have a site as a benchmark of its work. For the other visits, we divided into two groups, each of them led by one of the independent evaluators.

DSK provided a list of the total inventory of community water systems they have implemented since inception. Seven community names were randomly selected from the list of projects as representatives and were confirmed to be visited.

The process for interviews and infrastructure inspections are briefly described in the following.

Interviews to Community Based Organizations (CBOs)

Slums assisted by DSK have the common characteristic of having Community Based Organizations (CBOs) as part of the governance model to assure coordination and participation among dwellers. The CBOs interviews were held with most or their members. The discussion included questions regarding its origins, relation with CMCs, coordination with DWASA, coordination with the implementing organization (DSK) and rules and regulations for governance.

Interviews with Community Management Committee (CMCs)

The CMCs interviews were held with most or all members of the current water board. The discussion included questions regarding financial management, operation and maintenance, rules and regulations for use, future planning and water source protection. The evaluators also reviewed CMC's records including minutes, water bills and sometimes technical drawings and legal documents related to the water system and sanitation system.

Interviews to Community Members

Focus groups were held with 6-8 community members who in turn represented -in some cases- the total of the community visited apart from the water board members. Questions discussed included satisfaction, reliability (including response to breakdowns), quality, quantity and payment of water service, hygiene education, and typical sanitation service in the community.

Inspections of Infrastructure

The evaluation process included visits to a water source, community tanks and distribution lines to investigate construction quality and evidence of long-term water source protection such as reforestation, fencing and evidence of maintenance. The independent evaluators had visited the water sources from the seven communities visited.

Household Observations

For household observations, groups of two to three people visited several homes that were representative of the local geographic area (i.e. community center, upper areas and lower areas). All results in this report are backed up with evidence from multiple sources including community water board members, community members, organization staff and observation of documentation.

7.2 Rationale for the methods used

A previous report elaborated by one of the independent evaluators explained the rationale of the methods used which a synthesis ix describe below.

- Qualitative, in-depth approaches allow for the inclusion of contextual and rich data. It is difficult to capture what is going on in each community through quick numeric surveys. The removal of contextual information from an evaluation that includes many variables which cannot be controlled can lead to misinterpretation of results.
- Information beyond the project status for the day of the visit is desired. In order to gather complete information from multiple stakeholders on project performance and satisfaction over the project lifetime, in-depth interviews are needed.
- The ability for each research group to spend part of the day in each community allows time for informal conversations to get to know community members outside of interview and focus group questions. This typically makes community members feel more

comfortable and respected and provides time for community members to voice their opinions in their own time and to share information they feel is important.

- Case study approaches are acknowledged as a robust research method[5] where variables cannot be controlled and when trying to answer questions of how and why, such as how and why an organization's work is successful or not. Without this contextual information it may be easy to assume an organization's work is poor or exemplary without understanding the full picture which may reveal otherwise.

7.3 Key domains and criteria applied

In accordance with the methodology described, the evaluation does not solely depend on interview questions or information provided by DSK, but includes a triangulation of information obtained from the community CMCs, the state of infrastructure, focus groups with dwellers ("beneficiaries"), and random inspection of household facilities. The evaluation used is divided in eight Key-Domain and 22 criteria which are presented below (**Table 7**).

[5] See Yin, R. (2003). Case study research: design and methods (4th ed.). Thousand Oaks: Sage Publications.

Table 7. Key Domain and Criteria used for the Evaluation

Key Domain	Standards
A. Internal in-country partner structure	1) In-country partner collaborates or coordinates with other water and sanitation organizations (public or private)
	2) In-country partner is concerned with improving water and sanitation program quality
	3) In-country partner is a sustainable organization and maintains solid business practices
B. Community Commitment and Local Project Management	4) The community makes a financial contribution to the capital cost of the project either up-front or over time (i.e. a loan), though cash and/or in-kind contributions
	5) A competent local water management board is created and functions effectively
C. Sanitation	6) Most people in the community have access to a sanitary toilet
	7) Toilets are well-used in a sanitary manner and users are satisfied with the toilets
	8) Users have a replacement strategy for toilets not connected to a public sewage system
D. Water Supply and Hygiene Education	9) All households in the community have convenient access to a safe water supply
	10) Household water use is sufficient to meet all needs for consumption and hygiene purposes.
	11) Households demonstrate increased health and hygiene awareness over time
E. Project Design and Construction	12) The community has legal authority for the water source and water system
	13) Water quality is tested and treated appropriately
	14) Water system is appropriately designed and well-constructed
	15) Toilets/sanitation system is appropriately designed and well-constructed
F. Water System Long-term Operation and Maintenance	16) Water system is well-used and users are satisfied with the system
	17) Water system repair issues are addressed quickly and water system undergoes routine maintenance
	18) User fees are paid by project beneficiaries and water system is financially self-supporting
G. Water Source Protection	19) An active water source protection program exists in the community
H. Environmental Impact	20) Wastewater management 21) Sludge management 22) Solid Waste management

Each of the criteria evaluated includes a series of questions and/or requests for documents to verify results. Each sub-criterion/question is used to determine the scoring of each variable using a qualitative color scoring according to the following:

Red	Extreme problems encountered
Yellow	Organization does not meet all of the basic expectations listed for the metric – "caution"
Green	Organization meets all the basic expectations listed for the metric, but does not meet all the high/exceptional expectation criteria – "going well"
Blue	Organization meets or exceeds all criteria for high/exceptional expectations in the metric – "above and beyond"

The following provides a brief summary based on the criteria evaluated including evidence (based on questions asked during the study) supporting the assessment conducted to DSK.

8. SYSTEMS EVALUATION

8.1 Community Selection

Based on random selection described above two groups were organized, each one led by the independent evaluator. The visit to the exemplary community was to Korail Slum with all the participants.

Table 8 shows the slums visited for this assessment and their characteristics.

Table 8. Technical Information from the Projects visited

	Korail Bosti, Banani/ Mohakha	Vangha Dewal, Banani/ Mohakhali	Ali Nagar Kamrangir Char	South Rasulpur Kamgangir Char	Shibpur, Amin Bazar	Uttarbishil, Mirpur pallbi	Rupshi Kazipara, Demra
Project Name	Promoting Environmental Health for the Urban Poor (PEHUP)	Promoting Environmental Health for the Urban Poor (PEHUP)	"Community Based Water and Sanitation Project for the Urban slum Dwellers in Dhaka and Chittagong Cities in Bangladesh" (2006-2013) "Scaling up WASH services for the Urban Poor in Dhaka, Chittagong and Khulna" (2014-2018)	"Community Based Water and Sanitation Project for the Urban slum Dwellers in Dhaka and Chittagong Cities in Bangladesh" (2006-2013) "Scaling up WASH services for the Urban Poor in Dhaka, Chittagong and Khulna" (2014-2018)	"Community Based Water Supply and Sanitation Project Targeting Urban Slums and Fringes in Dhaka Bangladesh" (Savar-Aminbazar-Pallabi)	Community Based Water Supply and Sanitation Project Targeting Urban Slums and Fringes in Dhaka Bangladesh" (Savar-Aminbazar-Pallabi)	"Community Based Water and Sanitation Project for the Urban slum Dwellers in Dhaka and Chittagong Cities in Bangladesh" (2007-2013) "Scaling up WASH services for the Urban Poor in Dhaka, Chittagong and Khulna" (2014-2018)
Funding Agency	Water Aid	Water Aid	Water 1st International (USA)	Water 1st International (USA)	Water.Org (USA)	Water.Org (USA)	Water 1st International (USA)
Project Duration	November 2011-October 2016	November 2011-October 2016	Project-01------2006 Project-02------2007 to 2008 Project-03-------2009-2013 Project-04-------2014-2018	Project-01------2006 Project-02------2007-2008 Project-03-------2009-2013 Project-04-------2014-2018	March 2008-February 2011	March 2008-2013	Project-02-----2007 to 2008 Project-03-----2009-2013 Project-04-----2014-2018

Number of Population Coverage	Water: 7424 Sanitation:212 Hygiene:3986	Water: 0 Local Water Vendor providing Water Sanitation: 122 Hygiene: 972	Water: 3113 Sanitation:1128 Hygiene:10010	Water: 2611 Sanitation:1650 Hygiene:9751	Water: Project Support 30 + Local Government (By Project Motivation) 610 = Total 640 Sanitation: Project support 400 + Community own initiative (By Project Motivation) 200 = Total 600	Water:1080 Sanitation:1680 Hygiene:1624	Water:1756 Sanitation: 712 Hygiene: 5304
# of Household Coverage	Water: 1947 Sanitation:65 Hygiene:3986	Water : 0 Local Water Vendor providing Water Sanitation: 23 Hygiene: 234	Water: 394 Sanitation:195 Hygiene:590	Water: 449 Sanitation:324 Hygiene:773	**Water: :** Project Support 08+ Local Gov (By Project Motiv) 122 = Total 130 **Sanitation:** Project Support 80+ Community own initiative (By Project Motivation) 40=Total 120 Hygiene:120	Water: 316 Sanitation:300 Hygiene:543	Water: 286 Sanitation: 152 Hygiene: 1326
Type of Hardware (different types):	Supply line with reservoir Supply line without reservoir(Stand Post) Community Managed Toilet(2 Chamber)	N/A Local Water Vendor providing Water Community Managed Toilet(2 Chamber)	**Water option** Deep Tube well HTW (Half cylinder pump) Submergible pump – (min) Renovation Water(Deep Tube well) **Sanitation option** 1-Chamber latrine 2 Chamber latrine Renovation Sanitation, Slab	**Water option** Deep Tube well HTW (Half cylinder pump) Submergible pump – (min) Renovation Water(Deep Tube well) **Sanitation option** 1-Chamber latrine 2 Chamber latrine Renovation Sanitation, Slab Latrine	**Water:** Deep set pump, Submergible Pump **Sanitation:** Slab Latrine	Supply line with reservoir: Sanitation:CL-2	**Water option** Deep tube well (DTW), Submergible pump (SP), **Sanitation option** 1 Chamber latrine (1CL), 2 Chamber latrine (2CL),

# of Hardware provided: **Water** **Sanitary Latrine**	Water : 120 Sanitary Latrine: 2	Water: 0 Local Water Vendor providing Water Sanitary Latrine: 1	Water : 35 Sanitary Latrine: 34	Water : 35 Sanitary Latrine: 32	Water : Project Support 01 Deep set Pump + 1 Submergible pump large (Local Gov)=Total 2 Sanitary Latrine: Project Support 80 + 50 Community own initiative (Project motivation) = Total 130	Water : 10 Sanitary Latrine: 7	Water : 27 Sanitary Latrine: 34
Cost of each type of Hardware: Water, Sanitary Latrine	Supply line with reservoir : WP-1: 58899 WP-2: 77934 WP-5: 52735 Supply line without reservoir(Stand Post): 20574 Community Managed Toilet 2 Chamber: 118968	Water : N/A Local Water Vendor providing Water Community Managed Toilet 2 Chamber: 122967	**Water option** DTW- 45000--50000 HTW -30000 SP- 70000---90,000 RW- 30000--50000 **Sanitation option** 1CL -35000---60000 2CL- 80000---90000 RS-30000---40000 SL-3000	**Water option** DTW- 45000--50000 HTW -30000 SP- 70000---90,000 RW- 30000--50000 **Sanitation option** 1CL -35000---60000 2CL- 80000---90000 3CL-100000---120000 RS-30000---40000 SL-3000	**Water:** Deep Set Pump 28000 (Project) Submergible Pump large 1,50,000 **Sanitation:** S/L: 3500	Water:50000 Sanitation:60000	Water : Deep tube well (DTW) = 50000, Submergible pump (SP) = 90000, Sanitary Latrine: Slab latrine (SL) = 3000, 1 Chamber latrine (1CL) = 60000, 2 Chamber latrine (2CL) = 90000
# of Installment Allowed: **Water,**	Water : 12	Water : Local Water Vendor providing Water	Water: For Hardware construction 2 -3 installments for each construction and for recovery repayment 24 months and sometimes 30 months.	Water: For Hardware construction 2 - 3 installments for each construction and for recovery repayment 24 months and sometimes 30 months.	Water: For Hardware construction 2 -3 installments for each construction and for recovery repayment 24 months and sometimes 30 months	Water: For Hardware construction 2 -3 installments for each construction and for recovery repayment 24 months and sometimes 30	Water : For Hardware construction 2 -3 installments for each construction and for recovery repayment 24 months and sometimes 30 months

Sanitary Latrine	Sanitary Latrine: 12	Sanitary Latrine:12	Sanitary Latrine: Basically for Hardware construction 4 -5 installments for each construction and for recovery repayment 24 months and sometimes 30 months	Sanitary Latrine: Basically for Hardware construction 4 -5 installments for each construction and for recovery repayment 24 months and sometimes 30 months	Sanitary Latrine: Basically for Hardware construction 3 -5 installments for each construction and for recovery repayment 12 months to 24 months	Sanitary Latrine: Basically for Hardware construction 3 -5 installments for each construction and for recovery repayment 12 months to 24 months	Sanitary Latrine: Basically for Hardware construction 4 -5 installments for each construction and for recovery repayment 24 months and sometimes 30 months
Legal CBO	Yes	Yes	Yes	Yes	Yes	Yes	Yes

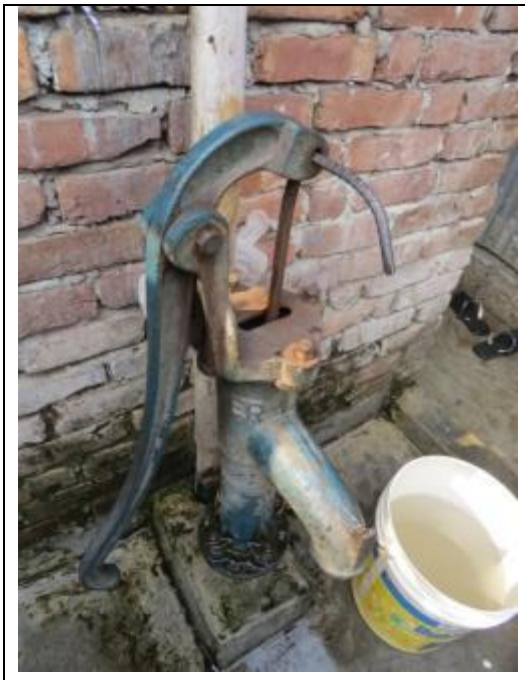
Source: Data Base from DSK

8.2 Description of systems visited

Korail Slum

The slum is 35 years old and the CBO is 10 years old (composed by 27 people for the four regions of the slum, 5 are officers: President, Vice-president, Treasurer, PR and Secretary). They have the mandate for 2 year period. Possibility for reelection

- CMCs have the responsibility for O&M. Collector comes from CBO based on monthly bill from DWASA. CBO pays to DWASA for the water service. Approximate tariff: Tk/m^3 8.5 to 8.9 (USD 0.11 to 0.12 per m^3).
- Financial model of the infrastructure: Grant and cost sharing (categories A to D). Water Aid Model (See **Appendix 5**). The goal is to get 30% cost recovery from the water investment to be used for future repairs and/or expansion. Infrastructure includes water points and septic tanks accompanied by sanitary education (WASH). Categories by number of HH in the slum are as follows: 816 HH in class A (4%); 8,002 HH in class B (40%); 11,005 HH in class C (55%) and 182 HH (1%) in class D. Total: 20,005 HH (approx. 100,000 inhab)
- Water is provided from DWASA to several water storage tanks with meters. The Project has supported 456 water points (456 CMCs) for 8000 HH. Additionally there are 48 water points built by their own and 60 in progress. Existence of more than 300 storage tanks from difference capacities: 5,600 L for 20-30 HH; 3,000 L for 15-20 HH and 2,200 L for 10-15 HH.

	
Water Point	**Water point**

	
Water meter at the entrance of the storage tank	**Valve control at the storage tank**

Sanitation: Mostly have two chamber septic tanks. Some clusters serving more people have septic tanks with 4 chambers. They are connected to reduced sanitary sewer as a conveyance to the main sanitary sewer from DWASA. Sludge is collected periodically but dumped into a land nearby.

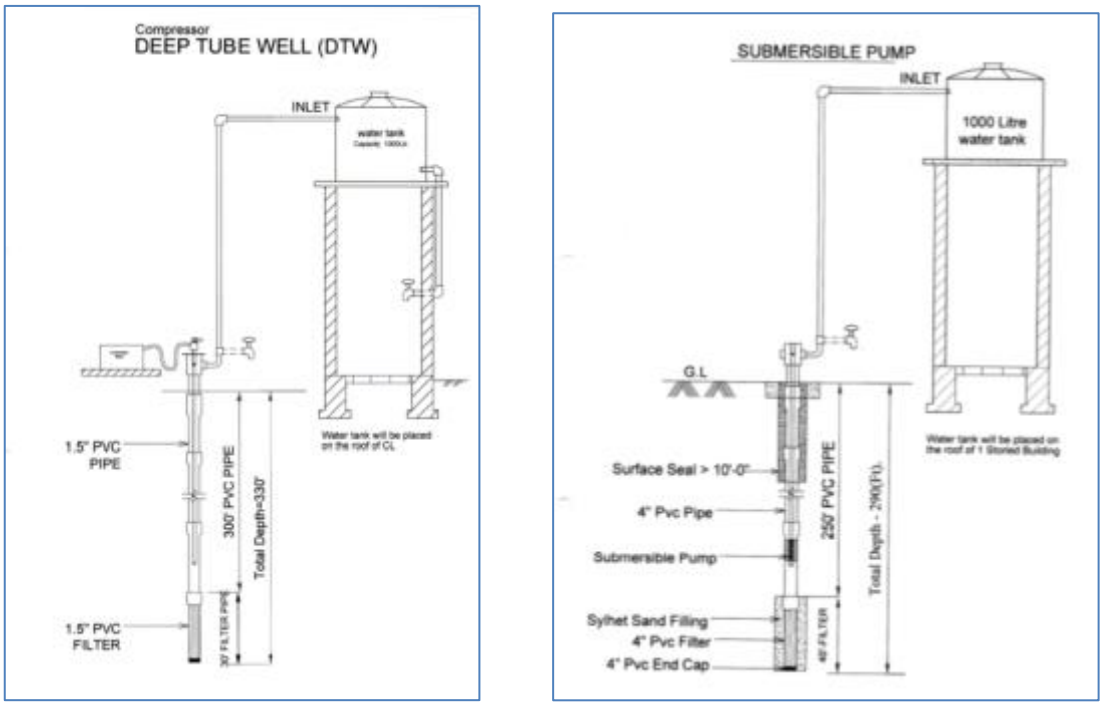
	
Two chamber septic tank	**View of a septic tank**

Demra Slum

The slum is more than 25 years old, CBOs are 8 years old, composed of 15 people in total, 5 are officers and all are women. The project has 340 compounds.

- CMCs have the responsibility for O&M. Landlord collects the monthly rent from renters and includes expenses for water and sanitation operation and maintenance.

- 27 CMCs for water and 34 CMCs for sanitation. The CMC visited has nine members representing 12 HH. Volunteer service. CMCs have the responsibility for O&M, water service is included in the rent. Landlord pays the loan to DSK (10% annual rate, 2 yr.)
- Financial model: Loans for HW: water and sanitation. Usual latrine cost USD 700-900 and deep tube-well costs USD 720 (with a reservoir of 1000 L) or a submersible pump costs USD 1380 with the same reservoir capacity. Hence total credit per CMC fluctuates between USD 2080 to USD 2280. Applying 10% annual rate for 2 years represents a monthly payment ranging USD 96-105. Considering 12 HH as the average per compound the loan should represent a payment of USD 8-9 per household per month. However as mentioned before Landlord is in charge to collect it as part of the monthly rent.
- Water system: Tube-well or submersible pump for each compound. It pumps to a storage tank (brick or HDPE) of 1000 L installed on the roof of the latrine.



Source: DSK designs

	 
Tube well	**Submersible pump**

	
Community storage tank built by brick	**Community prefabricated storage tank**

Sanitation: Mostly a single chamber septic tank. It is connected to a reduced sanitary sewer as a conveyance to a main sanitary sewer. Sludge is collected periodically but dumped into a land nearby.

	
Septic tank	**Septic tank**

	
Bathroom with Septic tank	**Septic tank**

Vhanga Dewal Slum

The slum is more than 15 years old and the CBO is 12 years old, composed of 25 people in total: men (7) and women (18). Five are officers and all are women. The area visited covers 1330 houses with around 5000 inhabitants. CBO has meetings with CMCs on a monthly basis.

- There are 15 CMCs for 15 septic tanks. They have the responsibility for O&M of the latrines. CMC visited is composed by nine members: 6 women and 3 men.
- The project consist of Sanitation only, supported by DSK
- Informal water points (around 103 points for water collection, mostly illegal) and around 28 hand-dug wells (risk of contaminated water) not supported by DSK nor any NGO.
- Water service is provided by independent intermediaries (private water tankers). There is no water quality assurance. Water is distributed to the slum by informal networks (by hoses over the roofs) to storage tanks or vessels. Water service is included in the rent collected by the Landlords. Each Landlord pays to the water tanker and he gives a receipt for the water sold.

  For instance, in the CMC visited, the Landlord has to pay 800 Tk (USD 10.4) per month during winter and on summer pays around 2,400 Tk (USD 31) due to more consumption. In case those families would have to pay directly to the private vendor it would be USD 0.5 to USD 1.6 per family per month.

 	 
Water point	**Provisional water storage**

- Financial model of sanitation infrastructure: By means of cost sharing (categories A to D). Water Aid Model (See Appendix 5). Infrastructure includes septic tanks accompanied by sanitary education. Septic tank cost was 100.000 Tk (USD 1300) and the cost sharing was 20.000 Tk (USD 260) equal to 20%. However, categories at the slum are mainly belonging to class C and D. Estimates of cost sharing recovery will be less than 15%.

- Number of Latrines as part of the Project are 15. Existence of 98 unhygienic latrines at the slum.

 	 
Septic tank	**Septic tank**

Unhygienic latrines

	
Unhygienic latrines	**Unhygienic latrines**

<u>Ali Nagar (Kamrangir Char)</u>

DSK has provided water supply system in this slum to 3,100 people and sanitation by means of septic tanks to more than 1,100 people and sanitary education to more than 10,000 inhabitants. A total of 394 water supply systems are installed along with 195 hygienic septic tanks.

People have safe water through deep tube wells, half cylinder pumps and also submersible pumps with reservoir facility. Groundwater quality is annually tested by DSK, who shares the results with the households and ensures people are getting safe water for all purposes. All hanging latrines were demolished and people are using sanitary latrines of different kinds based on their affordability, supported by DSK. Solid waste has also been improved by introducing waste collection van within the entire areas.

- The inhabitants have lived in the area for more than 15 years. DSK started working in 2006. CBO is 5 years old, composed of 15 members in total with 2 officers, all are women.
- There are 394 water points and 195 latrines (septic tanks) installed by DSK.
- Land lords live at the slum for more than 40 years.
- 35 CMCs for water are being installed and 34 CMCs for sanitation. Each CMC has nine members and all are women.
- CMCs have the responsibility for O&M. Water service is included in the rent; Landlord pays the loan to DSK (10% annual rate, 2 yr.)
- CMC is also responsible for cleaning and purchasing materials needed to maintain the systems.

- Financial model: Loans for water and sanitation infrastructure

Water: Deep Tube wells or Submersible pumps, Reservoir of water for each compound.

Water Point

Water Point with Rooftop Reservoir

Single Chamber Hygienic Latrine

3 Chamber Cluster Latrine

<u>Amin Bagh, South Rasulpur (Kamrangir Char)</u>

The infrastructure development of the entire areas has been started from the last decade. Before DSK's intervention, people used to depend on river water. Groundwater is heavily iron contaminated. People had unhygienic hanging latrines. Solid waste was a serious problem. After the intervention of DSK in 2006, the scenario in the project area has been changing. At present, DSK has covered more than 2,600 people by providing 449 water points. A total of 324 hygienic septic tanks are also provided to serve 1,650 inhabitants. Nowadays, people have safe water by

means of deep tube wells, half cylinder pumps and/or submersible pumps with reservoir facilities. People are also using different types of hygienic septic tanks based on their affordability.

Door-to-Door solid waste collection has been introduced in the area to assure healthy environment for all.

- Tenants have been living in the area for more than 20 years. CBO is 5 years old (15 total, 2 officers, all are women).
- Total water points are 449 and sanitation facilities are 324.
- Landlords live at the slum for more than 40 years.
- 35 CMCs for water are being installed and 32 CMCs for sanitation. Each CMC has nine members and all are women.
- CMCs have the responsibility for O&M. Water service is included in the rent; Land Lord pays the loan to DSK (10% annual rate, 2 yr.)
- CMC is also responsible for cleaning and purchasing materials needed to maintain the systems.
- Financial model: Loans for water and sanitation infrastructure

Water: Deep Tube wells or submersible pumps for each compound

	
Water Point	**Water Point**

	
Hygienic Latrine	**2 Chamber Cluster Latrine**

Shibpur, Amin Bazaar

Before intervention of DSK, people used to have water from two sources: from tube wells for cooking and drinking and also from a distance place due to limited availability and access to tube wells. In the areas most of people were using unhygienic hanging latrines.

DSK has been started implementing WASH projects since 2008. At present, population has increased upon 950 with 190 households. Through DSK intervention, community has got the opportunity to use piped water supply system introduced by the Local Government Institute, the Union Parishad, where system operating responsibility is given to the local mosque committee. Users pay 160 Tk (USD 2.05) per month per family and additionally 50 Tk (USD 0.64) as payment share of the caretaker's monthly salary. Households are using sanitary septic tanks taking technical and financial support from DSK. People are aware about hygiene issues.

- CBO is 6 years old (15 total members, 2 officers, all are women).
- Total households coverage in Water option is 130, Sanitation option is 120 and Hygiene coverage is 120.
- 02 CMCs for water and 80 CMCs for sanitation. Nine members per each CMC. All are women.
- CMCs have the responsibility for O&M, water service is included in the rent; the Land Lord pays the loan to DSK (10% annual rate, 2 yr.)
- CMC also responsible for cleaning and purchasing materials.
- Financial model: Loans for HW: water and sanitation

Water: Deep Tube wells with submersible pumps for each compound.

	
Water point	**Household Piped Water Connection System**

Sanitation: Single pit latrine with 5 rings and 1 slab.

	
Hygienic Latrine	**Hygienic Latrine**

North Bishil (Mirpur 1)

Uttar Bisil is a place in Pallabi at Mirpur of Dhaka. It is a large slum where DSK has provided WASH support since 2008. Since its inception, a total of 1,080 people have already come under the water supply system and 1,680 people have sanitation. Total slum population is 2,100 with 420 households. Before the project started people had unsafe water from different sources -illegally or paying high charge for it-. All the slum dwellers were dependent on using nearly pond water for bathing and washing clothes. In general, people, especially children, frequently had water borne diseases including high level of diarrhea. After the intervention, 316 households have already come under the water system coverage and around 300 use sanitary septic tanks. DSK provided cooperation to the community in the implementation of the Community Based Committee (CBO). CBO and DSK together appealed to DWASA to provide legal water supply connections into the slum areas. They are succeeded as the issue is covered under the Citizen Charter and the slum dwellers are getting legal water supply connection from DWASA nowadays.

- CBO is 6 years old (15 total, 2 officers, all are women).
- CBO is an elected committee; the election was held 1 time and same members are still serving
- Total households coverage in Water option is 316 and Sanitation option is 300 and hygiene 543.
- 10 CMCs for water and 07 CMCs for sanitation. Nine members per each CMC. All are women.
- CMCs have the responsibility for O&M, water service is included in the rent; the Land Lord pays the loan to DSK (10% annual rate, 2 yr.)
- CMC also responsible for cleaning and purchasing materials.
- Financial model: Loans for HW: water and sanitation

Water: Deep Tube wells with submersible pumps for each compound.

Water Supply System – underground reservoir

Water point

Sanitary latrine: 1, 2 & 3 Chamber Latrine. 3 chamber latrine with septic tank

2 Chamber Cluster Latrine

Sanitary Latrine

8.3 Project Characteristics in each Community

Table 9 summarizes water systems characteristics. **Table 10** is related to Community Management Committees.

Table 9. Water System Characteristics

Community	System Components	Metered	Chlorinated
1. Korail	-Water points -Double chamber septic tanks for men and women	YES	Yes. From DWASA mains
2. Demra	- Water points - Single chamber septic tanks	NO	NO
3. Vhanga Dewal	- Provisional water points (not part of the Project) - Double chamber septic tanks for men and women	NO	NO
4. Ali Nagar (Kamrangir Char)	- Deep Tube well - HTW (Half cylinder pump) - Submergible pump - 1 and 2 Chamber latrine	NO	NO
5. Amin Bagh, South Rasulpur (Kamrangir Char)	- Deep Tube well - HTW Half cylinder pump - Submergible pump - 1, 2 & 3 Chamber latrine	NO	NO
6. Shibpur, Amin Bazaar	- Deep set pump - Submergible pump - Slab latrine (Single pit)	NO	YES At source, The Mosque Committee responsible O&M and they have chlorinated practice while wash the reservoir.
7. Uttar Bishil (Mirpur 1)	- Water supply line with reservoir - 2 Chamber latrine	Yes	Yes The caretaker chlorinated reservoir regularly

Table 10. Characteristics of Community Management Committees (CMCs)

Community	# Members	# Women	Rotation System	Member compensation	Meeting Frequency
1. Korail	15	13	Every 2 years	None	Monthly
2. Demra	9	9	No rotation. CMC works continuously	None	n.a.
3. Vhanga Dewal	9	6	Once a year due to migration	None	Monthly
4. Ali Nagar Kamrangir Char	15	15	Selection process; when any member left the community CMC selects a new member by their own.	No water fee	Once in every 3 months; Running case once in every month
5. Amin Bagh, South Rasulpur Kamrangir Char	15	15	Selection process; when any member left the community CMC selects a new member by their own.	No water fee	Once in every 3 months Running case once in every month
6. Ahibpur, Amin Bazaar	15	15	Selection process; when any member left the community CMC selects a new member by their own.	No compensation Motivation by CBO	Once in every 3 months
7. Uttar Bishil (Mirpur 1)	15	15	Selection Process; when any member left the community CMC selects a new member by their own.	No water fee Motivation by CMC & CBO	Once in every 3 months

8.4 Household Observations

During the assessment a sample of household were visited from the seven communities included in the survey. **Appendix 4** presents the observations from the independent evaluators. **Figure 3** presents a summary including Korail Slum (the exemplary project) and **Figure 4** excludes the results from this community for comparison.

Figure 3. Results of Household Observation Surveys (including Korail Slum)

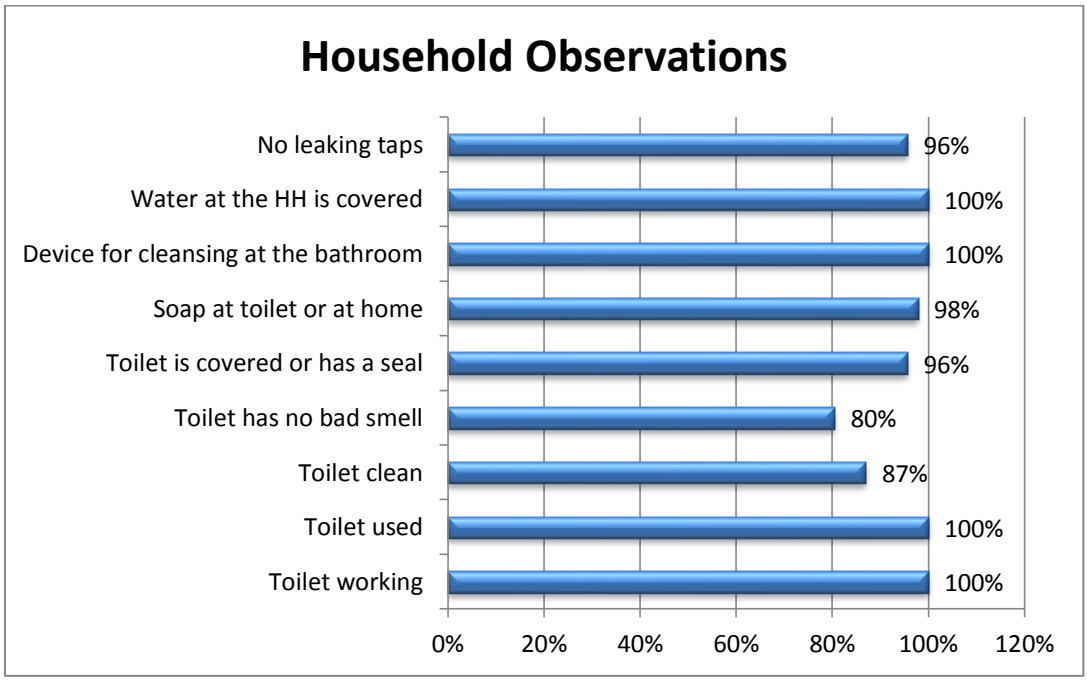
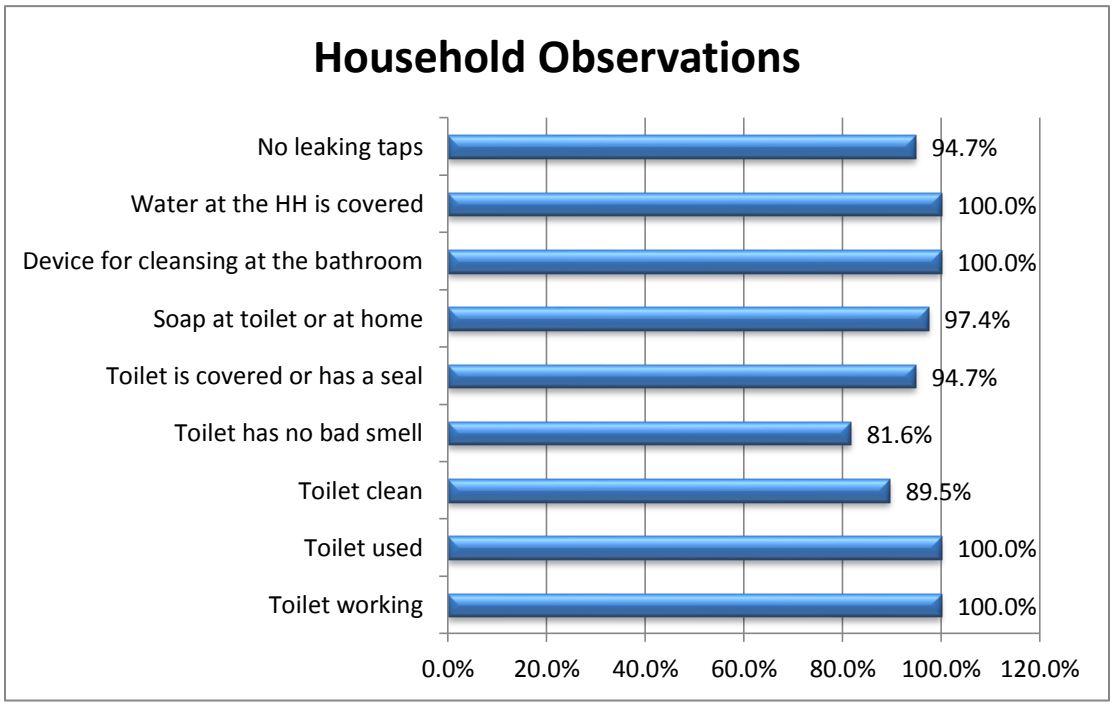


Figure 4. Results of Household Observation Surveys (excluding Korail)



8.5 Evaluation Results

A. Internal in-country partner structure

Metric 1. In-country partner collaborates or coordinates with other water and sanitation organizations (public or private)

Expectation		Result	Evidence
BASIC	a. Organization knows the principal public/private organizations in the region involved in water and sanitation projects.	**Yes**	DSK is part of many task-force groups. They participated actively on the National Sanitation Policy 2011-2025, also organized some international seminars and led some cross-cutting topics for the country like grassroots and gender. At present DSK has been implementing WASH projects in 199 slums (Memoire, 2013).
	b. Organization is aware of the national water laws and their application to the types of projects implemented by the organization.	**Yes**	DSK officials participate in different task-forces regarding by-laws, standards, best practices and similar. For instance DSK has identified policy gaps, took initiatives through advocacy with the government and successfully reviewed rules and regulations of DWASA which turned into national regulations.
	c. Organization has an informal relationship with other public/private organizations involved in water and sanitation projects in the region.	**Yes**	DSK has not only informal relationship with other local and international NGOs but an active participation on networks (WSSCC network) and has covenants and/or contracts with some international NGOs such as Water First, Water Aid. DSK is also the representative of Bangladesh at the South Fresh Action for South Asia (regional Platform). DSK has also a good coordination with WASAs and City Corporations.
HIGH	d. Organization has a formal relationship with other public/private organizations involved in water and sanitation projects in the region. (Examples of a formal relationship would be membership in a professional advocacy group or collaboration on specific projects.)	**Yes**	
Score: Blue			

Metric 2. Organization is concerned with improving water and sanitation program quality

	Expectation	Result	Evidence
BASIC	a. Organization has internal standards to define a "successful" and "sustainable" project.	**Yes**	DSK have technical standards for Hardware. Also some principles and standards such as Social Participation to achieve social engagement and transparency. Financial sustainability also by internalizing economic cost of water and sanitation service (water bills for O&M and cost sharing or total cost recovery for HW depending on the donor policy). DSK has developed Community Based participatory Approach to ensure sustainability of any project.
	b. Organization has had the opportunity to learn from observing another organization's work.	**Yes**	DSK collaborates actively with other organizations exchanging ideas and lessons learnt. For instance they have frequent collaboration with WSP-WB and Water Aid Bangladesh. Community Based Total Sanitation (CLTS) is an example of a successful approach, in which DSK has learnt and incorporated with different innovative projects in WASH sector.
	c. Organization conducts evaluations of its own projects at least 2 years after completion.	**Yes**	DSK accompanies projects after infrastructure completion for more than 2 years. Sanitary Education requires behavior change and it gets after continuous visits, talks and courses.
HIGH	d. Organization has an ongoing structure to improve program quality and has made specific changes in project implementation or internal operations in the last two years.	**Yes**	They have the following criteria to improve programs quality: a) Monitoring Team with task to produce 6 reports per year according to Logical Framework goals; b) Active Governing Body who has sessions every month to track advances; c) Engineering Forums to promote exchange among engineers, best practices and similar; d) Innovation promotion for new technology (customized to the country, for instance working with Gates Foundation on new design of latrines).
	e. Organization has had an evaluation of its water and sanitation projects conducted by another organization.	**Yes**	Midterm Review Report of Progress, Problems and Prospects of the Project Promoting Environmental Health for the Urban poor. Prepared for Water Aid Bangladesh, May 2014
	f. Organization is involved with the communities upon project completion for 2 years	**Yes**	DSK accompanies projects after infrastructure completion for more than 2 years. Sanitary Education requires behavior change and it gets after continuous visits, talks and courses.
Score: Blue			

Metric 3. Organization is a sustainable organization and maintains solid business practices

	Expectation	Result	Evidence
BASIC	a. Organization has an annual budget.	**Yes**	Budget for 2014 was 6.4 billion Tk corresponding 5.9 billion Tk (USD 76 Mio) for microcredit and the remaining for other projects (including water and sanitation with 106 Mio Tk eqq to USD 1.38 Mio)
	b1. Organization tracks income and expenditures and has a bank balance that exceeds liabilities.	**Yes**	They conduct annual external audits and have annual bank balances. According to the Audit Report 2013, DSK has a bank balance that exceeds liabilities.
	c. Organization is legally registered in the country where it is operating.	**Yes**	NGO Affairs Bureau is 577, dated 26-12-1991 and last renewed on 26th December, 2011
	d. Organization has a mission statement and by-laws or equivalent organizational management documentation.	**Yes**	DSK has a Strategic Plan 2013-2018 comprising Identity, SWOT, Strategy Development Process, priorities for the period (WASH is one of them) and budget projections.
HIGH	b2. Organization tracks income and expenditures according to standard accounting practices and has a bank balance that exceeds liabilities.	**Yes**	They conduct annual external audits and have annual bank balances. Each year DSK publishes an Activity Report. The corresponding to 2013 includes consolidated Statement of Financial Position and Statement of Comprehensive Income.
	e. Organization undergoes an annual audit of its finances	**Yes**	They conduct annual external audits and have annual bank balances http://www.dskbangladesh.org/DSK%20Audit%20Report%202014.pdf
	f. Organization produces an annual financial statement/report.	**Yes**	Each year DSK publishes an Activity Report. The corresponding to 2013 includes consolidated Statement of Financial Position and Statement of Comprehensive Income.
	g. Organization has stable annual funding	**Yes**	It can be appreciated in the Annual Activity Report. Equity is around 1.5 billion Tk
	h. Organization has an Strategic Plan	**Yes**	DSK has a Strategic Plan 2013-2018 comprising Identity, SWOT, Strategy Development Process, priorities for the period (WASH is one of them) and budget projections.
	i. Organization has an elected governing body	**Yes**	The governing body is composed by 10 members for three year period. They have sessions every month. They have established Subcommittees to attend different topics.

	j. Organization has specialists in relevant fields (finance, engineering, community development, hygiene education)	**Yes**	DSK has 1700 workers. People working in water and sanitation exceed 30. People destined to PEHUP and Water 1st Projects at DEMRA are 19.
Score: Blue			

B. Community Commitment and Local Project Management

Metric 4. The community makes a financial contribution to the capital cost of the project either up-front or over time (i.e. a loan), though cash and/or in-kind contributions

Expectation		Result	Evidence
BASIC	a1. Community contributes 10% of the project capital cost through cash (up front or over time via a loan) and/or in-kind contributions.	**Yes**	Depending of the donor Community pays cost sharing component (Water Aid) or full cost recovery (Waster First). Cost sharing in Korail was above 30% and in Vhanga Dewal was around 25%
HIGH	a2. Community contributes 25% of the project capital cost through cash (up front or over time via a loan) and/or in-kind contributions.	**Yes**	
	b. Loans to communities have a default rate of less than 10%.	**Yes**	Due to Landlord makes the collection the default rate is minimum. Landlord brings collection to CBO and CBO pays to the MFI
Score: Blue			

Metric 5. A competent local water management board is created and functions effectively

	Expectation	Result	Evidence
BASIC	a. Water management board members have received training to prepare them for their roles (e.g. accounting, leadership)	Yes	DSK trains each Community Based Organization (CBO) and also to Community Management Committees (CMCs) in their roles.
	b. Water management board meets regularly and has minutes of past meetings.	Yes	CMC have meetings regularly. Most of CMC meet once a month and maintain register book by keeping meeting minutes and signature of the attendees.
	c. Users are satisfied with the water management board.	**Yes**	Users have close relation with CMC due to small number of HH in each cluster/compound
	d. Water management board tracks income and expenditures and has a bank balance that exceeds liabilities.	**Yes**	Due to special case of slums, evaluators consider as a "yes". Landlords or land owners collect a monthly rent that covers water and sanitation O&M expenses.
	d1. Women have held position on the water management board.	**Yes**	Yes, mostly. For instance, at Korail there are 15 people with 13 women. At DEMRA the nine members are women. At Vhanga Dewal six are women out of nine. In the rest of the projects visited most of members at CMCs are women.
HIGH	d2. At least 25% of water management board positions are held by women.	**Yes**	
	e. Water management board is increasing savings towards a savings goal for future upgrades/expansions	**No**	Clusters or compounds have definite number of HH with small possibility to demand expansion. Savings are considered to pay either full cost recovery or cost sharing. However in some slums cost sharing percentage was at risk due to insufficient payment from HH (Vhanga Dewal)
	f. Water management board is representative of the community and users are satisfied with the board.	**No**	In some slums CMCs are integrated by the Landlords who define the rent and collects it on a monthly basis. Renters have a little option to define issues regarding water and sanitation infrastructure.
	g. Water management board enforces collection of fees by water system users.	**No**	Some HH are not paying due they are considered in category D. However at the beginning of the project they were considered in a better category. In practice differentiation between categories C or D seems to have some degree of subjectivity.
	h. Independent evaluations of water management board accounts are conducted.	**Yes**	DSK as implementing organization regularly evaluates the accounts of CBOs and CMCs and provides required

			guidelines.
	i. Water management board makes policy decisions (e.g. increases in water use fees, connection fees for new users of the water system)	**No**	CMCs only operate systems. DWASA charges in the case of Korail. In the rest of slums visited Landlords include the tariff into the monthly rent but with no clarity to determine if it only covers O&M costs or a surplus. In Vhanga Dewal Landlord pays to particular water truckers usually unregulated.
Score: Green			

C. Sanitation

Metric 6. Most people in the community have access to a sanitary toilet

According to JMP definition, if more than two households share a latrine, it is "unimproved." However this concept is somewhat controversial, especially at slums. Other studies consider a pit latrine or septic tank to be considered "improved" if the pit is covered and insects cannot fly in and out, whether or not it is shared. In this assessment evaluators have considered this latter concept.

Expectation		Result	Evidence
	Urban:		
	a. Organization encourages 100% of community members build and use sanitary toilets.	**Yes**	EDUSAN is one of the strengths and strategies of the organization
	b. Organization has a design standard for toilets.	**Yes**	Technical Drawings, reference cost and some specification were provided.
BASIC	c1. More than 70% of households have access to a sanitary toilet.	**No**	Sanitation is communal. Most of slums visited do not have high sanitation coverage. In Vhanga Dewal for instance (where the project is present), unhygienic latrines were more than well-constructed septic tanks.
	d1. There is at least one toilet for every 20 people.	**No**	System visited at Korail had 2 latrines for 15 HH (75 px) i.e. 36 each. At DEMRA 2 latrines serve for 12 HH (60 px) above 10 HH (50 persons) i.e. 25 each. At Vhanda Dewal there are 2 latrines for 20 HH (100 px) i.e. 50 each.
HIGH	c2. More than 90% of households have access to a sanitary toilet.	**No**	In some slums areas (like Vhanga Dewal) where the project is present unhygienic latrines were more than well-constructed septic tanks.

	d2. There is at least one toilet for every 15 people.	**No**	See d.1
	e. There are separate toilets for women	**No**	Not always. At Water Aid Projects that is the practice. For other donors toilets are unisex with no additional area for menstruation -as observed in some projects-
	f. The ratio of toilets per female population for women is higher than the ratio of toilets for men.	**No**	No. In some slums toilets are indistinct of sex.
Score: Yellow			

Metric 7. Toilets are well-used in a sanitary manner and users are satisfied with the toilets

Expectation		Result	Evidence
BASIC	a1. 75% of the toilets constructed are clean; functioning properly, being used as toilets, and covered (water seal or other physical seal).	**Yes**	Based on HH observations (where the project is present) more than 90% of latrines are clean and functioning properly.
	b1. More than 70% of households report being satisfied with the toilets.	**Yes**	Based on Focus Groups more than 90% are satisfied with the toilets.
	c1. More than 70% of households report that everyone in the household uses the toilet for defecation.	**Yes**	Based on HH observations and Focus Group
HIGH	a2. 90% of the toilets constructed are clean, functioning properly, being used as toilets, and covered (water seal or other physical seal).	**Yes**	Based on HH observations more than 90% of latrines are clean and functioning properly
	b2. More than 90% of households report being satisfied with the toilets.	**Yes**	Based on Focus Groups more than 90% are satisfied with the toilets.
	c2. More than 90% of households report that everyone in the household uses the toilet for defecation.	**Yes**	Based on HH observations and Focus Group
Score: Blue			

Metric 8. Users have a replacement strategy for toilets not connected to a public sewage system

Expectation		Result	Evidence
BASIC	a1. More than 75% of households can describe what they will do when the toilet needs to be replaced (i.e. when the pit on a VIP fills up)	Yes	People report good knowledge on sanitation issues. DSK focuses on sanitary education as part of the sustainability model. Interviews with CMC and also during Focus Groups confirm that. Materials used are adequate for long lasting service
HIGH	a2. More than 80% of households can describe what they will do (or have done) when the toilet needs to be replaced (i.e. when the pit on a VIP fills up)	Yes	
Score: Blue			

D. Water Supply and Hygiene Education

Metric 9. All households in the community have convenient access to a safe water supply

Expectation		Result	Evidence
	Urban	Yes	In the areas visited all of the population living in those clusters/compounds has water service. Evaluators understand water projects are in progress and the remaining population with no service will have in the near future.
BASIC	a1. 75% of households in the community have access to water every day, within a 15 minute round trip walk (including queuing and container filling time) to each home.		
HIGH	a2. All households in the community have access to water 24 hours each day for house taps or during reasonable hours of operation for public taps located within a 15 minute round trip walk (including queuing and container filling time) to each home.	Yes	Water points are built/established for each cluster/compound. In the project areas people can access to water at any time and no queues were observed.
	b2. When the water system is undergoing maintenance, households boil/chlorinate/treat their water supply to make it safe while waiting for maintenance activities to conclude	Yes	In general, water comes from aquifers that have acceptable monitoring on bacteriological and arsenic parameters.
Score: Blue			

Metric 10. Household water use is sufficient to meet all needs for consumption and hygiene purposes.

	Expectation	Result	Evidence
	a1. Water system is designed to provide at least 50 liters per capita per day (l/c/d).	**Yes**	It is designed to supply at least 50 L/c/d. Nevertheless, consumption in some slums was found inferior (estimated 35-40 l/c/d based on consumption metered at Korail Slum), but not attributable to improper designs.
	b1. There is evidence that more than 60% of users have increased per capita water use for hygiene purposes.	**Yes**	Before water points or water wells per compound, people used to depend on water tankers or from rivers nearby with much less availability and questionable water quality. With water projects the consumption has increased and also with better water quality.
HIGH	b2. There is evidence that more than 80% of users have increased per capita water use for hygiene purposes.	**Yes**	
Score: Blue			

Metric 11. Households demonstrate increased health and hygiene awareness over time

	Expectation	Result	Evidence
BASIC	a1. More than 60% of households can identify critical hand-washing times.	**Yes**	Focus Group confirms population knows critical hand-washing times.
	b1. More than 60% of households have soap present.	**Yes**	During HH observations it was confirmed each HH had soap at its home.
	c1. More than 60% of households have a covered drinking water storage container.	**Yes**	During HH observations it was confirmed each HH had covered water storage container.
	d1. More than 60% of households report either boiling or chlorinating their drinking water.	**Yes**	The evaluation should be focused more on water safety. People at slums are not accustomed to boil or chlorinate by themselves. At Korail slum water comes from DWASA which is chlorinated. In the other slums visited water comes from deep aquifers which have frequent bacteriological analysis and no contamination was/is found.
HIGH	a2. More than 80% of households can identify critical hand-washing times.	**Yes**	Focus Group confirms population knows critical hand-washing times.

	b2. More than 80% of households have soap present.	**Yes**	During HH observations it was confirmed each HH had soap at its home.
	c2. More than 80% of households have a covered drinking water storage container.	**Yes**	During HH observations it was confirmed each HH had covered water storage container.
	d2. More than 80% of households report either boiling or chlorinating their drinking water.	**Yes**	See d.1
	e. Animal access to the house is prevented in more than 80% of households.	**Yes**	No animals were found except domestic animals (cats).
Score: Blue			

E. Project Design and Construction

Metric 12. The community has legal authority for the water source and water system

	Expectation	Result	Evidence
BASIC	a. Community has documentation of the legal process it went through to obtain permission for the water source and system.	**Yes**	The implementing organization has served as nexus to ensure legal process and proper documentation either with Water Utility or for wells drilling.
HIGH	Same as minimum expectation.	**Yes**	
Score: Blue			

Metric 13. Water quality is tested and treated appropriately

	Expectation	Result	Evidence
BASIC	a. Initial water quality of source water (bacteriological and chemical) is tested and meets country water quality standards.	**Yes**	DSK conducts water quality analysis before the projects begins.
HIGH	b. Water quality (bacteriological and chemical) is tested annually against country water quality standards.	**No**	No annual water quality analysis was found during some of the visits. Evaluators were informed analyses are frequent for bacteriological parameters. However not seen complete analysis according to the parameters set in the mandatory standard (especially for chemical parameters).

	c. If standards are not met, community takes appropriate steps to remedy the situation and bring water quality back to acceptable standards.	**No**	In general population is not prepared to an emergency due to bad water quality. If water quality worsens they will probably go back to water tankers or to take water from rivers nearby.
Score: Green			

Metric 14. Water system is appropriately designed and well-constructed

Expectation		Result	Evidence
BASIC	a. Water source is sufficient to meet the needs of the community for at least 20 years.	**Yes**	Korail Slum has water from the Water Utility DWASA. Other projects have deep wells with sufficient capacity
	b. Water system is designed and constructed to last at least 20 years.	**Yes**	It is appreciated the use of materials for long lasting projects. DSK estimates durability of 20 years.
	c. Water system is a closed system. (A water system which, through water seals on well-heads, capped springs, or other methods, does not allow any outside contamination inside the system.)	**Yes**	Water-tightness system is the general criteria.
	d. Water system components can be found in-country and community members are aware of where replacement parts can be found and their approximate costs.	**Yes**	DSK uses local materials and proper technology adapted to local needs. Community members are aware where replacement parts are found and approximate costs.
	e. System is designed (considering pressure and number of taps) so that once users arrive at a tap they do not have to spend more than 5 minutes waiting in line and filling their container.	**Yes**	No queues were found
HIGH	f. Appropriate/good quality materials are used for water system infrastructure.	**Not always**	An observation was made regarding the use of PVC or uPVC pipelines exposed to UV. In general PVC are recommended to be installed buried or within the walls.
	g. Organization uses a set of water system design standards.	**Yes**	DSK has water system design standards
	h. Construction management and oversight is vigorously implemented.	**Not always**	Some minor construction observations were made. On the other hand, Community can take decision on construction by themselves or use old existing infrastructure to reduce lending (storage tanks for instance in the case of Demra). Hence the overall project can have unequal quality.
Score: Green			

Metric 15. Toilets/sanitation system is appropriately designed and well-constructed

	Expectation	Result	Evidence
BASIC	a. Sanitation system is isolated from the water source.	**Yes**	Water wells are deep (more than 70 m deep). Septic tanks are built to be hermetic and fecal sludge is collected with certain periodicity.
BASIC	b. Sanitation system is designed for 100% of community members to use.	**Yes**	Sanitation allows access to everyone at the cluster/compound
BASIC	c1. Toilet is designed and constructed to last at least 2 years before needing replacement.	**Yes**	Toilets are built for long lasting use
HIGH	c2. Toilet is designed and constructed to last at least 5 years before needing replacement.	**Yes**	
HIGH	d. Organization uses a set of toilet design standards.	**Yes**	DSK have proper design standards such as septic tanks.
Score: Blue			

F. Water System Long-term Operation and Maintenance

Metric 16. Water system is well-used and users are satisfied with the system

	Expectation	Result	Evidence
BASIC	a1. More than 75% of community members use the water system.	**Yes**	Water system is used for everyone at the cluster/compound which is part of the project
BASIC	b1. More than 75% of users report being satisfied with the water system.	**Yes**	Based on Focus Groups users who are part of the Project are satisfied with the system.
HIGH	a2. More than 95% of community members use the water system.	**Yes**	Water system is used for everyone at the cluster/compound
HIGH	b2. More than 90% of users report being satisfied with the water system.	**Yes**	Based on Focus Groups users who are part of the Project are satisfied with the system.
Score: Blue			

Metric 17. Water system repair issues are addressed quickly and water system undergoes routine maintenance

	Expectation	Result	Evidence
BASIC	a. Water system components are inspected and maintained on a regular basis.	**Yes**	Caretaker or CMC inspects regularly the water system components
BASIC	b. Water system is repaired within 48 hours of breakage.	**Yes**	Systems visited showed no evidence of breaks. CMC inform they address any inconvenience promptly.
HIGH	c. Piped water systems are metered to help identify leaks.	**No**	Only Korail Slum has meters. Other slums with deep tube wells or submersible pumps have no meters.
Score: Green			

Metric 18. User fees are paid by project beneficiaries and water system is financially self-supporting

	Expectation	Result	Evidence
BASIC	a1. More than 75% of households regularly pay a water bill/user fee.	**Yes**	Everybody pays for water as part of the rent
BASIC	b1. More than 75% of households are aware of specific consequences when the water bill is not paid.	**Yes**	Everybody pays regularly his monthly rent. As DSK provided training to the community, 100% community members are aware of specific consequences when the water bill is not paid.
HIGH	a2. More than 95% of households regularly pay a water bill/user fee.	**Yes**	Everybody pays for water as part of the rent. Land lords are aware of the benefits of having water and sanitation systems for better quality of life.
HIGH	b2. More than 90% of households are aware of specific consequences when the water bill is not paid.	**Yes**	Everybody pays regularly his monthly rent. Also see b.1
Score: Blue			

G. Water Source Protection

Metric 19. An active water source protection program exists in the community

	Expectation	Result	Evidence
BASIC	a. Water management board members demonstrate knowledge of the water cycle and how human activities affect the availability and purity of water supplies.	**Yes**	CMC are aware of water scarcity and source protection
	b1. The quality and quantity of the source water has been maintained 5 years or more.	**Yes**	Projects date from 5 years. There was no evidence of changes in quantity or quality.
	d1. Wells: Organization uses a standard to provide separation between wells and toilets.	**Yes**	Designs were supplied to evaluators. Water wells are deep enough (more than 75 m).
	e1. Wells: Located so they will not flood in wet season and storms	**No**	It was observed lack of slab or protection against floods or dust in some tube wells and/or submersible pumps
	f1. Wells: There are no openings in top of well-casing.	**No**	
HIGH	b2. The quality and quantity of the source water has been maintained 20 years or more.	**Not known**	Projects do not have that life period. Even more some are still in progress in some areas of the same slums
	c. The water management board has determined allowable uses of water from the project and effectively monitors and enforces these uses.	**Yes**	They have verbal agreements. Each CMC has determined allowable uses of water and effectively monitors and enforces these uses.
Score: Yellow			

H. Environmental Impact

Metric 20. Wastewater receives proper treatment before it is disposed to reception bodies (lakes, rivers, soil, etc)

	Expectation	Result	Evidence
BASIC	a. Wastewater and/or fluids from on-site sanitation are contained on watertightness facilities	**Yes**	Septic tanks are tightness.
	b. Wastewater and/or fluids from on-site sanitation are connected to some type of safe conveyance technology	**No**	There is no evidence wastewater flows by proper conveyance. Septic tanks are sometimes connected to the storm drainage system which is not designed for

			that purpose and also with absence of proper maintenance.
HIGH	Urban: c. Wastewater receives secondary treatment or equivalent (reduction of BOD and SST)	**No**	Wastewater is not treated. Decentralized wastewater treatment plants are possible for decentralized systems.
Score: Yellow			

Metric 21. An adequate sludge management is held

Expectation		Result	Evidence
BASIC	a. Sludge from latrines/septic tanks are collected periodically from on-site sanitation facilities	**Yes**	Most of sanitation systems report periodic collection of fecal sludge from septic tanks
HIGH	b. Sludge from latrines/septic tanks are collected periodically from on-site sanitation facilities and properly disposed into other facility for treatment	**No**	Sludge is collected manually and dumped into the nearby drainage system or low lands. Just an exception was found in Uttar Bisil where DSK collects sludge through Vaccutug vehicle (technically safe vehicle to collect fecal sludge).
Score: Green			

Metric 22. Solid waste is properly managed

Expectation		Result	Evidence
BASIC	a. Solid waste is collected periodically	**Yes**	CBO and CMCs informed solid waste is collected periodically.
HIGH	b. Solid waste is periodically and properly disposed in sanitary landfill	**No**	CBO and CMCs informed solid waste is not disposed on sanitary landfills. This point was controversy between evaluators. On one hand it is considered final waste disposal should be responsibility of City Corporations. On the other hand, waste is dumped with no concern on local contamination and possible health risks.
Score: Green			

8.5 Summary

Key Domain	Standards	Score
A. Internal in-country partner structure	1) In-country partner collaborates or coordinates with other water and sanitation organizations (public or private)	**Blue**
	2) In-country partner is concerned with improving water and sanitation program quality	**Blue**
	3) In-country partner is a sustainable organization and maintains solid business practices	**Blue**
B. Community Commitment and Local Project Management	4) The community makes a financial contribution to the capital cost of the project either up-front or over time (i.e. a loan), though cash and/or in-kind contributions	**Blue**
	5) A competent local water management board is created and functions effectively	**Green**
C. Sanitation	6) Most people in the community have access to a sanitary toilet	**Yellow**
	7) Toilets are well-used in a sanitary manner and users are satisfied with the toilets	**Blue**
	8) Users have a replacement strategy for toilets not connected to a public sewage system	**Blue**
D. Water Supply and Hygiene Education	9) All households in the community have convenient access to a safe water supply	**Blue**
	10) Household water use is sufficient to meet all needs for consumption and hygiene purposes.	**Blue**
	11) Households demonstrate increased health and hygiene awareness over time	**Blue**
E. Project Design and Construction	12) The community has legal authority for the water source and water system	**Blue**
	13) Water quality is tested and treated appropriately	**Green**
	14) Water system is appropriately designed and well-constructed	**Green**
	15) Toilets/sanitation system is appropriately designed and well-constructed	**Blue**
F. Water System Long-term Operation and Maintenance	16) Water system is well-used and users are satisfied with the system	**Blue**
	17) Water system repair issues are addressed quickly and water system undergoes routine maintenance	**Green**
	18) User fees are paid by project beneficiaries and water system is financially self-supporting	**Blue**
G. Water Source Protection	19) An active water source protection program exists in the community	**Yellow**
H. Environmental Impact	20) Wastewater receives proper treatment before it is disposed to reception bodies (lakes, rivers, soil, etc)	**Yellow**
	21) An adequate sludge management is held	**Green**
	22) Solid waste is properly managed	**Green**

Each variable is of equal weight. Numeric scores are 3 points for Blue, 2 points for Green, 1 point for Yellow when the organization meets most of variables corresponding to basic level and Red equals zero (0). DSK scores **54 points out of a possible 66** if high/exceptional expectations were all met in all categories. There are 13 variables where DSK meets high expectations (blue), 6 variables where they meet basic standards (green) and 3 where they do not fully comply with basic standards (yellow).

Qualitative Score	**Quantitative Score**
Blue	3 points
Green	2 points
Yellow	1 point
Red	0 point
Score possible if all high expectations are met	66 points
Score possible if all basic expectations are met	44 points
DSK Score	**54 points (82%)**

13 metrics in Blue equal to	39 points
6 metrics in Green equal to	12 points
3 metric in Yellow equal to	3 points
Total	**54 points**

9. CONCLUSIONS

Water Rating System focused on the evaluation of DSK, a local NGO set in Bangladesh, which has been implementing water and sanitation programs for over 20 years. During one week in December 2014, DSK was evaluated based on 22 criteria of likelihood to provide long-term services as an indication of money well spent by donor organizations.

DSK has shown good work in a complex environment such as slums and also in the challenging water and sanitation sector. Some of the remarks are the following:

- Good governance: CBOs and CMCs already installed in each project.
- Continuous communication with CBO and CMCs: confidence
- Community Led Total Sanitation Strategy. Ownership
- Water designs and construction according to technical procedures.
- Solid organization and adequate monitoring during the project
- Reservoirs as part of water projects to guarantee water continuity
- Septic tanks for gents and women (gender-oriented) in some of the slums
- Billing included in the rent. No delays nor any default rate

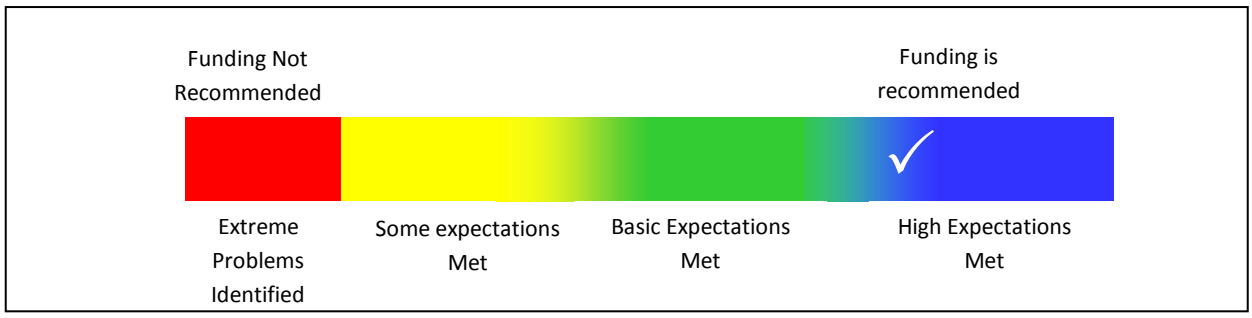
Based on the criteria used in the WfL rating system DSK fulfilled basic expectations for sustainability in six (6) out of 22 categories but remarkably met **high expectations in thirteen (13)** of these.

Though there were many successes observed, there are some areas that need to be addressed. Water quality is a sensitive matter, especially in Bangladesh with relevant concerns on arsenic and other metals present. Hence, a comprehensive water quality analysis of the aquifer or the main water source should be an essential part of all the projects as well as good monitoring with some specific parameters that could be conducted by the organization or in alliance with local governments. Regarding sanitation, on-site sanitation solutions must be spread. It is also desirable to complete the sanitation ladder by adequate fecal sludge collection and disposal, as well as support for wastewater treatment either by means of decentralized plants or conveyance to main sewers with final destination to wastewater treatment.

Some slums have no access to legal water and it represents a higher and much more complex challenge. DSK has been supporting as an intermediary with local authorities to sensitize them in order to allow bulk water points surrounding the slum for further distribution to the population with NGOs support (as Korail slum). However, in other cases it seems harder to bring to fruition in the short term. In those areas, DSK's support is limited to on-site sanitation projects such as septic tanks connected to main sewers belonging to Water Utilities, but the interdependence with water is undeniable (on health, sanitary education, finance on services and O&M). It would be desirable to address both projects at the same time to increase sustainability likelihood.

Based on 66 possible points if all exceptional expectations are met in all categories and 44 points if basic expectations are met in all categories, DSK received **54 points.** According to the criteria established, the scoring represents above the average, and highly recommended to donor organizations.

Though still facing some challenges, DSK has shown very good work in a complex water and sanitation sector. According to the criteria established, receives a score of **82%**. This means DSK complies with basic standards but most important DSK reaches "blue" in most of the metrics which is the optimum score. Hence DSK is considered suitable for a recommendation for future funds from donors and international organizations.



Report prepared by:

Franz Rojas-Ortuste and Waled Mahmud

January 2015

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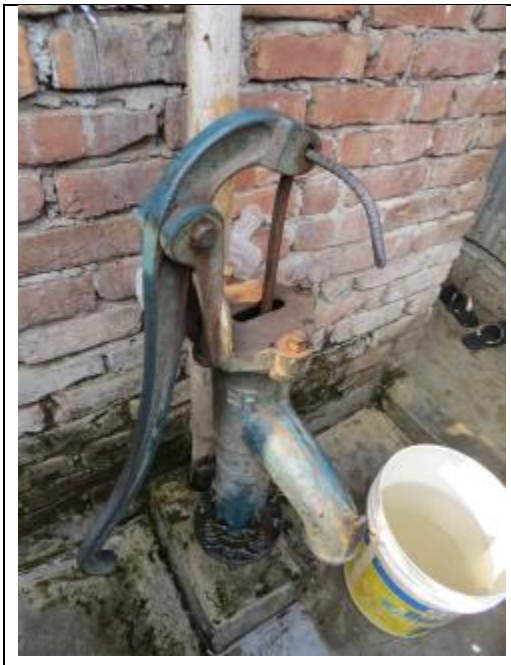
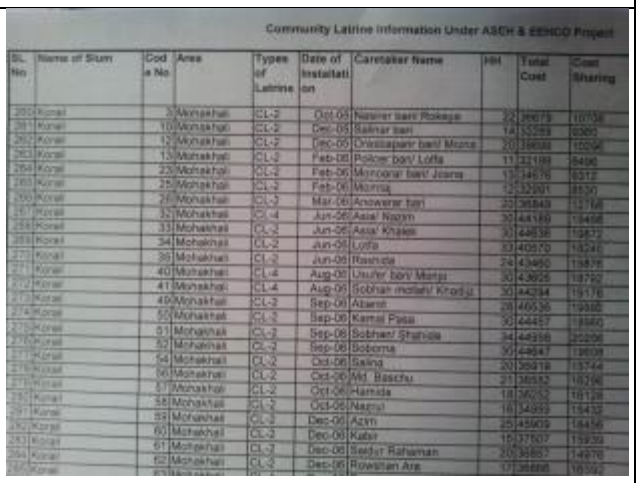
APPENDICES

Appendix 1. Additional Photos

Korail Slum



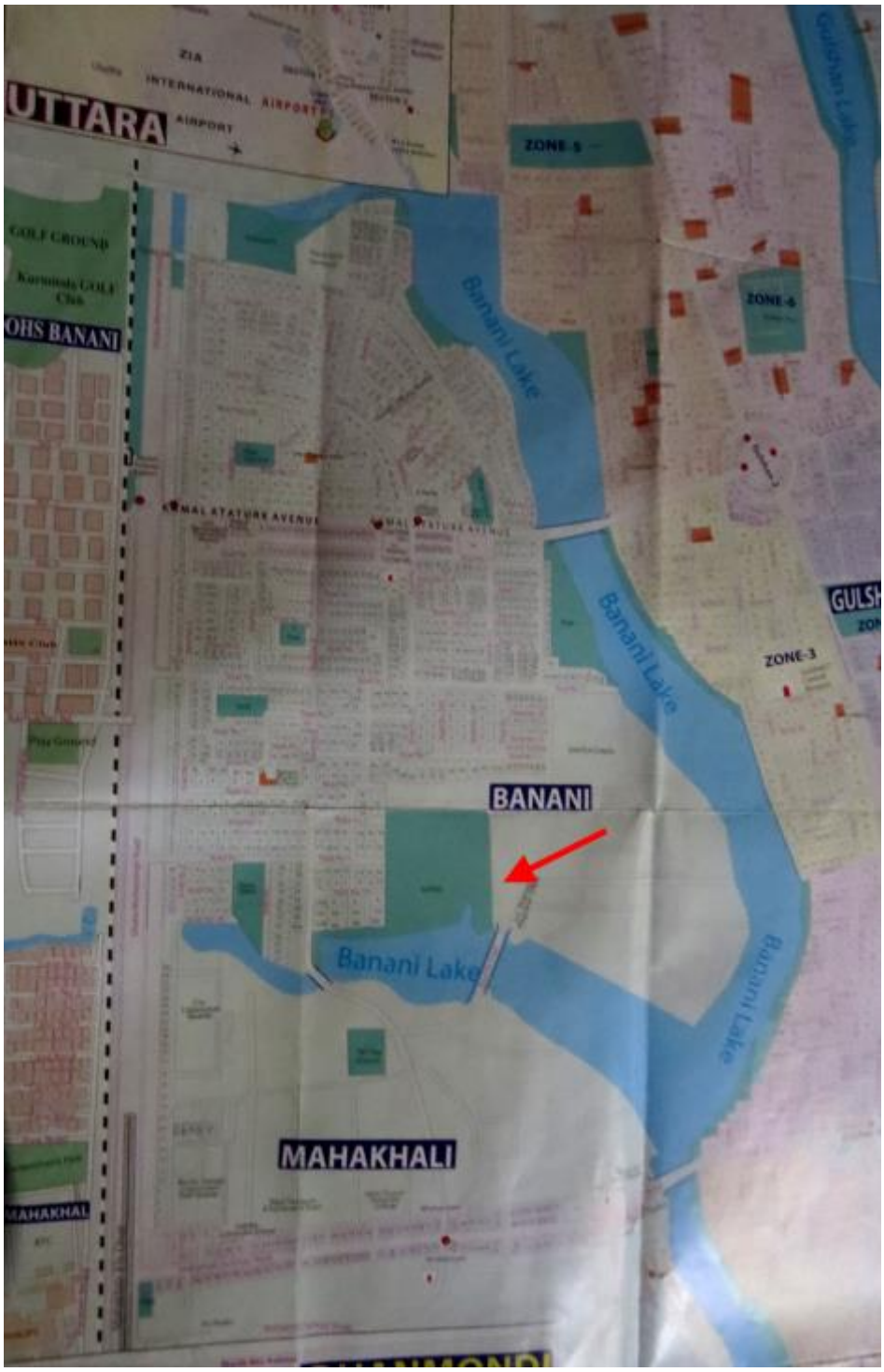


Community Latrine Information Under ASCH & EEHCO Project

SL No	Name of Slum	Code No	Area	Types of Latrine	Date of Installation	Caretaker Name	HH	Total Cost	Cost Sharing
260	Korail	3	Mohakhali	CL-2	Oct-05	Nasirer bari Rokeya	22	39675	10706
261	Korail	10	Mohakhali	CL-2	Dec-05	Salimar bari	14	32283	8391
262	Korail	12	Mohakhali	CL-2	Dec-05	Orissapatir bari/ Mona	20	39838	10256
263	Korail	13	Mohakhali	CL-2	Feb-06	Policer bari/ Lotfa	11	33188	8496
264	Korail	23	Mohakhali	CL-2	Feb-06	Moncorar bari/ Joana	13	34676	8312
265	Korail	25	Mohakhali	CL-2	Feb-06	Momtaj	12	32261	8530
266	Korail	26	Mohakhali	CL-2	Mar-06	Anowarer bari	20	36843	10178
267	Korail	32	Mohakhali	CL-4	Jun-06	Asia/ Nazim	30	44180	13498
268	Korail	33	Mohakhali	CL-2	Jun-06	Asia/ Khalek	30	44838	13872
269	Korail	34	Mohakhali	CL-2	Jun-06	Lotfa	30	40570	10246
270	Korail	39	Mohakhali	CL-2	Jun-06	Rashida	24	43460	13878
271	Korail	40	Mohakhali	CL-4	Aug-06	Unufer bari/ Monju	30	43605	13792
272	Korail	41	Mohakhali	CL-4	Aug-06	Sobhan mollah/ Khadiju	30	44284	13176
273	Korail	49	Mohakhali	CL-2	Sep-06	Abanti	28	46536	13985
274	Korail	50	Mohakhali	CL-2	Sep-06	Kamal Pasa	30	44457	8940
275	Korail	51	Mohakhali	CL-2	Sep-06	Sobhan/ Shahida	34	46936	20206
276	Korail	52	Mohakhali	CL-2	Sep-06	Soborna	30	44647	13608
277	Korail	54	Mohakhali	CL-2	Oct-06	Saina	20	39818	10744
278	Korail	56	Mohakhali	CL-2	Oct-06	Md. Baschu	21	38512	10236
279	Korail	57	Mohakhali	CL-2	Oct-06	Hamida	18	36052	10128
280	Korail	58	Mohakhali	CL-2	Oct-06	Nazrul	16	34493	10432
281	Korail	59	Mohakhali	CL-2	Dec-06	Azim	25	45409	18456
282	Korail	60	Mohakhali	CL-2	Dec-06	Kabir	15	37507	13939
283	Korail	61	Mohakhali	CL-2	Dec-06	Sadyr Rahaman	20	38857	14976
284	Korail	62	Mohakhali	CL-2	Dec-06	Rowshan Ara	17	36696	10752


মহিলা
পুরুষ
ukaid
unicef

Korail Slum in an official map



Demra Slum

Children taking a bath in a river contaminated nearby

Vhanga Dewal Slum

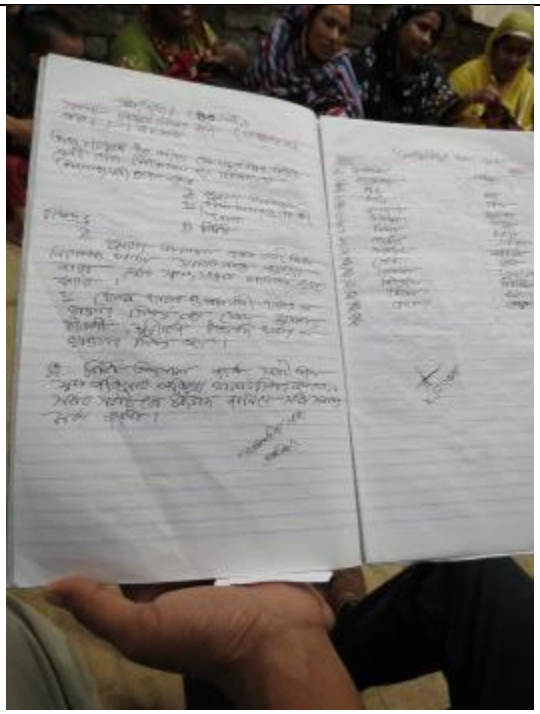
	
	

Provisional Water Supply

Unhygienic Latrines

Ali Nagar, Kamrangir Char

South Rasulpur, Kamrangir Char



Shipbur, Amin Bazaar

North Basil, Mirpur 1

Appendix 2. Interview to DSK Executive Director

A. Internal in-country partner structure	
1. In-country partner collaborates or coordinates with other water and sanitation organizations (public or private)	
a. Organization knows the principal public/private organizations in the region involved in water and sanitation projects.	DSK is part of many task-force groups. They participated actively on the National Sanitation Policy 2011-2025, also organized some international seminars and led some cross-cutting topics for the country like grassroots and gender. At present DSK has been implementing WASH projects in 199 slums (Memoire, 2013)
b. Organization is aware of the national water laws and their application to the types of projects implemented by the organization.	DSK has a set of national laws and by-laws and has participated on some sector policies
c. Organization has an informal relationship with other public/private organizations involved in water and sanitation projects in the region.	DSK has not only informal relationship with other local and international NGOs but an active participation on networks (WSCC network) and has covenants and/or contracts with some international NGOs such as Water First, Water Aid. DSK is also the representative of Bangladesh at the South Fresh Action for South Asia (regional Platform). DSK has also a good coordination with WASAs and City Corporations.
d. Organization has a formal relationship with other public/private organizations involved in water and sanitation projects in the region (membership in a professional advocacy group or collaboration on specific projects.)	
2. In-country partner is concerned with improving water and sanitation program quality	
a. Organization has internal standards to define a "successful" and "sustainable" project.	DSK have technical standards for Hardware. Also some principles and standards such as Social Participation to achieve social engagement and transparency. Financial sustainability also internalizing economic cost of water and sanitation service (water bills for O&M and cost sharing or total cost recovery for HW depending on the donor policy).
b. Organization has had the opportunity to learn from observing another organization's work.	DSK collaborates actively with other organizations and they exchange ideas, projects, lessons learnt. For instance they have frequent collaboration with WSP-WB and Water Aid Bangladesh.
c. Organization conducts evaluations of its own projects at least 2 years after completion.	DSK accompanies projects after infrastructure completion for more than 2 years. Sanitary Education requires behavior change and it gets after continuous visits, talks and courses.
d. Organization has an ongoing structure to improve program quality and has made specific changes in project implementation or internal operations in the last two years.	They have the following criteria to improve programs quality: a) Monitoring Team with the task to produce 6 reports per year according to Logical Framework goals; b) Active Governing Body who has sessions every month to track advances; c) Engineering Forums to promote exchange among engineers, best practices and similar; d) Innovation promotion for new technology (customized to the country, for instance working with Gates Foundation on new

	design of latrines).
e. Organization has had an evaluation of its water and sanitation projects conducted by another organization.	There is a Mid-term Evaluation of Projects conducted by Water Aid in 2009 for some NGOs working in Bangladesh including DSK
f. Organization is involved with the communities upon project completion for 2 years	DSK accompanies projects after infrastructure completion for more than 2 years. Sanitary Education requires behavior change and it gets after continuous visits, talks and courses.
3. In-country partner is a sustainable organization and maintains solid business practices	
a. Organization has an annual budget.	Budget for 2014 was 6 billion Tk corresponding 5 billion for microcredit and 1 billion for other projects (including water and sanitation)
b1. Organization tracks income and expenditures and has a bank balance that exceeds liabilities.	They conduct annual external audits and have annual bank balances
c. Organization is legally registered in the country where it is operating.	Registered since 1989. Currently they have 3 registrations, one as NGO and another as MFI. They have 150,000 clients on microcredit though its 85 branches.
d. Organization has a mission statement and by-laws or equivalent organizational management documentation.	They have a Strategic Plan 2013-2018
b2. Organization tracks income and expenditures according to standard accounting practices and has a bank balance that exceeds liabilities.	They conduct annual external audits and have annual bank balances. Each year DSK publishes an Activity Report. The corresponding to 2013 includes consolidated Statement of Financial Position and Statement of Comprehensive Income.
e. Organization undergoes an annual audit of its finances	They conduct annual external audits and have annual bank balances
f. Organization produces an annual financial statement/report.	Each year DSK publishes an Activity Report. The corresponding to 2013 includes consolidated Statement of Financial Position and Statement of Comprehensive Income.
g. Organization has stable annual funding	It can be appreciated in the Annual Activity Report. Equity is around 1.5 billion Tk
h. Organization has an Strategic Plan	Strategic Plan 2013-2018
i. Organization has an elected governing body	The governing body is composed by 10 members for three year period. They have sessions every month. The have established Subcommittees to attend different topics.
j. Organization has specialists in relevant fields (finance, engineering, community development, hygiene education)	DSK has 1700 workers. People working in water and sanitation exceed 30. Only people destined to PEHUP and Water 1st Projects at DEMRA are 19.

Appendix 3. Interviews with CMCs

Interview with Community Management Committee (CMC) **Community: Korail Slum**

#	Question / Observation	Answer
Economic Contribution of the community		
WCC1	What type of contribution did the community make towards the Project? (labor, cash, food for workers, lodging, local materials, etc)	Community formed a CBO to promote basic services including WASH and also as spokesman with DWASA to get a legal water connection in their area. Currently, slum people are receiving water from a legal water point provided by DWASA. CBO is an elected committee. Only 1 time election was held. Community users were formed by 5 members to purchase required materials from the local market and monitor water supply and sanitation hardware activities. CMCs are responsible for operation and maintenance of water system/sanitation. The community has received a legal water supply connection from DWASA. DWASA is responsible to provide safe water to the citizens in city corporation areas by collecting monthly water fee.
	Describe the contribution made most frequently by the community and quantify any cash contribution. Did they make a contribution in the form of a loan? Who provided the loan?	A 5 members Purchase Committee was formed to buy required water supply and septic tank materials with a representative of DSK. This committee also selected the mason for installation of Water Supply hardware and Cluster Latrine. The land owner/land lord paid a percentage of the capital cost. The remaining percentage of the capital cost was provided by DSK as a loan with 10% interest rate. Total cost of the water supply system was 112,727 Tk. The land owner/land lord repaid the loan through 24 installments.
WCC1d	What was the total amount of the community's contribution to the Project (in amount or percentage?)	Loan is considered as cost recovery based on cost sharing model. The expectancy is to recover at least 30% of the investment.
Water management		
WC1	Is there a Water Committee consisting of members of the community that is responsible for managing the Water Project?	Yes. The land owner/occupier is responsible for resolving any kind of water supply and sanitation problem; however, there is a CMC committee that also monitors the entire activities. Under CMC, the beneficiaries have shared the responsibility of cleaning the

#	Question / Observation	Answer
		platform of the water point and all cluster latrines.
WC2	How frequently are members elected? Are members paid or do they volunteer? Is it possible to be reelected to a position?	CMC members are selected among the beneficiaries. It is composed by 15 members: 1 member comes from each of the households. When a family is shifted in other place then CMC cope up a new member from the new family. All are providing volunteer services. Only one election was held in formation of CBO.
	How many people serve on the Water Committee? How many of those members are women?	CMC has 15 members whereof 13 are female and 2 are male.
	Does the Water Committee have rules/by-laws? Do you keep record of meetings and decisions made?	CMC does not have printed or documented rules and regulations. However, they maintain the Meeting Minutes book, which was shown and was found fine. They also maintain the monthly payment document.
WC5	Are households charged a fee for using the water system?	Yes
WC6	How much is the water fee?	Monthly water bill provided by DWASA is divided among 15 households equally. Moreover, each of the household pays 50 Tk more every month to pay monthly salary of the caretaker appointed by the CBO.
WC7	Who collects the fee? How often is it collected?	Caretaker is appointed by CBO to collect the monthly water bill from the households.
WC8	What type of payment is accepted (cash only? Cash or labor?)	Cash.
WC9	Is there a record of payments made?	Yes, they maintain a file to keep payments. However, they do not maintain any workbook based on individual family level payment.
WC10	What percentage or how many families are current in their payments?	Most of the 15 households are paying on time. There were 2 families with some level of default.
WC11	What happens when a household doesn't pay a water tariff? Has this ever occurred?	CMC internally solves such situation. CMC motivates households' members for regular payment. It was mentioned that in the case one household cannot pay immediately then the other families pay the amount on behalf of the first and collect from the household afterwards.

#	Question / Observation	Answer
	What expenses are paid with the fees that are collected?	Additionally to the water fee, each household pays 50 Tk as a part of the monthly salary of the Caretaker appointed by the CBO.
WC13	Are the fees sufficient to cover the costs of operating the system? Is there a savings for repairs and expansions to the system.	Yes. No saving practice for repairs; it is made instantly by collecting expenses from all the households.
WCC2	Is there a fee for new users to connect to the system? How much is the fee? How is that amount determined?	No
WCC4	Does the community own the water system?	Yes. Water system is owned by the Land Owner/Land lord with legal permission.
Planning		
WCP1	Who decides rules and regulations for the use of the water?	CMC supported by CBO
WCP2	What are the permitted uses for the water from the water system?	No restriction. Everybody use water for domestic purposes.
WCP3	Are there any uses that are not permitted?	No
WCP4	What happens if someone doesn't follow the rules?	CMC has regular practice to motivate users to follow the rules. No situation encountered.
WCP5	How many users can be served by the water source?	More than the 15 households.
WCP6	At what point will you have to increase the capacity of the water system? When do you expect that to happen?	Due to the distribution on clusters each one has a water point for specific range of households. However, during dry season Community does not receive adequate quantity of water through the bulk water point already installed. Hence, they have requested DWASA for installing another pump to get adequate water continuously during the year.
WCP7	Are you accumulating savings to allow you to increase capacity?	No
Water source protection		

#	Question / Observation	Answer
WCSP2	Who is responsible for protecting the water source/watershed?	CMC
WCSP1	Is there a watershed protection plan or program? Please describe.	Water comes from the distribution system operated by DWASA.
WCSP4	What measures are taken to prevent bacteriological and chemical contamination of the water at the source?	Regular cleaning of the reservoir and surrounding areas is a common practice to prevent bacteriological and chemical contamination of the water source. In general, reservoir and surrounding areas are cleaned 2 times a month by using chlorination.
WCSP5	Are any pesticides/herbicides used near the water source?	No
WCSP7	What is the community doing to ensure that the water source continues to provide adequate water to meet the needs of the community?	In dry season, community does not get sufficient quantity of water to meet her needs. Therefore, they are in conversations with DWASA for installing another pump nearby.
WCSP9	Is the water committee the owner of the land around the water source. If not, does an agreement exist with the owner?	Yes
WCSP10	Has the quantity of water changed during the years after completion of the Project.	No
WCSP11	Has the quality of water changed during the years after the Project was completed. Please explain.	Water has neither Iron nor any other contaminant. Water taste is good, no smell and color.
WCC3	Does the community have legal title to the water source? If yes, describe how this was obtained.	Yes the community has legal title to water source. They have got legal permission from DWASA. They regularly receive monthly bill from the Water Utility.
O&M		
WCOM1	What is the procedure for making repairs?	In general, the caretaker is responsible for making repairs. DSK has trained and provided a tools kit box to the caretaker. The caretaker himself works for repairing small problems. However, CMC should inform CBO for any kind of large problem on the existing water system. In that case CBO will take initiative to solve such problem. It is the procedure for making repairs. However, the community has not yet experienced any large problem.
WCOM2	Does the community possess the tools and spare parts necessary to make repairs to the wáter system.	Yes The caretaker has a tools kit box provided by DSK.
WCOM3	Where do you purchase spare parts?	Local Bazaar.

#	Question / Observation	Answer
WCOM4	What distance do you have to go to purchase spare parts?	1 km
WCOM5	How much do they cost? (from examples of the spare parts you need to purchase.)	Last year altogether repair cost was around 500 Tk
WCOM6	Have they made repairs to their water system during the past year?	Yes
WCOM7	If they have made repairs to the water system during the past year, for how much time was the water system not functioning while the repair was in progress?	1 to 1 ½ hours.
WCOM8	If they made repairs in the last year, describe types of repairs, when they were made, and how they have paid for the spare parts.	Small repair like changing nuts, bulb, washer etc.
WCOM9	Is the community/plumber able to make the repairs?	Yes
WCOM10	And how is the plumber/community able to receive external assistance for repairing the system?	N/A
WCOM11	Do they still maintain communication with the implementing organization?	Yes And vis-à-vis with DSK. DSK representatives also visit their place time to time and provide require advice to them.
WCOM12	How many times has the implementing organization helped them to repair or expand their water system?	N/A
Observations		
WCO1	Review/observe the existence of the record of water tariffs, the list of users, etc	DWASA issues water bills as observed during the visit. They keep records of all previous bills.
WCO2	If yes, are the households paying the tariffs?	Water tariff is paid by the households in equitable manner.
WCO3	Check if the income exceeds the expenses (in other words, if the tariff is sufficient to cover expenses. Ask if they have a bank account for savings)	CBO is in charge to achieve cost sharing as a reserve for further repairs
WCO5	What has happened to the amount of savings in the past two years?	No saving provision.

#	Question / Observation	Answer
WCO8	Verify that the water board possesses a title or legal papers that demonstrate ownership of the Project/water source/etc.	Legal papers has been seen during the visit.
WCO9	Verify that minutes of water board meetings exist.	Not verified but they have such practice with DWASA Zonal Office.
WCO4	In the case of public taps, How much time do the users wait in line to fill their containers?	N/A
WCO7	Identify if there are possible sources of contamination of the water system.	It is a DWASA connection. In general, do not have contamination posibility.
WCO6	Is the water source protected from agriculture/animals	N/A as it in urban areas.

Interview with Community Management Committee (CMC) **Community: Demra Slum**

#	Question / Observation	Answer
Economic Contribution of the community		
WCC1	What type of contribution did the community make towards the Project? (labor, cash, food for workers, lodging, local materials, etc)	Community got a loan from DSK for a water point and septic tanks. CBO is in charge of collecting monthly payments. Unlike other Projects that consider cost sharing participation, this Project considers full cost recovery.
	Describe the contribution made most frequently by the community and quantify any cash contribution. Did they make a contribution in the form of a loan? Who provided the loan?	Regular payment by the Landlord to the CBO.
WCC1d	What was the total amount of the community's contribution to the Project (in amount or percentage?)	Full cost recovery. Monthly payment fluctuates between 500 Tk to 1500 Tk (USD 6.5 to 19) depending of the family.
Water management		
WC1	Is there a Water Committee consisting of members of the community that is responsible for managing the Water Project?	Nine people coming from the 12 HH of the compound
WC2	How frequently are members elected? Are members paid or do they volunteer? Is it possible to be reelected to a position?	They are elected to work continuously. It is a volunteer service.
	How many people serve on the Water Committee? How many of those members are women?	There are around 42 to 50 inhabitants in the 12 HH. CMC are nine and all are women.
	Does the Water Committee have rules/by-laws? Do you keep record of meetings and decisions made?	Rules exist, written on murals. They keep some records of the meetings, eventually.
WC5	Are households charged a fee for using the water system?	Yes, as part of the rent
WC6	How much is the water fee?	N.a.
WC7	Who collects the fee? How often is it collected?	Landlord
WC8	What type of payment is accepted (cash only? Cash or labor?)	Only cash
WC9	Is there a record of payments made?	Informally because any HH has to pay the monthly rent. Otherwise they are subject to eviction from the Landlord.
WC10	What percentage or how many families are current in their payments?	All of them
WC11	What happens when a household doesn't pay a water tariff? Has this ever occurred?	No. Family is exposed to eviction

#	Question / Observation	Answer
	What expenses are paid with the fees that are collected?	Operation and maintenance (as Landlord explained)
WC13	Are the fees sufficient to cover the costs of operating the system? Is there a savings for repairs and expansions to the system.	Yes, otherwise the Landlord increase the monthly rent
WCC2	Is there a fee for new users to connect to the system? How much is the fee? How is that amount determined?	If the HH increases the number of inhabitants the corresponding rent will increase. It is the example of a woman who marries and moves to her husband's home.
WCC4	Does the community own the water system?	Yes
Planning		
WCP1	Who decides rules and regulations for the use of the water?	CMC. Landlord is sometimes a member of the CMC
WCP2	What are the permitted uses for the water from the water system?	Water for cooking, drinking, bathing, for washing dishes and clothes.
WCP3	Are there any uses that are not permitted?	No
WCP4	What happens if someone doesn't follow the rules?	Not happened
WCP5	How many users can be served by the water source?	More than 50 people
WCP6	At what point will you have to increase the capacity of the water system? When do you expect that to happen?	Each compound at Demra has a water point consisting of a deep tubewell or submersible pump. Water is enough for usual-size compounds.
WCP7	Are you accumulating savings to allow you to increase capacity?	Not needed.
Water source protection		
WCSP2	Who is responsible for protecting the water source/watershed?	Each family at the compound. CMC has established roles for each day. Some are fixed and other flexible.
WCSP1	Is there a watershed protection plan or program? Please describe.	Not as a Water Safety Plan needed for bigger water systems.
WCSP4	What measures are taken to prevent bacteriological and chemical contamination of the water at the source?	DSK supports with water quality analysis for As and bacteriological parameters (twice a year).
WCSP5	Are any pesticides/herbicides used near the water source?	No
WCSP7	What is the community doing to ensure that the water source continues to provide adequate water to meet the needs of the community.	Community avoids misuse of water source and tries to keep the peripheral area of the wells clean.
WCSP9	Is the water committee the owner of the land around the water source. If not, does an agreement exist with the owner.	It belongs to the Landlord. However people at the compound expect to live there for long time
WCSP10	Has the quantity of water changed during the years after completion of the Project.	No

#	Question / Observation	Answer
WCSP11	Has the quality of water changed during the years after the Project was completed. Please explain.	No
WCC3	Does the community have legal title to the water source? If yes, describe how this was obtained.	Landlord has a contract with the implementing organization
O&M		
WCOM1	What is the procedure for making repairs?	There is a Caretaker who is usually a plumber from the same community
WCOM2	Does the community possess the tools and spare parts necessary to make repairs to the water system?	They got a tool box from the Project. They can also buy spare parts at any hardware nearby
WCOM3	Where do you purchase spare parts?	Hardware nearby
WCOM4	What distance do you have to go to purchase spare parts?	Hardware is half an hour by bike
WCOM5	How much do they cost? (From examples of the spare parts you need to purchase.)	N.a. However they collect as much as they need to buy accessories
WCOM6	Have you made repairs to your water system during the past year?	No
WCOM7	If you have made repairs to the water system during the past year, for how much time was the water system not functioning while you made repairs?	N.a.
WCOM8	If you made repairs in the last year, describe the types of repairs, when they were made, and how you paid for the spare parts.	N.a.
WCOM9	Is the community/plumber able to make the repairs?	Yes, there is a plumber
WCOM10	And how is the plumber/community able to receive external assistance for repairing the system?	From DSK
WCOM11	Do you still maintain communication with the implementing organization?	Yes, frequently. Every month
WCOM12	How many times has the implementing organization helped you repair or expand your water system?	First time in 2007 during the water Project. Second when the latrine was built in 2008 and when another latrine was built in 2011.
Observations		
WCO1	Review/observe the existence of the record of water tariffs, the list of users, etc	No possible. Part of the monthly rent
WCO2	If yes, are the households paying the tariffs?	Yes

#	Question / Observation	Answer
WCO3	Check if the income exceeds the expenses (in other words, if the tariff is sufficient to cover expenses. Ask if they have a bank account for savings)	N.a.
WCO5	What has happened to the amount of savings in the past two years?	N.a
WCO8	Verify that the water board possesses a title or legal papers that demonstrate ownership of the Project/water source/etc.	Contract
WCO9	Verify that minutes of water board meetings exist.	Some were shown. They do not keep minutes of each session
WCO4	In the case of public taps. How much time do the users wait in line to fill their containers?	Less than 5 minutes
WCO7	Identify if there are possible sources of contamination of the water system.	No. The cemetery is far away
WCO6	Is the water source protected from agriculture/animals	Yes, there was a slab built around the tube well. However there were other tube wells in the surroundings with no slab

Interview with Community Management Committee (CMC) **Community: Vhanga Dewal**

#	Question / Observation	Answer
Economic Contribution of the community		
WCC1	What type of contribution did the community make towards the Project? (labor, cash, food for workers, lodging, local materials, etc)	Project consists of Septic Tanks with a total investment of 100.000 Tk. Cost sharing was established in 20.000 Tk. CBO is in charge of collecting monthly payments. At present the had recovered 12.000 Tk.
	Describe the contribution made most frequently by the community and quantify any cash contribution. Did they make a contribution in the form of a loan? Who provided the loan?	Depending of the Category HH has to pay. At the compound there are 2 HH belonging to category A, 2 in B, 2 in C and 13-14 HH in category D. Only categories A, B and C have to pay
WCC1d	What was the total amount of the community's contribution to the Project (in amount or percentage?)	Project contemplates to get 20.000 Tk. However because of the existence of majority of HH belonging to category D it is likely to get less.
Water management		
WC1	Is there a Water Committee consisting of members of the community that is responsible for managing the Water Project?	Nine people coming from the 20 HH of the compound
WC2	How frequently are members elected? Are members paid or do they volunteer? Is it possible to be reelected to a position?	They are elected once a year due to high rate of migration.
	How many people serve on the Water Committee? How many of those members are women?	There are around 80-90 inhabitants in the 20 HH. CMC are nine: six are women and 3 are men.
	Does the Water Committee have rules/by-laws? Do you keep record of meetings and decisions made?	Rules exist, written on murals. They keep some records of the meetings, eventually.
WC5	Are households charged a fee for using the water system?	Yes, as part of the monthly rent
WC6	How much is the water fee?	Depending of the season could be 800 Tk (USD 11) in winter and 2,400 Tk (USD 31) in summer. However that is the cost for the Landlord. Landlord collects as part of the rent.
WC7	Who collects the fee? How often is it collected?	Landlord
WC8	What type of payment is accepted (cash only? Cash or labor?)	Only cash
WC9	Is there a record of payments made?	Landlord has a book

#	Question / Observation	Answer
WC10	What percentage or how many families are current in their payments?	All of them
WC11	What happens when a household doesn't pay a water tariff? Has this ever occurred?	No. Family is exposed to eviction
	What expenses are paid with the fees that are collected?	Operation and maintenance (as Landlord explained)
WC13	Are the fees sufficient to cover the costs of operating the system? Is there a savings for repairs and expansions to the system?.	Yes, otherwise the Landlord increase the monthly rent
WCC2	Is there a fee for new users to connect to the system? How much is the fee? How is that amount determined?	Temporarily no adjustment foreseen.
WCC4	Does the community own the water system?	No. It is informal
Planning		
WCP1	Who decides rules and regulations for the use of the water?	CMC. Each family can take and carry water once a day with buckets
WCP2	What are the permitted uses for the water from the water system?	Water for cooking, drinking, bathing, for washing dishes and clothes.
WCP3	Are there any uses that are not permitted?	No
WCP4	What happens if someone doesn't follow the rules?	Not happened
WCP5	How many users can be served by the water source?	Around 80
WCP6	At what point will you have to increase the capacity of the water system? When do you expect that to happen?	No formal water system until they get a legal arrangement with DWASA, similar as Korail
WCP7	Are you accumulating savings to allow you to increase capacity?	Only the cost sharing contribution. It goes to CBO who is responsible to get the amount established in the contract.
Water source protection		
WCSP2	Who is responsible for protecting the water source/watershed?	Each family at the compound. CMC has established roles for each day.
WCSP1	Is there a watershed protection plan or program? Please describe.	No because there is no legal water system
WCSP4	What measures are taken to prevent bacteriological and chemical contamination of the water at the source?	Community uses chlorine (1 teaspoon per 5 liters). Some others use to boil water
WCSP5	Are any pesticides/herbicides used near the water source?	No
WCSP7	What is the community doing to ensure that the water source continues to provide adequate water to meet the needs of the community.	N.a..

#	Question / Observation	Answer
WCSP9	Is the water committee the owner of the land around the water source. If not, does an agreement exist with the owner.	N.a.
WCSP10	Has the quantity of water changed during the years after completion of the Project.	N.a.
WCSP11	Has the quality of water changed during the years after the Project was completed. Please explain.	N.a.
WCC3	Does the community have legal title to the water source? If yes, describe how this was obtained.	N.a.
O&M		
WCOM1	What is the procedure for making repairs?	Not needed yet. Sanitation Project was implemented in 2010
WCOM2	Does the community possess the tools and spare parts necessary to make repairs to the water system?	N.a.
WCOM3	Where do you purchase spare parts?	N.a.
WCOM4	What distance do you have to go to purchase spare parts?	N.a.
WCOM5	How much do they cost? (From examples of the spare parts you need to purchase.)	N.a.
WCOM6	Have you made repairs to your water system during the past year?	N.a. Regarding the septic tanks cleansing they had to pay 700-800 Tk (USD 9-10) per load. Two-chamber septic tank requires 4 loads to carrying and four-chamber septic tank requires at least 8 loads. It usual to clean septic tanks every 2-3 years.
WCOM7	If you have made repairs to the water system during the past year, for how much time was the water system not functioning while you made repairs?	N.a.
WCOM8	If you made repairs in the last year, describe the types of repairs, when they were made, and how you paid for the spare parts.	N.a.
WCOM9	Is the community/plumber able to make the repairs?	N.a.
WCOM10	And how is the plumber/community able to receive external assistance for repairing the system?	From DSK
WCOM11	Do you still maintain communication with the implementing organization?	Yes, once a month

#	Question / Observation	Answer
WCOM12	How many times has the implementing organization helped you repair or expand your water system?	Frequently
Observations		
WCO1	Review/observe the existence of the record of water tariffs, the list of users, etc	No possible. Part of the monthly rent
WCO2	If yes, are the households paying the tariffs?	Yes
WCO3	Check if the income exceeds the expenses (in other words, if the tariff is sufficient to cover expenses. Ask if they have a bank account for savings)	N.a.
WCO5	What has happened to the amount of savings in the past two years?	N.a
WCO8	Verify that the water board possesses a title or legal papers that demonstrate ownership of the Project/water source/etc.	N.a.
WCO9	Verify that minutes of water board meetings exist.	Some were shown.
WCO4	In the case of public taps. How much time do the users wait in line to fill their containers?	N.a.
WCO7	Identify if there are possible sources of contamination of the water system.	Yes, unhygienic latrines. However the project does not cover water, only sanitation
WCO6	Is the water source protected from agriculture/animals	No

Interview with Community Management Committee (CMC) **Community: Ali Nagar, Kamrangir Char**[6]

#	Question / Observation	Answer
Economic Contribution of the community		
WCC1	What type of contribution did the community make towards the Project? (labor, cash, food for workers, lodging, local materials, etc)	Land owner contributed solely for installing water system (submersible pump) and Cluster septic tank from DSK. 30 Households are using both facilities and paying their fee as part of the rent. Submersible pump cost was 70,000 (USD 910) and septic tank cost was 50,000 Tk (USD 650). Repaired through 20 installments from DSK.
	Describe the contribution made most frequently by the community and quantify any cash contribution. Did they make a contribution in the form of a loan? Who provided the loan?	The land owner took loan from DSK based on annual 10% interest rate and paid through monthly installment. All expenses were provided by DSK. Land owner repaid the loan through 20 installments albeit the contract with DSK set 24 installments. All payment has been completed by 2012.
WCC1d	What was the total amount of the community's contribution to the Project (in amount or percentage?)	It is a full cost recovery project
Water management		
WC1	Is there a Water Committee consisting of members of the community that is responsible for managing the Water Project?	A 9 members CMC committee is formed. It is a selected committee. CMC takes care of that infrastructure. However, specific responsibility is given to the Caretaker, who is a paid staff of the land owner.
WC2	How frequently are members elected? Are members paid or do they volunteer? Is it possible to be reelected to a position?	CMC is formed based on selection process among 30 HHs. All members are providing volunteer services. When any member leaves the place then a new member is incorporated through selection by the other members.

[6] Conducted by Waled Mahmud

#	Question / Observation	Answer
	How many people serve on the Water Committee? How many of those members are women?	Total 9 members; Owner 1, Tenants 8; all are women. If any tenant moves out a member is incorporated through a selection process by the other members.
	Does the Water Committee have rules/by-laws? Do you keep record of meetings and decisions made?	The Water Committee doesn't have documented rules/by-laws. They maintain Register Book, keep records of meetings and decisions made. DSK trained them about how to maintain register book, preserve documents etc.
WC5	Are households charged a fee for using the water system?	No, the water charge/fee is inclusive within the monthly house rent. DSK supported the landlord by giving financial loan after confirmation that monthly house rent would not increase for having new WASH facilities. Tenants confirmed their monthly house rent wasn't increased due to use of the water system.
WC6	How much is the water fee?	Water fee is included in the rent
WC7	Who collects the fee? How often is it collected?	Landlord through the rent
WC8	What type of payment is accepted (cash only? Cash or labor?)	Cash
WC9	Is there a record of payments made?	N/A
WC10	What percentage or how many families are current in their payments?	N/A
WC11	What happens when a household doesn't pay a wáter tariff? Has this ever occurred?	N/A
	What expenses are paid with the fees that are collected?	N/A
WC13	Are the fees sufficient to cover the costs of operating the system? Is there a savings for repairs and expansions to the system.	N/A
WCC2	Is there a fee for new users to connect to the system? How much is the fee? How is that amount determined?	N/A
WCC4	Does the community own the water system?	No. The landlord owns the water system.

#	Question / Observation	Answer
Planning		
WCP1	Who decides rules and regulations for the use of the water?	Community management members discuss about maintenance procedures and share with the land owner to take final decision.
WCP2	What are the permitted uses for the wáter from the wáter system?	30 Households are using both facilities as they are living in the landlord's place.
WCP3	Are there any uses that are not permitted?	No
WCP4	What happens if someone doesn't follow the rules?	Everyone has to follow the rules of the landlord.
WCP5	How many users can be served by the water source?	A total of 30 HHs are using the water source.
WCP6	At what point will you have to increase the capacity of the water system? When do you expect that to happen?	No plan for increasing due to the current capacity fulfills the requirement for 30 HHs.
WCP7	Are you accumulating savings to allow you to increase capacity?	N/A
Water source protection		
WCSP2	Who is responsable for protecting the wáter source/watershed?	Mainly the Caretaker is appointed by the landlord. However, other users also monitor the water point.
WCSP1	Is there a watershed protection plan or program? Please describe.	Water source is covered with heavy protective shed as suggested by DSK. However, there is no additional watershed protection plan.
WCSP4	What measures are taken to prevent bacteriological and chemical contamination of the water at the source?	A heavy cover on the reservoir, which is closed/sealed and locked. The reservoir is built in such a way that there is no possibility of contamination. The inner walls of the reservoir are cleaned every month.
WCSP5	Are any pesticides/herbicides used near the water source?	No
WCSP7	What is the community doing to ensure that the wáter source continues to provide adequate water to meet the needs of the community.	There are 2000 liters (2 tanks, 1000 liters each) water tanks at the top of the building. There is an underground reservoir from where water is directly pumped to the tanks. Under the system, all people are getting adequate quantity of water. Moreover, at least 2 times a day water is stored on those

#	Question / Observation	Answer
		tanks and if needed, water is pumped for more time.
WCSP9	Is the water committee the owner of the land around the water source. If not, does an agreement exist with the owner.	Land lord is the owner and he lives with the community
WCSP10	Has the quantity of water changed during the years after completion of the Project.	Nowadays, people are getting adequate quantity of water. The quantity of water has not changed during the years after completion of the project.
WCSP11	Has the quality of water changed during the years after the Project was completed. Please explain.	After the project completed, users are collecting water from the system confidently. At the beginning of the project the water quality tested by DSK and shared the result with them where it confirmed that water quality is very good as it free from bacterial contamination and no arsenic on the water. Every year DSK tests the quality of water by their own cost and shares the result with them. So, they are now confident about collecting quality water. In general, water is odorless, colorless and taste is good.
WCC3	Does the community have legal title to the water source? If yes, describe how this was obtained.	It doesn't require yet. Now, the entire Kamrangir Char area comes under the Dhaka City Corporation. So, when DWASA will take the responsibility of the entire area then the issue will need to be considered.
O&M		
WCOM1	What is the procedure for making repairs?	Users notice to the caretaker if any repair of the water system is required and the land owner solves the problem by his/her own.
WCOM2	Does the community possess the tools and spare parts necessary to make repairs to the water system.	The caretaker has the tool kit box provided by DSK. The caretaker is responsible to make repairs to the water system.

#	Question / Observation	Answer
WCOM3	Where do you purchase spare parts?	From a nearby Market place (bazaar); name of the outlet is “Raza’s Shop”.
WCOM4	What distance do you have to go to purchase spare parts?	A quarter of a mile distance. Anyone can go by walking. If go by Rickshaw, it costs of BDT 10.(USD 0.13)
WCOM5	How much do they cost? (from examples of the spare parts you need to purchase.)	Only once there was a need to replace uPVC pipe from the ground water reservoir to the overhead talk at the rooftop. It required around 50 feet of pipe. A total of BDT 2,000 (USD 26) spent where BDT 1,400 (USD 18) for pipes and BDT 600 (USD 8) for the plumber.
WCOM6	Have you made repairs to your water system during the past year?	Yes It required a change of the pipe connection from the ground water reservoir to the rooftop tanks.
WCOM7	If you have made repairs to the wáter system during the past year, for how much time was the wáter system not functioning while you made repairs?	1 hour. It wasn’t a problem as informed previously to all the users.
WCOM8	If you made repairs in the last year, describe the types of repairs, when they were made, and how you paid for the spare parts.	It required a change of the pipe connection from the ground water reservoir to the rooftop tanks at 4th floor. The land owner paid the required money in cash.
WCOM9	Is the community/plumber able to make the repairs?	Yes, the plumber successfully made the repair.
WCOM10	And how is the plumber/community able to receive external assistance for repairing the system?	Plumber is an expert to repair such problem and completed the entire work effectively. The plumber didn’t require any outside assistance as he has skills to handle the

#	Question / Observation	Answer
		entire works by his own.
WCOM11	Do you still maintain communication with the implementing organization?	Yes And vis-à-vis. According to the working procedure of DSK, the representative always visits the place of the beneficiaries once in every 3 months after completed the installment return to them. It is a mandatory issue. In reality, the representative of DSK can visit earlier as they are still serving other households within the same community/areas.
WCOM12	How many times has the implementing organization helped you repair or expand your water system?	CMS successfully repaired the pipe connection by hiring plumber from the market; they didn't require to take help from DSK.
Observations		
WCO1	Review/observe the existence of the record of water tariffs, the list of users, etc	N/A Presently, the community does not need to pay for water used. Recently, the area is declared as the part of the Dhaka City Corporation; therefore, in future, they will need to pay for water. However, DWASA not yet take any initiative to work on water system in the Kamrangir Char areas and people are completely unaware about DWASA.
WCO2	If yes, are the households paying the tariffs?	N/A When DWASA will take the responsibility to serve the people through installing pipe water supply connection system in the entire areas then they will be able to impose the water tariff among the users.
WCO3	Check if the income exceeds expenses (in other words, if the tariff is sufficient to cover expenses. Ak if they have a bank account for savings)	N/A

#	Question / Observation	Answer
WCO5	What has happened to the amount of savings in the past two years?	N/A
WCO8	Verify that the water board possess a title or legal papers that demonstrate ownership of the Project/water source/etc.	Recently, the area was declared as part of the Dhaka City Corporation. When DWASA will take the responsibility of the water supply system then legal issues will need to be addressed.
WCO9	Verify that minutes of water board meetings exist.	N/A
WCO4	In the case of public taps, How much time do the users wait in line to fill their containers?	N/A
WCO7	Identify if there are possible sources of contamination of the water system.	Water may be contaminated if reservoir is not cleaned on a regular basis. Collection of water from the tap to fill different buckets and/or bottles can be contaminated if these buckets are not cleaned.
WCO6	Is the water source protected from agriculture/animals	Yes

Interview with Community Management Committee (CMC) **Community: South Rasulpur, Amin Bagh**[7]

#	Question / Observation	Answer
Economic Contribution of the community		
WCC1	What type of contribution did the community make towards the Project? (labor, cash, food for workers, lodging, local materials, etc)	DSK provided 100% capital cost as loan. A 1,000 liter Tank and a Motor Pump bought and installed with the financial support of DSK. Water system is known as Deep tube well. A total of 8 HH are using the water system. Initially, community formed a 5 member purchase committee to buy materials and also selected the mason.
	Describe the contribution made most frequently by the community and quantify any cash contribution. Did they make a contribution in the form of a loan? Who provided the loan?	The landlord took a loan from DSK where Principal amount was 28,000 Tk (USD 363)[8]. Repayment was made with 10% annual interest. Total repaid amount was 34,000 Tk (USD 442). Repayment was made through 20 installments though allowed 24 installments by DSK.
WCC1d	What was the total amount of the community's contribution to the Project (in amount or percentage?)	Initially no cash or in kind contribution.
Water management		

[7] Conducted by Waled Mahmud
[8] 1 USD = 77 BDT

#	Question / Observation	Answer
WC1	Is there a Water Committee consisting of members of the community that is responsible for managing the Water Project?	The land lord is responsible for managing the water system. However a 8 members CMC formed initially through selection process among the tenants. All members are women. When 1 member leave the community then a new member is included. Other CMC members select the new member. All women monitor the water system and cooperate to the landlord for effective O&M of the system.
WC2	How frequently are members elected? Are members paid or do they volunteer?Is it possible to be reelected to a position?	All members of CMC are selected.
	How many people serve on the Water Committee? How many of those members are women?	Total of 8 women members serve in the CMC.
	Does the Water Committee have rules/by-laws? Do you keep record of meetings and decisions made?	Water Committee doesn't have documented rules/by-laws. They maintain Register Book, keep records of meetings and decisions made. DSK trained them about how to maintain register book, preserve documents etc.
WC5	Are households charged a fee for using the water system?	No, the water charge/fee is inclusive within the monthly house rent. DSK supported the landlord by giving financial loan after receiving clearance that the monthly house rent of the tenants would not increase due to WASH facilities.
WC6	How much is the water fee?	It is inclusive with the monthly house rent of the tenant.
WC7	Who collects the fee? How often is it collected?	N/A
WC8	What type of payment is accepted (cash only? Cash or labor?)	N/A
WC9	Is there a record of payments made?	N/A

#	Question / Observation	Answer
WC10	What percentage or how many families are current in their payments?	N/A
WC11	What happens when a household doesn't pay a water tariff? Has this ever occurred?	N/A
	What expenses are paid with the fees that are collected?	N/A
WC13	Are the fees sufficient to cover the costs of operating the system? Is there a savings for repairs and expansions to the system?	N/A
WCC2	Is there a fee for new users to connect to the system? How much is the fee? How is that amount determined?	There is no fee for the new users to connect to the water system.. The monthly rent for tenants was not increased due to the installed water system. In general, the monthly rent is increased annually by BDT 100/200 (USD 1.30/2.60).
WCC4	Does the community own the water system?	No. Landlord is the owner of the water system.
Planning		
WCP1	Who decides rules and regulations for the use of the water?	The landlord, in consultation with the other users (tenants) decides the rules and regulations of the use of water.
WCP2	What are the permitted uses for the water from the water system?	All 08 Households are using the water system for domestic purposes.
WCP3	Are there any uses that are not permitted?	No
WCP4	What happens if someone doesn't follow the rules?	Everyone has the obligation to follow rules of the landlord.
WCP5	How many users can be served by the water source?	A total of 08 HHs are using the water source.

#	Question / Observation	Answer
WCP6	At what point will you have to increase the capacity of the water system? When do you expect that to happen?	No plan to increase the capacity as it fulfills the requirement of 08 HHs.
WCP7	Are you accumulating savings to allow you to increase capacity?	N/A
Water source protection		
WCSP2	Who is responsible for protecting the water source/watershed?	Landlord is responsible for protecting the water source/watershed.
WCSP1	Is there a watershed protection plan or program? Please describe.	Water is directly exploited from the ground by a pump and stored in the reservoir and also at the overhead tank. Water well is protected from outside contamination.
WCSP4	What measures are taken to prevent bacteriological and chemical contamination of the water at the source?	The reservoir is covered by wall at four sides with roof cover. So, the pump and reservoir is well protected with a strong established watershed. Overhead tank is also strong enough to prevent bacteriological and chemical contamination of the water at the source.
WCSP5	Are any pesticides/herbicides used near the water source?	No There are no agriculture lands, only Buriganga River passes by.
WCSP7	What is the community doing to ensure that the water source continues to provide adequate water to meet the needs of the community?	It's a 1,000 liter overhead Tank filled 2 times a day to meet the needs of the households. The reservoir is filled along with the overhead tank, which ensures adequate quantity of water for all.
WCSP9	Is the water committee the owner of the land around the water source? If not, does an agreement exist with the owner.	Landlord lives with the community
WCSP10	Has the quantity of water changed during the years after completion of the Project?	No, same good quality

#	Question / Observation	Answer
WCSP11	Has the quality of water changed during the years after the Project was completed? Please explain.	Yes. Previously the collected ground water was slightly turbid however after collecting water through the present system; water quality is improved a lot. Now, there is no turbid on water though collected water from the underground water aquifer.
WCC3	Does the community have legal title to the water source? If yes, describe how this was obtained.	No; not yet required. However, the area became under the city corporation and might be requiring in near future when DWASA will take the responsibility.
O&M		
WCOM1	What is the procedure for making repairs?	Users would notice to the landlord if any repair is required in the water system.
WCOM2	Does the community possess the tools and spare parts necessary to make repairs to the water system.	No
WCOM3	Where do you purchase spare parts?	From a near market where spare parts are available.
WCOM4	What distance do you have to go to purchase spare parts?	The shop is 2 km distance; transportation (Rickshaw) is available.
WCOM5	How much do they cost? (from examples of the spare parts you need to purchase.)	Last year the pump was repaired with BDT 1,200 (USD 15.6).
WCOM6	Have you made repairs to your water system during the past year?	Yes The pump was repaired.

#	Question / Observation	Answer
WCOM7	If you have made repairs to the water system during the past year, for how much time was the water system not functioning while you made repairs?	4 hours. But it wasn't a problem for having water in the reservoir and the overhead tank.
WCOM8	If you made repairs in the last year, describe the types of repairs, when they were made, and how you paid for the spare parts.	Last year, the water pump was malfunctioning once. The pump was sent to the plumber's shop for repairing. It cost BDT 1,200.
WCOM9	Is the community/plumber able to make the repairs?	Yes
WCOM10	And how is the plumber/community able to receive external assistance for repairing the system?	Plumber is an expert to repair such problem and completed the entire work effectively. The plumber did the work at his shop.
WCOM11	Do you still maintain communication with the implementing organization?	Yes And vis-à-vis. According to the working procedure of DSK, the representative always visits the place of beneficiaries once every 3 months after infrastructure completion. It is a mandatory issue. In real, the DSK representative can visit earlier as they are still serving other households within the same community/areas.
WCOM12	How many times has the implementing organization helped you repair or expand your water system?	The water pump repaired, by hiring the local plumber from the local market. So, CMC didn't need to take support from DSK.
Observations		
WCO1	Review/observe the existence of the record of water tariffs, the list of users, etc	N/A Recently, the area has been declared as part of the Dhaka City Corporation; therefore, in the future, they will need to pay for water to DWASA. However, DWASA has not yet taken any initiative to work on the water system at

#	Question / Observation	Answer
		Kamrangir Char areas.
WCO2	If yes, are the households paying the tariffs?	N/A When DWASA will take the responsibility to serve the people through installing pipe water supply connection system in the entire areas then they will be able to impose the water tariff among the users.
WCO3	Check if the income exceeds the expenses (in other words, if the tariff is sufficient to cover expenses. Ask if they have a bank account for savings)	N/A
WCO5	What has happened to the amount of savings in the past two years?	N/A
WCO8	Verify that the water board possesses a title or legal papers that demonstrate ownership of the Project/water source/etc.	Recently, the area has been declared as part of the Dhaka City Corporation. When DWASA will take the responsibility of water supply system then legal issues will be needed to address.
WCO9	Verify that minutes of water board meetings exist.	N/A
WCO4	In the case of public taps, How much time do the users wait in line to fill their containers?	N/A
WCO7	Identify if there are possible sources of contamination of the water system.	Water may be contaminated if the reservoir and the overhead tanks are not cleaned on a regular basis.
WCO6	Is the water source protected from agriculture/animals	Yes There is no agricultural land near. Usually people do not have practice of keeping pets.

Interview with Community Management Committee (CMC) **Community: Shipbur (Amin Bazaar)**[9]

#	Question / Observation	Answer
Economic Contribution of the community		
WCC1	What type of contribution did the community make towards the Project? (labor, cash, food for workers, lodging, local materials, etc)	In general, community provided efforts to motivate the inhabitants at the initial stage while directly worked under the guidance of DSK. DSK provided 100% financial cooperation with technical know-how to the people.
	Describe the contribution made most frequently by the community and quantify any cash contribution. Did they make a contribution in the form of a loan? Who provided the loan?	A Purchase Committee was formed to purchase the required septic tank materials with a representative of DSK. This committee also selected the mason for installation of single/double Pit latrine. DSK provided 100% capital cost as loan. The beneficiaries returned the loan through 24 monthly installments.
WCC1d	What was the total amount of the community's contribution to the Project (in amount or percentage?)	The cost of Single Pit Latrine was BDT 12,000 (USD 154)[10] with 10 Rings and Twin Pit Latrine cost was BDT 35,000 (USD 449) with 20 Rings.
Water management		
WC1	Is there a Water Committee consisting of members of the community that is responsible for managing the Water Project?	There is no currently a CMC. However, Community Based Organization (CBO) motivates the inhabitants on water, sanitation and hygiene issues. The entire water system is provided by the Union Parishad, a Local Government Institute (LGIs) and the execution authority is laid on the Mosque Committee.
WC2	How frequently are members elected? Are members paid or do they volunteer?Is it possible to be reelected to a position?	Mosque Committee is responsible for the water supply system. Pipe water connection system is established at the entire areas. CBO is the elected committee. It monitors the system on a regular basis and also provides efforts to raise awareness on WASH issues among the inhabitants. CBO members select new member if anyone leaves the community.
	How many people serve on the Water Committee? How many of those members are women?	CBO is a 15 members committee and all are women.
	Does the Water Committee have rules/by-laws? Do you keep record of meetings and decisions made?	CBO does not have printed/documented rules or regulations. However, they keep the Meeting Minutes book. It observed during the visiting time. The book is properly

[9] Conducted by Waled Mahmud
[10] I USD = 78 BDT

#	Question / Observation	Answer
		maintained.
WC5	Are households charged a fee for using the water system?	Yes.
WC6	How much is the water fee?	Each household is paying BDT 120 (USD 1.5) per month as the water fee.
WC7	Who collects the fee? How often is it collected?	A caretaker is appointed by the Mosque Committee who collects regularly the monthly fee from all the households. The monthly water fee is collected once is a month.
WC8	What type of payment is accepted (cash only? Cash or labor?)	The households are paying the water fee in Cash.
WC9	Is there a record of payments made?	The caretaker maintains a money collection book where all the users sign on it after paid the monthly water fee for keeping proven tracks of their payment.
WC10	What percentage or how many families are current in their payments?	A total of 300 Households are presently using the water supply system through pipe water supply connection. At the initial stage, the household coverage was 150 HHs, which was introduced in 2008. A non-significant number of Hardcore poor are also using the water system in their daily lives. However, they are getting the service free of cost as allowed by the Mosque Management Committee in consultation with CBO.
WC11	What happens when a household doesn't pay a water tariff? Has this ever occurred?	At the initial stage, some of the households were not cooperative to pay the monthly water fee however CBO played a vital role to motivate all the inhabitants. Presently, it is not at all a problem and every household is paying regularly on a monthly basis.
	What expenses are paid with the fees that are collected?	CBO mentioned that the households do not pay for water used; The amount which is collected by the caretaker as the water fee is actually the **electricity charge**. As a submergible pump is used to extract groundwater, it requires electricity and that collected amount is spent for paying the government electric charge.
WC13	Are the fees sufficient to cover the costs of operating the system? Is there a savings for repairs and expansions to the system.	Yes, it covers the charge of operating the system. It is the responsibility of the Mosque Committee along with LGI to arrange the cost for repairs and expansions of the system.
WCC2	Is there a fee for new users to connect to the system? How much is the fee? How is that amount determined?	No extra charge/fee for new users to connect to the system. New users only need to spend the cost of additional pipe, tap and labor charge to take a connection from the main pipeline to his/her house. They need to inform to the Mosque Committee previously.

#	Question / Observation	Answer
		After taking the water connection, the new user only pay the monthly water fee as are paying by other users.
WCC4	Does the community own the water system?	No. The water system is owned by the Mosque Committee under the supervision of LGI. However, the Mosque Committee has communication with CBO.
Planning		
WCP1	Who decides rules and regulations for the use of the water?	Mosque Committee in consultation with CBO decides rules and regulations for the use of water system. Presently, the households have received 2 times water in a day. i.e. at the morning hour (8:00 AM) and the afternoon (1:00 PM).
WCP2	What are the permitted uses for the water from the water system?	All 300 inhabitants that are living within this area are the permitted users for the water from the water system.
WCP3	Are there any uses that are not permitted?	No All economic classes of people are allowed to
WCP4	What happens if someone doesn't follow the rules?	CBO play the motivating role among the inhabitants.
WCP5	How many users can be served by the water source?	Presently 300 HHs are using the water source. It is the optimal coverage under the present system. The management committee has to think newly if wants to expand the present system with the existing infrastructure.
WCP6	At what point will you have to increase the capacity of the water system? When do you expect that to happen?	The issue is not presently considering by the Mosque Management Committee and CBO. Moreover, as the area is out of the city, some of the households are also installed own hand pump for collecting water by their own in addition to the existing pipe water connection system under LGI.
WCP7	Are you accumulating savings to allow you to increase capacity?	N/A
Water source protection		
WCSP2	Who is responsible for protecting the water source/watershed?	The Mosque Management Committee is responsible for protecting the water source/watershed.
WCSP1	Is there a watershed protection plan or program? Please describe.	CBO is unaware about having any plan or not. However, the mosque committee built in such a way that it is lick proof. All sides of it is covered by brick walls with a strong roof cover. The caretaker is all time responsible for O&M of the water system, which is an

#	Question / Observation	Answer
		indicator of having such type of protecting plan.
WCSP4	What measures are taken to prevent bacteriological and chemical contamination of the water at the source?	CBO members regularly monitor the pipe water connection lines. The caretaker always doing same in the entire area, which is an indicator of taking measure to prevent bacteriological and chemical contamination of the water at various points of the system. DSK tests the water quality once in every year and share the results with the Mosque Management Committee and CBO.
WCSP5	Are any pesticides/herbicides used near the water source?	No Agriculture land is in distance place.
WCSP7	What is the community doing to ensure that the water source continues to provide adequate water to meet the needs of the community.	Presently, the existing water system is working properly. Only low flow of water is identified as a problem at the long distance place. The water users raised the issue; however, neither the mosque committee nor LGI takes any further initiative yet. In general, the households are getting adequate quantity of water from the present water system.
WCSP9	Is the water committee the owner of the land around the water source. If not, does an agreement exist with the owner.	The entire water system is monitor by CBO and the paid caretaker. The water system is owned by the mosque committee.
WCSP10	Has the quantity of water changed duriing the years after completion of the Project.	Yes, water quantity is changed positively as are getting adequate quantity of water, nowadays.
WCSP11	Favor explicar. Has the quality of water changed during the years after the Project was completed. Please explain.	Yes. The quality of water is good; it is well tested, no odor and no color. DSK tests the quality of water once in every year. They also share the result with the Mosque Committee, CBO and LGI representatives. All results are found positive as not having any kind of bacterial contamination and arsenic problems.
WCC3	Does the community have legal title to the water source? If yes, describe how this was obtained.	Not required. It is outside the Dhaka city.
O&M		
WCOM1	What is the procedure for making repairs?	The water users have the rights to share any issues with the Mosque Management Committee. Moreover, the caretaker is always available in the locality. So, the water users can inform about any kind of repairing issue to them.

#	Question / Observation	Answer
WCOM2	Does the community possess the tools and spare parts necessary to make repairs to the water system.	No The caretaker has the tool kit box as provided by DSK. The caretaker is also got training from DSK.
WCOM3	Where do you purchase spare parts?	N/A In general, spare parts are available at the nearby local market.
WCOM4	What distance do you have to go to purchase spare parts?	N/A The distance of the local market place is less than half a kilometer.
WCOM5	How much do they cost? (From examples of the spare parts you need to purchase.)	N/A
WCOM6	Have you made repairs to your water system during the past year?	N/A
WCOM7	If you have made repairs to the water system during the past year, for how much time was the water system not functioning while you made repairs?	N/A
WCOM8	If you made repairs in the last year, describe the types of repairs, when they were made, and how you paid for the spare parts.	N/A
WCOM9	Is the community/plumber able to make the repairs?	N/A
WCOM10	And how is the plumber/community able to receive external assistance for repairing the system?	N/A
WCOM11	Do you still maintain communication with the implementing organization?	The Mosque Committee doesn't need to maintain any communication with DSK. However, CBO has regular communication with DSK and it is vis-à-vis.
WCOM12	How many times has the implementing organization helped you repair or expand your water system?	N/A
Observations		
WCO1	Review/observe the existence of the record of water tariffs, the list of users, etc	Monthly Payment Book wasn't available at the time.
WCO2	If yes, are the households paying the tariffs?	Yes, every household is paying the water tariff.
WCO3	Check if the income exceeds the expenses (in other words, if the tariff is sufficient to cover expenses. Ask if they have a bank account for	N/A

#	Question / Observation	Answer
	savings)	
WCO5	What has happened to the amount of savings in the past two years?	N/A
WCO8	Verify that the water board possesses a title or legal papers that demonstrate ownership of the Project/water source/etc.	N/A
WCO9	Verify that minutes of water board meetings exist.	N/A
WCO4	In the case of public taps, How much time do the users wait in line to fill their containers?	N/A
WCO7	Identify if there are possible sources of contamination of the water system.	At the joint point of the entire pipe connection line; joint point of the main line and the household connection.
WCO6	Is the water source protected from agriculture/animals	Yes Agriculture fields are far away from the locality. People do not have practice of pet animals.

Interview with Community Management Committee (CMC) **Community: North Bisil (Mirpur-1)** [11]

#	Question / Observation	Answer
Economic Contribution of the community		
WCC1	What type of contribution did the community make towards the Project? (labor, cash, food for workers, lodging, local materials, etc)	It was established a CBO to motivate inhabitants on social needs cooperation and also to have communication with DWASA to get legal water connection in the slum . For hardware (infrastructure), they formed a 5 member committee to purchase required materials from the local market and monitor water supply and sanitation infrastructure installment activities.. DSK provided 100% loan for installation of hardware.
	Describe the contribution made most frequently by the community and quantify any cash contribution. Did they make a contribution in the form of a loan? Who provided the loan?	A 05 members Purchase Committee were formed who bought the required water supply and latrine materials with a representative of DSK. This committee also selected the mason for instalation of Water Supply hardware and Cluster Latrine. CBO monitored the entire installation activities. CBO was also responsible for regular O&M of hardware.
WCC1d	What was the total amount of the community's contribution to the Project (in amount or percentage?)	The cost of Cluster latrine was BDT 60,000/= (USD 769)[12] and also took BDT 50,000 (USD 641) for installing the submergible pump.
Water management		
WC1	Is there a Water Committee consisting of members of the community that is responsible for managing the Water Project?	Actually CBO is operating as well as the Community Management Committee for monitoring the hardware. A caretaker is appointed from the committee who is mainly responsible for O&M of both infrastructure. His monthly salary is BDT 1,000/= (USD 13). Overall supervision responsibility is CMC's.

[11] Conducted by Waled Mahmud
[12] 1 USD = 78 BDT

#	Question / Observation	Answer
WC2	How frequently are members elected? Are members paid or do they volunteer?Is it possible to be reelected to a position?	An election was held once at the initial stage in 2008. The same committee is still working. When a member leaves the community committee members choose another member through a selection process.
	How many people serve on the Water Committee? How many of those members are women?	CBO is composed by 15 members and all are women.
	Does the Water Committee have rules/by-laws? Do you keep record of meetings and decisions made?	CBO/CMC does not have printed/documented rules or regulations. However, they keep the Meeting Minutes book, which was shown and properly maintained.
WC5	Are households charged a fee for using the water system?	It is inclusive with the house rent. The Land Owner/Occupier is responsible for paying the water bill. As it is a legal water connection from DWASA. They regularly receive monthly water bill from DWASA and the land owner/occupier pays the bill.
WC6	How much is the water fee?	N/A One of the major conditions to pay the WASH infrastructure loan to the land owner is getting assurence from the land owner that he/she will not increase the house rent due to install water supply and sanitary latrine hardware. In general, every year the land owner increase BDT 100/200 (USD 1.3/2.6) on the house rent of the tenants.
WC7	Who collects the fee? How often is it collected?	N/A
WC8	What type of payment is accepted (cash only? Cash or labor?)	N/A
WC9	Is there a record of payments made?	Yes, the land owner/occupier maintain a file where all paid water bill is preserved.
WC10	What percentage or how many families are current in their payments?	N/A

#	Question / Observation	Answer
WC11	What happens when a household doesn't pay a water tariff? Has this ever occurred?	N/A
	What expenses are paid with the fees that are collected?	N/A
WC13	Are the fees sufficient to cover the costs of operating the system? Is there a savings for repairs and expansions to the system.	N/A
WCC2	Is there a fee for new users to connect to the system? How much is the fee? How is that amount determined?	No fee for new users i.e. tenant to connect to the system. It is inclusive on the monthly house rent. The land owner will not get any loan for installation of WASH infrastructure from DSK unless ensure that no additional cost will be added with the monthly house rent for availing WASH facilites. CMC ensured that the land owner didn't increase the house rent due to installing WASH facilities.
WCC4	Does the community own the water system?	No. The water system is owned by the Land Owners/Occupier.
Planning		
WCP1	Who decides rules and regulations for the use of the water?	The land owner/occupier decides rules and regulations for the use of the water system in consultation with CBO. In general, the reservoir is filled 2 times a day which is found adequate to meet the needs of water of all the households.
WCP2	What are the permitted uses for the water from the water system?	All 30 households are permitted users for the water system.
WCP3	Are there any uses that are not permitted?	No

#	Question / Observation	Answer
WCP4	What happens if someone doesn't follow the rules?	N/A Everyone follows the rules because there is no cost involvement and water is availavle.
WCP5	How many users can be served by the water source?	All 30 households are users of the water source.
WCP6	At what point will you have to increase the capacity of the water system? When do you expect that to happen?	No necessary. Under the present water system, the tenants are receiving adequate quantity of water.
WCP7	Are you accumulating savings to allow you to increase capacity?	N/A
Water source protection		
WCSP2	Who is responsable for protecting the water source/watershed?	Mainly the Land Owner/Occupier is responsible for protecting the water source/watershed. However, CBO has a role to play as the facilitator.
WCSP1	Is there a watershed protection plan or program? Please describe.	Yes, Under the watershed protection plan, the caretaker everyday clean the entire platform both water system and cluster latrine. The pump and reservoir always is protected and locked. Reservoir is desinfected every month by using bleaching powder (chlorination).
WCSP4	What measures are taken to prevent bacteriological and chemical contamination of the water at the source?	In addition, water quality is checked once in every year by DSK for ensuring that water is free from bacteriological and arsenic contamination. The results is shown among CBO members and a photocopy is provided to them for keeping records.
WCSP5	Are any pesticides/herbicides used near the water source?	No Agriculture land is in distance place.

#	Question / Observation	Answer
WCSP7	What is the community doing to ensure that the water source continues to provide adequate water to meet the needs of the community?	CBO/CMC only monitors the system for ensuring adequate water for all households. People are getting adequate quantity of water everyday. 2times water is collected and preserved in the reservior, which is enough to meet the needs for all the households.
WCSP9	Is the water committee the owner of the land around the water source. If not, does an agreement exist with the owner?.	No, actually the land owner/occupier is the owner of the land. CMC provides cooperation on O&M to the land owner/occupier.
WCSP10	Has the quantity of water changed during the years after completion of the Project?	Yes, water quantity is changed positively as are getting adequate quantity of water for all.
WCSP11	Has the quality of water changed during the years after the Project was completed. Please explain.	Water test is good, no smell and color. No becteria and arsenic contamination as tested by DSK.
WCC3	Does the community have legal title to the water source? If yes, describe how this was obtained.	Yes the community has legal title to water source. They have got legal permission from DWASA. They regularly receive monthly bill from the government concern authority menas DWASa and pay the bill accordingly.
O&M		
WCOM1	What is the procedure for making repairs?	Caretaker is mainly responsible for O&M of both the hardware. DSK has trained and provided a tool kit box to the caretaker.
WCOM2	Does the community possess the tools and spare parts necessary to make repairs to the water system.	No Caretaker has the tool kit box as provided by DSK.
WCOM3	Where do you purchase spare parts?	The caretaker purchases spare parts from the adjacent market.
WCOM4	What distance do you have to go to purchase spare parts?	The distance is ½ a kilometer.
WCOM5	How much do they cost? (From examples of the spare parts you need	N/A

#	Question / Observation	Answer
	to purchase.)	
WCOM6	Have you made repairs to your water system during the past year?	No. After installing the water system, it doesn't require to repair.
WCOM7	If you have made repairs to the water system during the past year, for how much time was the water system not functioning while you made repairs?	N/A
WCOM8	If you made repairs in the last year, describe the types of repairs, when they were made, and how you paid for the spare parts.	N/A
WCOM9	Is the community/plumber able to make the repairs?	N/A
WCOM10	And how is the plumber/community able to receive external assistance for repairing the system?	N/A
WCOM11	Do you still maintain communication with the implementing organization?	Yes And vis-à-vis with DSK. According to the management rules of DSK, the field monitoring team visits the beneficiaries' places once every 3 months that already completed the repayment of monthly installments to DSK. In reality, it happens more frequently as they are working in other houses within the same community.
WCOM12	How many times has the implementing organization helped you repair or expand your water system?	N/A

#	Question / Observation	Answer
		It is not required to take help from DSK to repair or expand water system.
Observations		
WCO1	Review/observe the existence of the record of water tariffs, the list of users, etc	Water bills are observed as they keep record in a file of all previous bills.
WCO2	If yes, are the households paying the tariffs?	The water tariff is paid by the land owner/occupier.
WCO3	Check if the income exceeds the expenses (in other words, if the tariff is sufficient to cover expenses. (Ask if they have bank account for savings)	N/A
WCO5	What has happened to the amount of savings in the past two years?	N/A
WCO8	Verify that the water board possesses a title or legal papers that demonstrate ownership of the Project/water source/etc.	It is verified. The land owner/occupier posesses a title of ownership of the water system as provided by DWASA. The land owner has shown the legal documents.
WCO9	Verify that minutes of water board meetings exist.	Not verified but they have such practice with the DWASA Zonal Office.
WCO4	In the case of public taps, How much time do the users wait in line to fill their containers?	N/A
WCO7	Identify if there are possible sources of contamination of the water system.	It is a DWASA connection. In general, no contamination is perceived.
WCO6	Is the water source protected from agriculture/animals	N/A. It is a periurban area.

Appendix 3. Model for Focus Groups

Associated Standards	Question Number	Question / Observation	Possible Answers
Water System			
B2	HH1	Are users satisfied with the Water System?	
B3	HH2	Is water available whenever you need it? Thoughout the year? Throughout the day?	
B3	HH3	Is there sufficient water for you now?	
B3	HH4	Sometimes do you use another source of water? Why/for what purpose? Where?	
Quantity		What do you think about the quality of water? Is it turbid at times?, Does it taste good or bad? The smell?	
B13	HH5	Do you pay a tariff/fee to use water system?	Yes/No
B13	HH6	If you pay a fee, How much do you pay and how often (every month, etc)	Amount (local money)
B13	HH7	Who collects the tariff/fee? How is the fee collected?	
B13	HH8	Does everyone pay the fee? How many people pay the fee regularly? Are there people who pay on a different schedule?	
B14	HH9	Are there actions taken if someone doesn't pay the fee? What are they?	
B13	HH10	What fee did you pay when the Project started? What fee do you pay now? What are the reasons the fee increased/changed?	
F4	HH14	Did the community make repairs during the pasts year? For how long was the system not working? How many times during the year were repairs made?	

Associated Standards	Question Number	Question / Observation	Possible Answers
F4	HH15	If water was not available from the system during the past year, where did you collect water during this time?	
Sanitary Education			
D2	HHE1	Have you ever received training in sanitation or hygiene? How frequent? From whom?	
D2	HHE2	What were the topics? *(for the evaluator: hygiene habits, protection of water at home, use of soap, use of on-site sanitation, maintenance of on-site systems, etc.)*	
G2	HHE4	For what purposes do you use the water system?	
D3	HHE5	Do you drink water directly from the tap/pila?	Yes/No
D3	HHE6	Do you treat water that you drink? What type of treatment? Do you always treat the water that you drink?	
Sanitation System			
C2	HHT1	What type of toilet/sanitation system do you have? *(evaluator: latrine, septic tank, EcoSan)*	
C1	HHT5	What do you do when the septic tank is full?	
C6	HHT6	Are you satisfied with your toilet/sanitation system? Why?	
C3	HHT7	Does everyone in the community have a toilet? How many people do not have a toilet/sanitation system?	
Water system management			
B6	HH11	Are you satisfied with the Water Board?	
Tariff		Are you satisfied with water tariff/fee?	

Appendix 4. Households Observations

	KORAIL								DEMRA						VHANGA DEWAL						Ali Nagar Kamrangir Char					
	Observations FR				Waled observations				Franz						Franz						Waled			Kirk		
	HH1	HH2	HH3	HH4	HH5	HH6	HH7	HH8	HH1	HH2	HH3	HH4	HH5	HH6	HH1	HH2	HH3	HH4	HH5	HH6	HH1	HH2	HH3	HH4	HH5	HH6
Toilet working	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Toilet used	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Toilet clean	Y	Y	Y	Y	N	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
Toilet has no bad smell	Y	Y	Y	Y	N	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
Toilet is covered or has a seal	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Soap at toilet or at home	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Device for cleansing at the bathroom	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Water at the HH is covered	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
No leaking taps	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

	Amin Bagh, South Rasulpur								Shibpur, Amin Bazaar				Uttar Bishil							
	Waled				Kirk				Waled				Waled				Kirk			
	HH1	HH2	HH3	HH4	HH5	HH6	HH7	HH8	HH1	HH2	HH3	HH4	HH1	HH2	HH3	HH4	HH5	HH6	HH7	HH8
Toilet working	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Toilet used	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Toilet clean	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y
Toilet has no bad smell	Y	Y	N	N	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	Y	N	N	Y	Y
Toilet is covered or has a seal	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y	Y
Soap at toilet or at home	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Device for cleansing at the bathroom	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Water at the HH is covered	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
No leaking taps	Y	Y	Y	Y	N	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Appendix 5. Cost Sharing Basis

Cost Sharing Strategy

Water Aid has promoted the cost sharing for investment in water and sanitation in Bangladesh (WaterAid, 2006). The purpose of sharing/recovering the capital cost of water supply and sanitation facilities with the community is to i) contribute to building the sense of ownership in the community, ii) benefiting more people with relatively less funding from WaterAid. Costs that are shared by communities will be 'ploughed' back into increasing coverage for scaling up and also major repair/replacement of the installed hardware.

The core principles are as follows:

- Capital cost recovery and provision of subsidy will be based on categorization of people according to poverty levels
- cash and in-kind contributions will be accepted and accounted
- Upfront contribution by the community for capital cost and contribution in installments will both be accepted;
- 100% of regular O&M costs will be generated by the community, but a process of cross subsidization will be adopted to benefit the poorest.
- For major repair & replacement, recovered fund (community contribution) can be used.
- Recovered funds will be managed by community groups or partner organizations (for the time being);

In community situation analysis there will be five categories; rich, better off, poor but relatively better of, moderately poor & extreme poor/hardcore poor. The rich families (categorized as R) will not receive hardware facilities. The following table summarizes the criteria adopted.

Category	Description
R Rich	Persons in the community who have valuable assets/savings after fulfilling basic needs
A Better off	Persons in the community who have to be included in the water/ sanitation group but are better off (have some savings after having three meals, housing, cloths, expenses of education & treatment for the common diseases), can afford the cost of water and sanitation services without any subsidy.
B Poor but relatively better off household	Through average monthly income it is possible to meet demand for food (three meals) housing, and payment of other basic services (cloths, education & treatment cost for common diseases) but no savings.
C Moderately Poor household	Approximately two to three months of the year does not have three meals a day, to meet other basic needs sometimes borrow money.
D Hard Core poor/ Vulnerable/Extreme poor	Almost round the year do not have three meals. Can not meet the other basic needs e.g. children are not able to go to school.

Water and sanitation Projects visited in Dhaka where Water Aid was the funder followed the criteria presented above.