

Baseline Report of WASH4UrbanPoor Project

Submitted to



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Abbreviations

BDT	Bangladeshi Taka
CC	City Corporation
CCC	Chittagong City Corporation
DNCC	Dhaka North City Corporation
DPHE	Department of Public Health Engineering
DSCC	Dhaka South City Corporation
HH	Household
JMP	Joint Monitoring Programme
KCC	Khulna City Corporation
MHM	Menstrual Hygiene Management
NGO	Non-government Organization
PDC	Pavement Dweller Centers
ppm	Parts Per Million
SDG	Sustainable Development Goal
SDP	Sector Development Plan
UNICEF	United Nations Children's Fund
WASA	Water Supply & Sewerage Authority
WASH	Water, Sanitation, and Hygiene

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Executive Summary

Urban population in Bangladesh is growing rapidly. Situation of access to health, education, safe water supply, sanitation and waste management is very much limited for the urban poor and migrant communities. Keeping this in mind, WaterAid Bangladesh launched WASH4UrbanPoor Project. This report consists of baseline status of key indicators relevant to the project components describing pre-project conditions within the project implementation area.

Methodology: The study design was a combination of quantitative and qualitative techniques. Data was primarily collected through household survey in the project area for quantitative survey. HH survey included observation of water and sanitation facility of HH. Quantitative survey also covered students (grade VIII, IX, and X) in target schools. Qualitative techniques included Focus Group Discussions (FGD), In-depth Interviews (IDI) and Key Informant Interviews (KII). Separate observation checklist was prepared for schools and pavement dweller centers (PDC). Furthermore, water quality test took place in water points of HH, schools and PDCs.

Household Characteristics: Average HH size in target group is 4.21. Most of the HHs (52.5%) had 3 to 4 members. 2.9 percent of the surveyed households had one or more disable person. One-fourth (26.1%) of the population is of school going age. 60.5 percent females were of reproductive age and 18.8 per cent were adolescents. The average monthly HH income of surveyed HHs is BDT 11,100, average per capita monthly HH income is BDT 2,637, and the average monthly HH expenditure of surveyed HHs is BDT 10,921 and average per capita monthly HH expenditure is BDT 2,594. Overall, 92.9 per cent of the HHs lives below upper poverty line and 59.4 per cent lives below lower poverty line.

Access to Water: There was no unimproved water source identified in the survey area. Common water points in Dhaka city was piped water; in remaining locations, tubewell was the common water source. In terms of water accessibility, only 13.9 per cent HH had basic services and remaining 86.1 per cent had limited services. Most of the water points were contaminated with faecal coliform (163 water points out of 169 tested). However, only 11.9 per cent of HHs treats water before drinking and only 4.2 per cent HH store drinking water safely. In addition, most of the HHs (99%) cannot collect adequate water for drinking or HH chores. Only 47.1 per cent HH can collect water (one cycle) in less than 30 minutes.

Access to Sanitation: Only 13.9 per cent of surveyed HHs was using improved sanitation facilities while 70.1 per cent use unimproved facility and remaining 16 per cent use facilities equivalent to open defecation (the faeces end up in open spaces/water bodies with risk of contamination). The proportion of pit latrines was 25.2 per cent and latrines with flush system was 58.8 per cent. However, many of pit latrines with slab are broken and require renovation while most of the latrines flushing faeces are not safely disposed. 32.4 per cent HHs reported availability of hand washing place within 10 feet of latrine. Physical verification suggests that no latrine has support system for elderly or physically challenged person. People are not aware (do not have knowledge) of any additional support mechanism within a latrine for elderly or physically challenged person and need to be aware of such mechanism.

Handwashing Facility among the Community People: 66.0 per cent have no facility for handwashing service while only 19.2 per cent have basic service and 14.8 have limited service. The highest 54.1 per cent of CCC have basic handwashing service while the lowest (2.6%) in DSCC. Among handwashing agents, soap is most common among community people (55.6%). A majority percentage (74.6%) from DNCC have no handwashing agents.

Hygiene knowledge and Practice: 98.2 per cent have knowledge about necessity of hand washing with soap after defecation, followed by 72.2 per cent before having food. Further, the percentages for other options like after rinsing child's excreta, wiping baby's bottom, before cooking, before feeding child, are comparatively low. 38.7 per cent have handwashing knowledge about at least 3 occasions and 46.4 per cent have for at least 2 occasions.

There is a big difference between knowledge and practice trend among the community people (practice is much lower compared to knowledge). The lack of handwashing practice is affected by the fact that two-third (66%) of the HHs do not have any hand washing facility of their own. 74.7 per cent respondents practice handwashing after defecation followed by 33.1 per cent before eating with big differences compared to knowledge (23.5 and 12.3 percentage points gap respectively). Interestingly, the percentage (16.5%) for handwashing practices before cooking is interestingly higher than the percentage (12.8%) of knowledge gathering among the community People. 23.4 per cent of respondents have ensured that they always wash hands at time of 3 occasions while this percentage is 47.6 for at least 2 occasions.

Menstrual Hygiene Management (MHM): Only 29.6 per cent of women of reproductive age (15-49 years) in DNCC and 34.7 per cent in DSCC reported existence of facility for MHM at community latrines. CCC, KCC, Sakhipur and Saidpur have no facility for MHM at Community Latrines. Most of the women (80.1%) use cloth and 17.6 per cent use sanitary napkin. 98.9 per cent women wash reusable cloth pad with soap and water and 36.3 per cent dry those under direct sun. Most of them (31.2%) dispose their MHM materials with HH garbage. In schools, less than one-third of girls have opportunity to collect MHM materials but none of the schools has any additional facility for MHM management in toilets.

Solid Waste Management and Drainage System at Community: 29.2 per cent HH have access to dustbin or public/private trash service for dumping their solid waste. Overall, 47.4 HHs dispose their solid waste through proper system (in designated place or through trash collection services) while 30.5 per cent dump in nearby ponds or ditches and 18.2 per cent dump on roadside. It is not certain that the solid waste properly disposed by 47.4 per cent HHs is treated properly (the responsibility of such treatment lies to CCs or Paurashavas). 83.3 per cent HHs of DSCC can manage the safe disposal of solid waste while no HHs of KCC disposes solid waste safely. In CCC, more than one-fourth HHs dispose solid waste safely and in the remaining areas more than half of the HHs do so (DSCC: 56.5%, Sakhipur: 50%, and Saidpur: 51.3%). Overall, 9 out of 10 (91.9%) HH reported that they have no access to drainage system while 55.4 per cent have reported that they are affected by water logging.

Initiatives for Development of Wash in Communities: Almost all areas have Community WASH Support Group but they are not functional. NGOs had played a part to form active WASH committee in consultation and combination with community leaders or senior persons or responsible persons who would help them in development work. NGOs play a part, but not in all areas, for rising awareness for hygiene and sanitation among the community group and in some areas, they have set up water points. Different projects (implemented by NGOs) influence active involvement of community people (involved in WASH support group) with the government officials in WASH development activities through a network. The government is active in all areas for providing WASH facilities.

Affordability and Wash Expenditure of the Community People: The average WASH expenditure is BDT 337 (3.1% of total expenditure). And separately, the average for water is BDT 158, for sanitation BDT 20 and for hygiene BDT 158. The overall share of WASH expenditure of total expenditure is 3.1 per cent which stand within the primarily set up standard range of 2 to 6 percent of total expenditure.

Chapter 1

Introduction and Methodology

1.1 Background

Although, Bangladesh is still predominantly rural, the country underwent fairly rapid urbanization and the total urban population rose to 33.6 million in 2011, growing by more than half a million people a year. A considerable portion of this rapidly growing urban population are female, predominantly female comes of the poverty laden restricted rural life to change their own and families. This provides opportunities as well as new challenges. This type of rapid urban growth has increased demands on urban utilities and services, e.g., electricity, gas, water, sanitation, sewerage, garbage disposal, transport, telephone, cables, and social services like health and education, etc. Scarcity or inadequacy of the service and mismanagement in these sectors has caused crisis in low income settlements. Situation of access to health, education, safe water supply, sanitation and waste management is very much limited for the urban poor and migrant communities. Its quality in most of the cases is substandard and the cost is also higher than normal.

The budget allocation for WASH in urban area has increased. Dhaka North City Corporation (DNCC), Dhaka South City Corporation (DSCC), and Chittagong City Corporation (CCC) has increased WASH budget for 2018-19. Khulna City Corporation (KCC) did not have any allocation in last two fiscal years but has received allocation for 2018-19.

Understanding of the assignment

The key purpose of this assignment was to conduct baseline survey in project areas. This assignment established baseline data on key indicators relevant to the project components to reflect the pre-project conditions within the project implementation area. Survey covered major cities (Dhaka, Chittagong, and Khulna) as well as municipalities (Sakhipur and Saidpur) within in project coverage.

Objective of the Study

To understand the initial status of WASH deprivation, climate resilience, environmental sanitation, education, socio-economic conditions, sectoral in service delivery and resource allocation by city town authorities for pro-poor WASH service.

Specific Objectives are as follows:

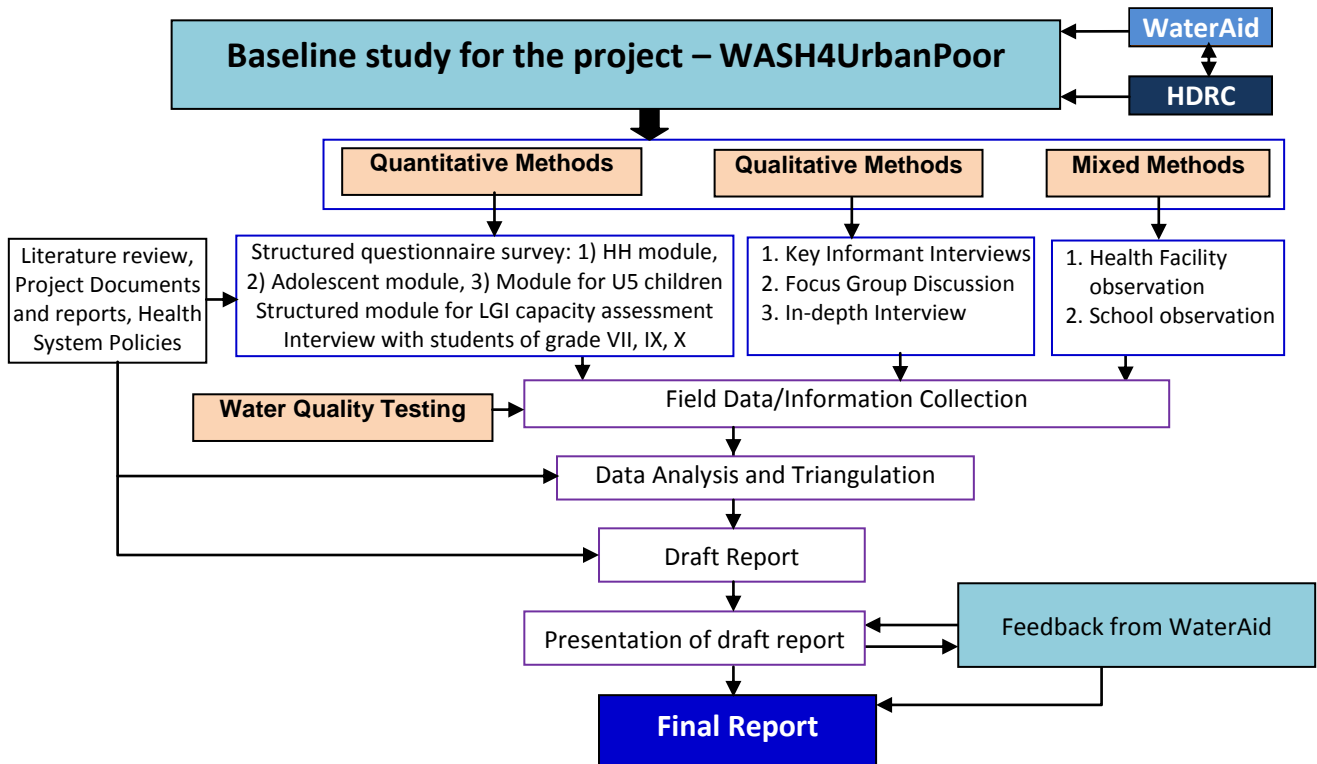
1. To understand the WASH deprivation among the target communities especially in the areas of “awareness” and “access” to: Climate resilient WASH services.
2. To measure the performance of local governance in pro-poor WASH service delivery and coordination with other services.
3. To analyze WASH policy and strategies those are in place for urban poor.

1.2 Methodology

The study design was a combination of quantitative and qualitative techniques. Data was primarily collected through household survey in the project area for quantitative survey. HH survey included observation of water and sanitation facility of HH. Quantitative survey also covered students (grade VIII, IX, and X) in target schools. Qualitative techniques included Focus Group Discussions (FGD), In-depth Interviews (IDI) and Key Informant Interviews (KII). Separate observation checklist was

prepared for schools and pavement dweller centers (PDC). Furthermore, water quality test took place in water points of HH, schools and PDCs.

Figure 1.1: Overall research approach and methodology of the assignment



Quantitative Survey Design for HH survey

Sample was stratified and selected in two stages. Each of the city corporations and municipalities were considered as separate stratum. This resulted in total of 6 strata within project area. Independent selection of clusters and samples will be ensured in each stratum. In first stage, clusters (considered as PSUs) will be selected through PPS method within each stratum. In the second stage of selection, a fixed number of 20 households per segment will be selected with an equal probability systematic selection.

Sample size for HH survey

Survey took place in Households within project areas as well as all target schools and health care facilities. Within households, there are three type of target groups: 1) women of reproductive age, 2) adolescent girls, and 3) mother/care giver of under 5 children. Standard statistical formula has been applied to determine the sample size of households. Among the target groups, under 5 children are least likely to be found in household (on average 100 in every 275 households). Sample was inflated to ensure minimum 30 under 5 children in each stratum.

The sample was determined assuming 95% confidence interval and 5 percent level of precision. The sample was then increased 30 percent for multi-stage sampling and probable non-response. The sampling strategy assumed p=0.5 to maximize the sample to provide robust estimate. Power allocation was applied to ensure minimum sample from each stratum. **The total sample size of households for this survey was 1,060.** Households were selected from 53 PSUs. This allowed minimum sample from each

$$n_i = \frac{Z^2 PQ}{e^2} \times deff$$

Where, n = Estimated Sample Size, P = Anticipated binomial probability for maximum sample size (0.50), Q = 1- P, Z = Standard normal variate value at 95% confidence level, e = Level of precision (5%), deff = Design effect

stratum to prepare monitoring level estimates for the selected indicators. The estimated sample size for random treatment households is distributed in Table 1.1 along with the required number of PSUs.

Table 1.1: Distribution of sample under HH survey

Stratum	Sample size of HHs	Number of clusters (PSUs)
Dhaka North City Corporation	240	12
Dhaka South City Corporation	240	12
Chittagong City Corporation	180	9
Khulna City Corporation	180	9
Sakhipur Paurashava	100	5
Saidpur Paurashava	120	6
Total	1,060	53

The households were selected in 2-stages. In first stage, clusters (slums) were selected using Probability proportionate to Size (PPS) method using list of targeted slums shared by WaterAid Bangladesh. In second stage a segment of each selected slum with minimum of 100 households were selected. Within the segments, households were selected following systematic random sampling.

School Survey

Within project targeted area, WASH situation in all 47 target schools was inspected within target area. Inspection focused on functionality and physical condition of water point and sanitation facility. An observation checklist was prepared for such inspection.

Furthermore, students in high school (grade VII, IX, X) was provided a self-administered structured questionnaire with facilitation form the field personnel. The questionnaire assessed their KAP on hygiene and WASH in school as well as personal hygiene. Separate modules were used for boys and girls. 400 students were interviewed from schools.

Inspection in Pavement Dweller Centre (PDC)

Alike school inspection, inspection took place in 13 Pavement Dweller Centers (PDC) within target area. An observation checklist has been prepared for such inspection.

Water Quality Testing

Water quality testing involved two specific tasks:

- Detection of Arsenic level in drinking water
- Existence of E.Coli in water

Water samples were collected from water source(s) for HHs within selected cluster. It was assumed that within a selected cluster 3-4 water points will be identified. Water from all identified water points was inspected. Field Arsenic detection kit as well as E.Coli detection Kit was used to detect arsenic and E.Coli content of drinking water at the field. Collected water samples were properly labeled using cluster identification number (for water source) and a combined cluster-household identification number. In this manner a total of 183 water sample was inspected. Water quality testing took place in all schools and Pavement Dweller Centers (PDC) as well.

Qualitative Survey

Apart quantitative data collection, HDRC collected qualitative information. This information was useful in explaining different socio-economic and WASH scenario in survey locations. Such information was collected through discussion with community people at survey locations, on sight observations, In-depth interviews, and Key Informant Interviews.

- Focus Group Discussion (FGD)
- In-depth Interview (IDI)
- Key Informant Interviews (KII)

Focus Group Discussion (FGDs)

Focus Group Discussions was conducted with target population in the project area to learn the untold stories about water sanitation scenario among them and their suggestions and observations. FGDs involved about 7-9 carefully chosen participants grouped to discuss issues concerning them. FGDs were conducted in presence of a facilitator and a note taker. The facilitator used a discussion guideline (semi-structured) while note taker jotted down discussion, comments and observations. A total of 12 FGDs (6 with males and 6 with females) was conducted for the survey.

In-depth Interviews (IDIs)

IDIs were conducted with LGI representatives, WASH Service Providers, school management committee members, and duty bearers to deliver WASH services directly. IDIs were expected to provide important information and insights about engagement level of civil society to promote citizens rights to WASH within the project area and it was used to assess their capacity regarding WASH service delivery. Semi-structured and unstructured questionnaires were used to collect necessary information. A total of 30 IDIs were conducted for the current survey.

Key Informant Interviews (KII)

KIIs were conducted with experts on WASH who are involved in policy perpetration process. The core team members themselves conducted such unstructured interviews. 3 KIIs was conducted.

1.3 Data Analysis Plan

Quantitative data analysis

The primary unit of analysis of the study was households, with results summarized for target area and stratum. Data was analyzed using SPSS. Basic tools used for data analysis are: distributions (numbers, proportions, and percentages), graphical representations, Statistics (mean, variance, numbers etc.), and Cross tabulations.

Qualitative information analysis

Qualitative information collection included a number of structured information. Such data was compiled into a separate database for analysis. The open ended qualitative information was converted into scripts. Content analysis was performed for to draw conclusion from such information from reporting.

Triangulation

Content analysis was performed for making replicable and valid inferences from information to their context, with the purpose of new insights, a representation of facts and a practical guide for action. The qualitative information and quantitative data analysis was performed separately and their findings were triangulated.

1.4 Limitations of the Study

- ✓ This survey did not conduct specific investigation on legality of water points

Chapter 2 Survey Findings

This chapter describes the findings from baseline survey. The findings are organized based on specific topics such as demographic characteristics, access to water, access to sanitation, access to hygiene, menstrual hygiene management, waste disposal, involvement of community in WASH, and Status of WASH in school.

The survey took place in 53 randomly selected slums across 6 urban areas involving city corporations as well as Paurashavas. The 53 slums were selected from a list of slums targeted by the project. The targeted slums were preliminarily assessed¹ by implementation partners of WaterAid Bangladesh for the project. In terms of targeted slum size, there is similarity between DNCC, KCC, Sakhipur Paurashava and Saidpur Paurashava (average number of HH per slum ranges between 215-260). However, The average number of HHs in targeted DNCC slums is close to 1,000 HH which is the courtesy of 2 very large slums: Karail and T&T slum in Banani. The average number of HHs in targeted slums of CCC (600 HHs) is lower compared to DNCC but higher compared to remaining target areas. In CCC the variation in number of HH within target slums is lower compared to targeted slums in other target areas.

The overall scenario of slums is similar. Most of the households are poor, living in poor housing structure, and without adequate water and sanitation services. Usually there is waste dumping/disposal location nearby the slums and the drainage system is inadequate and where available, is unprotected. In addition, most of the slums are nearby a small water body (i.e., pond, ditch, canal) where the water is not clean as well as contaminated. In all slums, there is waste lying here and there and there persists problem of water logging.

2.1 Household Characteristics

Average HH size in target group is 4.21. Most of the HHs (52.5%) had 3 to 4 members (Annex Table 2.1). The ratio of female to male members (Sex ratio) is 0.97. However, only 10 per cent household heads were female. The proportion of household with disable person is not negligible. According to the study, 2.9 percent of the surveyed households had one or more disable person.

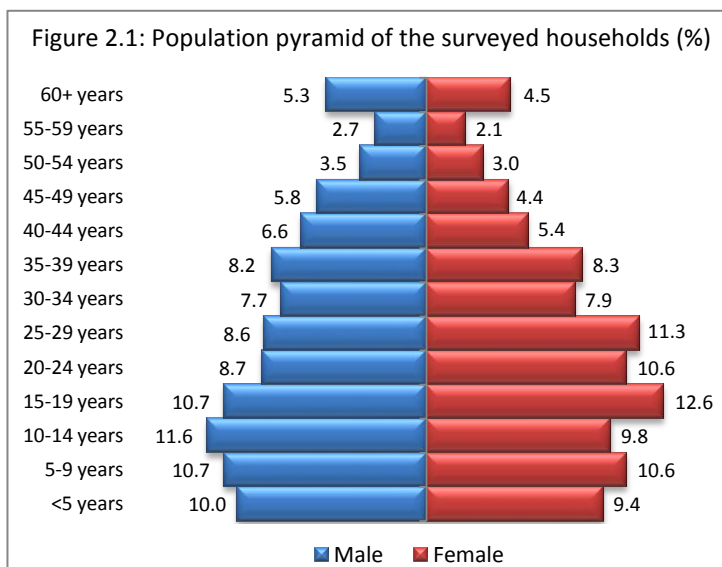
Table 2.1: Demographic indicators for surveyed household

Indicators	DNCC	DSCC	KCC	CCC	Sakhipur	Saidpur	Total
Household size (average)	4.27	4.41	4.12	4.03	3.85	4.39	4.21
Sex ratio	0.99	1.00	1.06	0.89	0.96	0.89	0.97
Female headed household	8.6	14.3	11.6	5.0	10.0	9.1	10.0
Households with members having disability (% among HHs)	4.1	4.6	0.6	0.6	3.0	4.1	2.9

¹ This assessment is based on the preliminary assessment prepared by the implementation partners and field observation.

Age-Sex Composition

The age-sex composition of the study reveals that age distribution within male and female HH members was similar up to 9 years of age, and then again followed similar trend from age 20. The percentage of population aged 15-59 was 64.1 per cent, which indicates a dependency ratio of 0.56. Among the female HH members, 60.5 percent were in the reproductive age and 18.8 per cent were adolescents.



Education and Literacy

Survey reveals that percentage of HH members (15+) with no schooling is high (30.6%). Only 12.1 percent of them studied up to SSC or higher. It is notable that percentage of HH members with no formal education was higher in Sakhipur (45.4%) than other areas.

Table 2.2: literacy status of HH members (15+ years)

Level of education	DNCC	DSCC	KCC	CCC	Sakhipur	Saidpur	Total
No formal education	29.9	37.4	20.4	26.1	45.4	28.3	30.6
Non-formal education	3.1	0.1	5.2	0.2	0.4	8.9	2.8
Can read and write only	0.0	0.0	6.5	1.1	0.4	0.0	1.3
Below primary	12.6	9.3	7.7	21.9	8.0	15.0	12.4
Primary	18.4	17.6	18.3	17.7	12.4	16.1	17.3
Above primary & below secondary	20.9	23.7	30.2	24.4	15.9	20.0	23.1
Secondary	8.1	7.2	6.7	4.8	6.0	5.8	6.7
Above secondary	6.0	4.2	4.6	3.8	11.6	5.3	5.4
Madrasha Education	1.0	0.4	0.4	0.0	0.0	0.6	0.5
n	680	697	480	475	251	360	2943

One-fourth (26.1%) of the population is of school going age, i.e. 5-16 years of age. However, a significant number of such populations are not continuing school (25.4%), which indicates a high rate of dropouts from school.

Table 2.3: Current schooling status of household children aged 5-16 years

Indicators	DNCC	DSCC	KCC	CCC	Sakhipur	Saidpur	Total
Percentage of school going aged children	25.0	26.5	26.9	25.1	28.6	25.8	26.1
n	1042	1049	698	737	385	531	4442
Percentage of school going aged children continuing school	71.5	76.6	83.0	65.4	83.6	70.1	74.6
n	260	278	188	185	110	137	1158

Occupation

HH members occupation was explored in this study. Majority of women were primarily reported as homemaker. Apart from that, 'service holder'² was mostly (17.2%) reported by HH members, which was followed by 'day labor' (10.2%), 'driver' (8.8%), and 'small/large business' (8.2%). A small percentage (6.1%) of them were found unemployed.

Table 2.4: Primary occupation of HH members (15+ years)

Type of occupation	DNCC	DSCC	KCC	CCC	Sakhipur	Saidpur	Total
Day labor	8.3	6.3	21.0	10.4	7.7	6.2	10.2
Driver (Rickshaw, van, CNG etc.)	9.0	8.3	7.6	10.9	10.0	6.9	8.8
Technician (Electrician, Carpenter, Mason etc.)	4.1	2.2	2.7	7.7	10.0	4.8	4.6
Garment Worker	12.7	14.5	1.9	3.5	0.0	0.0	7.2
Support staff in government office	1.9	1.6	2.1	2.6	0.9	1.7	1.9
Support staff in private sector	2.0	1.3	1.7	4.1	1.4	5.8	2.5
Support staff in non formal sector	5.4	5.3	3.4	6.3	4.6	9.3	5.6
Business	7.9	9.2	5.9	9.4	7.3	9.7	8.2
Home maker	30.7	30.3	36.4	31.1	44.4	40.3	33.9
Students	6.0	5.7	7.0	4.3	6.8	7.9	6.0
Domestic worker	4.7	9.6	1.7	2.2	2.3	1.7	4.3
Unemployed	7.3	5.7	8.4	7.4	4.6	5.5	6.7
n	680	697	480	475	251	360	2943

Income

The average monthly HH income of surveyed HHs is BDT 11,100 and average per capita monthly HH income is BDT 2,637 (Table 2.5). Most of the HHs are within BDT 5,000 to 10,000 monthly income range. The average monthly HH income and per capita income is lowest in KCC (BDT 7,199 and BDT 1,786) and highest in DNCC (BDT 12,006 and BDT 2,812). Only 5.8 per cent HH have monthly income more than BDT 15,000.

Table 2.5: Distribution of monthly HH income

Income Range (in BDT)	DNCC	DSCC	CCC	KCC	Sakhipur	Saidpur	Total
up to 5,000	17.3	17.2	6.4	58.5	21.0	15.7	22.7
5,001-10,000	46.7	53.4	57.3	35.2	45.0	56.2	45.2
10,001-15,000	27.5	24.4	33.3	2.8	20.0	18.0	25.3
15,001-20,000	6.1	3.8	3.0	1.2	10.0	5.9	4.7
20,001-25,000	0.8	0.4	0.0	1.7	2.0	2.5	1.1
25,000+	1.6	0.8	0.0	0.6	2.0	1.7	1.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average	12,006	10,541	11,036	7,199	9,418	9,494	11,100
Per capita income	2,812	2,390	2,679	1,786	2,446	2,163	2,637
N	244	238	173	179	100	121	1055

² Sum of Garment worker, Support staff in government office, Support staff in private sector, and Support staff in non formal sector

Expenditure

The average monthly HH expenditure of surveyed HHs is BDT 10,921 and average per capita monthly HH expenditure is BDT 2,594 (Table 2.6). The average monthly HH expenditure and per capita expenditure is lowest in KCC (BDT 7,146 and BDT 1,773) and highest in DNCC (BDT 11,945 and BDT 2,797). The largest share of HH expenditure belongs to food (49.9%) followed by (24.4%) which is not surprising since most of the HHs in CCs are tenants. Overall, 92.9 per cent of the HHs lives below upper poverty line³ and 59.4 per cent lives below lower poverty line.

Table 2.6: Distribution of HH average monthly expenditure in broad expenditure head

Items of Expenditure	DNCC	DSCC	CCC	KCC	Sakhipur	Saidpur	Total
Food	49.8	42.9	52.1	50.9	57.7	61.8	49.9
Education	6.2	8.8	4.7	4.4	13.5	5.9	6.8
Housing	25.4	25.2	24.4	32.1	9.3	12.1	24.4
Health	5.4	4.8	6.3	3.5	4.7	5.0	5.0
Clothing	6.0	7.7	7.8	5.6	6.3	7.8	6.8
Others	7.1	10.7	4.7	3.5	8.5	7.3	7.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average	11,945	10,128	10,788	7,146	9,403	9,231	10,921
Per capita	2,797	2,297	2,618	1,773	2,442	2,103	2,594
HHs below upper poverty line	91.4	95.0	90.2	97.8	92.0	89.3	92.9
HHs below lower poverty line	62.1	69.2	51.7	55.0	54.0	57.5	59.4
Share of WASH expenditure	3.9	3.1	3.0	3.0	6.0	1.4	3.1

Disability

This study reveals about 0.7 percent HH members had some sort of disability. Type of these disabilities varied among themselves. About one third (31.3%) of the disable persons had physical impairment, followed by 21.9 percent 'intellect impairment'. About 6.3 percent of them had both physical and intellectual impairment.

Table 2.7: Disability of HH members

Indicator	DNCC	DSCC	KCC	CCC	Sakhipur	Saidpur	Total
Percentage of HH members with disability	1.0	1.0	0.1	0.1	0.8	1.1	0.7
n	1042	1049	698	737	385	531	4442
Type of disability							
Sight impaired	10.0	27.3	0.0	0.0	0.0	16.7	15.6
Speech impaired	30.0	18.2	0.0	0.0	0.0	0.0	15.6
Physically impaired	20.0	27.3	100.0	100.0	66.7	16.7	31.3
Intellect impaired	20.0	27.3	0.0	0.0	0.0	33.3	21.9
Physical and Intellect impaired	0.0	0.0	0.0	0.0	33.3	16.7	6.3
Speech and physical impaired	20.0	0.0	0.0	0.0	0.0	16.7	9.4
n	10	11	1	1	3	6	32

³The poverty below upper poverty line has been assessed based on poverty lines available in Preliminary Report of Household Income and Expenditure Survey (HIES) 2016 (page 122).

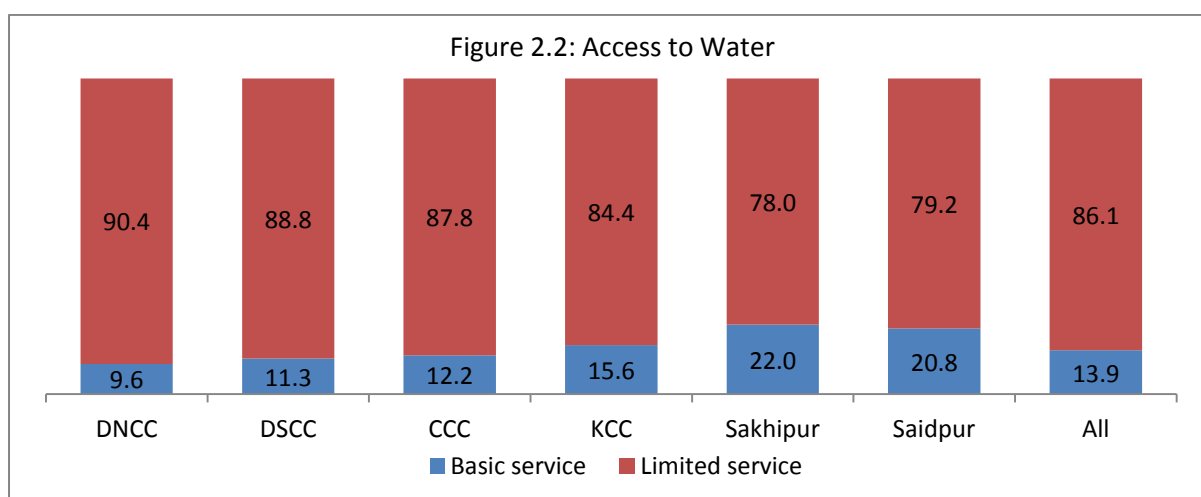
2.2 Access to Water

Water accessibility among surveyed HHs followed SDG defined classification⁴. There was no unimproved¹ water source identified in the survey area which is not surprising since the locations were urban areas of Bangladesh (Table 2.8). Common water points in Dhaka city was piped water (DNCC: 95.9% and DSCC: 86.1%). However, the overall status of piped water points is not satisfactory (described in table 2.12). Also, there is complex situation regarding piped water. There is instance of multiple water connectivity from one water point, there are illegally connected water points (without meter), there are local politicians who sets up water point and collect payments for water collection. In remaining locations, tubewell was the common water source. In Paurashavas, shallow tubewell was the key water source (Sakhipur: 96% and Saidpur: 97%) while in CCs outside Dhaka, Deep tubewell was more popular (CCC: 81% and KCC: 86%) [Annex table 2.8].

Table 2.8: Percentage distribution of key drinking water source

Key Drinking water source	DNCC	DSCC	CCC	KCC	Sakhipur	Saidpur	Total
Tubewell	0.0	0.0	92.5	99.4	100.0	100.0	55.0
Pipeline	98.8	92.0	7.5	0.6	0.0	0.0	42.9
Tanker/Truck loaded water	1.2	8.0	0.0	0.0	0.0	0.0	2.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Sample size (n)	240	240	180	180	100	120	1060

Among improved water sources, none were safely managed and 13.9 per cent were basic services. The key contributing factor to such low rate of safely managed water was faecal contamination in water. Most of the water points were contaminated with faecal coliform (Table 2.9). Though most of the slum dwellers get water from water points-connection from WASA; But the nature and condition of the water points are not hygienically and technically safe; as most of the connection lies in the garbage and contaminated water bodies with lots of leakage of the collection pipe. Which is one of the major reasons for FC contamination.



⁴**Improved drinking water source:**

Safely Managed – Drinking water from an improved water source that is located on premises, available when needed and free from faecal and priority chemical contamination.

Basic – Drinking water from an improved source, provided collection time is not more than 30 minutes for a round trip, including queuing.

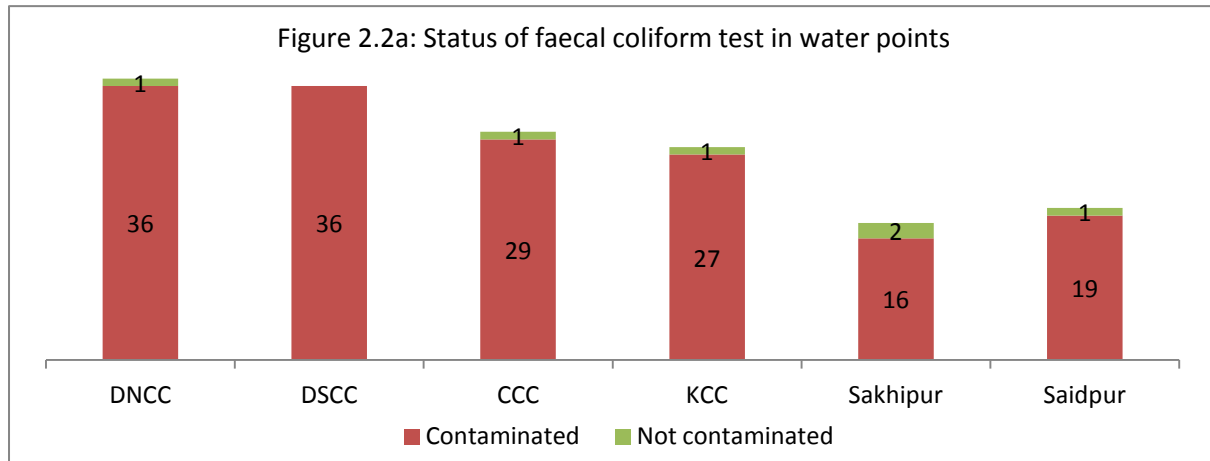
Limited – Drinking water from an improved source for which collection time exceeds 30 minutes for a round trip, including queuing.

Unimproved drinking water

Unimproved – Drinking water from an unprotected dug well or unprotected spring.

Surface Water – Drinking water directly from a river, dam, lake, pond, stream, canal or irrigation canal.

Different attributes of water accessibility reveal an interesting scenario (Table 2.9). More than 50 per cent of surveyed HHs have water points within 20 feet of their households. This rate is higher in Paurashava (Sakhipur: 77% and Saidpur: 82.5%) compared to CCs. However, 47.1 per cent of the households are able to collect water in less than 30 minutes.



Most of the household are un-able to collect necessary water for drinking as well as other HH chores. It is a fact that people are not aware of the standardized quantity of water and adopt whatever quantity they can collect. Still, only close to one-fifth (19.9%) of HHs reported that water is always available. Data suggest that there is water scarcity (less availability of water) between March and July in Dhaka and Khulna. It is to note that, HHs reports water scarcity have access to piped water system. HHs in Chittagong, Sakhipur, and Saidpur did not report any specific water scarcity. It is probable that the average water availability is similar in those areas throughout the year and people are now used to the scenario.

Table 2.9: Availability of water at water source, Water Source distance, time required to collect water, and adequate water collection (% of HH)

Status	DNCC	DSCC	KCC	CCC	Sakhipur	Saidpur	Total
Water available for 24 hours every day	11.3	12.1	10.6	9.4	54.0	54.2	19.9
Water quality acceptable (perception of respondent)	80.3	49.2	68.2	96.6	81.0	81.0	74.2
Water is not coliform contaminated	6.1	0.0	6.7	13.9	20.0	9.9	7.9
Water is Arsenic contaminated (>50 ppm)	0.0	0.0	5.6	3.5	0.0	0.0	1.5
Water point within 20 feet	35.0	44.2	51.1	45.0	77.0	82.5	50.8
Require less than 30 minutes to collect water	43.4	56.7	48.2	51.8	28.0	40.0	47.1
Can collect adequate drinking water	0.8	0.0	0.6	0.0	3.0	4.2	1.0
Can collect adequate water for other chores	0.4	0.0	0.0	0.0	3.0	3.3	0.8
n	244	238	179	173	100	121	1055

Nearly three-fourth (74.2%) of the HHs are satisfied (perceived) with the water quality (Table 2.9). Only 49.2 per cent of HHs in DSCC is satisfied with water quality while 96.6 per cent of HHs in CCC is satisfied with water quality. However, water quality testing suggests that only 7.9 per cent HHs drink water from sources without faecal contamination. Furthermore, the water treatment habit does not

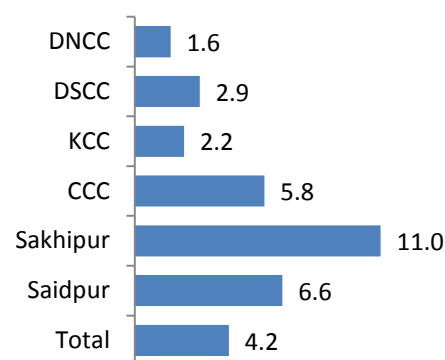
coincide with the satisfaction of water quality. Also, the HHs cannot collect adequate water⁵ for drinking or household chores. Table 2.10 suggests that only 11.9 per cent of HHs treat water before drinking. In KCC, 31.8 per cent HHs were not satisfied with water quality, and only 6.7 per cent HH collect water from sources without faecal contamination but only 3.9 per cent treated water before drinking. Such discrepancy is also true for HHs in DSCC. It is alarming that none of the HHs in Sakhipur and Saidpur reported treating water despite their dissatisfaction (19%) of water quality. The group discussants in Paurashavas mentioned that they do not treat water because they believe water from tubewell does not require treatment. Most of the HHs reported treating drinking water, does it by boiling followed by filtering.

Table 2.10: Status of water treatment before drinking

Response	DNCC	DSCC	KCC	CCC	Sakhipur	Saidpur	Total
Treat water (%)	18.0	18.5	3.9	17.9	0.0	0.0	11.9
n	244	238	179	173	100	121	1055
Methods of water treatment							
By boiling	81.8	54.5	14.3	41.9	-	-	58.7
By mixing bleaching powder or chlorine	0.0	11.4	0.0	19.3	-	-	8.7
By filtering	18.2	34.1	85.7	9.7	-	-	25.4
By settling down water	0.0	0.0	0.0	29.0	-	-	7.1
n	44	44	7	31	-	-	126

Since most of the HHs do not treat water before drinking, as well as most of the HHs do not have water point within HH, it was important that the water is stored safely before drinking. Data suggest that (Table 2.11) only 4.2 percent HHs store water safely ensuring all 6 steps of safe water storage. The HHs in CCs are behind to Paurashava HHs in terms of safely storing drinking water (Figure 2.3). The key factors unnoticed for safe storage of drinking water are placement of water pot in a high place (21.6%) and covering water pot while collecting as well as transporting water (33.2% and 37.3%). Also neglecting to clean the glass before drinking and/or serving water (41.2%) is common.

Figure 2.3: HHs store drinking water safely (%)



Title 2.11: Steps of Water Safety Plan including preservation / storage of drinking water

Response	DNCC	DSCC	KCC	CCC	Sakhipur	Saidpur	Total
Clean water pot with drinking water during collection (%)	68.4	62.2	51.4	66.5	87.0	95.9	68.7
Keep water pot covered during water collection (%)	23.4	28.2	40.2	43.4	42.0	30.6	33.2
Cover water pot during water transportation (%)	24.6	43.7	46.4	45.7	40.0	23.1	37.3
Cover water pot during drinking water preservation (%)	72.5	89.9	82.7	64.7	77.0	55.4	75.4
Preserve water in a high place (%)	8.2	23.9	24.6	24.3	35.0	24.8	21.6
Clean water glass with drinking water during drinking or serving water (%)	39.8	31.1	35.8	48.0	69.0	39.7	41.2
Safe storage of drinking water (follows all 6 steps)	1.6	2.9	2.2	5.8	11.0	6.6	4.2
n	244	238	179	173	100	121	1055

5 B. J. Reed, Minimum water quantity needed for domestic uses, WHO Regional Office for South-East Asia. Downloaded from: http://ec.europa.eu/echo/files/evaluation/watsan2005/annex_files/WHO/WHO5%20-%20Minimum%20water%20quantity%20needed%20for%20domestic%20use.pdf [accessed on 19 July 2018]

The water points were observed during the survey. the water points were observed focusing 8 indicators. Table 2.12 and 2.13 describes the status of water taps by different indicators. In Dhaka, nearly 90 per cent water points were piped system and in remaining areas, more than 95 per cent of water points are tubewells. More than half (51.7%) of the water tap does not have clean environment which obvious as 44 per cent of water taps has a platform that accumulates water and 49 per cent water tap is connected to a drain that is cracked/broken or accumulated filth/garbage. Also, 27 per cent of platforms of water taps are cracked and require renovation. If we consider all 8 indicators, only 11 per cent of water taps are in good condition (Figure 2.4).

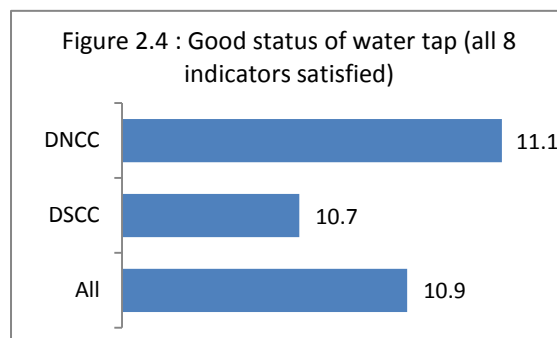


Table 2.12: Status of Water tap

Status of water tap	DNCC	DSCC	All
There is unclean environment/condition around the water tap	41.8	61.8	51.7
The drain connected to the water tap is cracked/broken or accumulated filth/garbage	43.4	54.6	49.0
Water accumulates on the platform of water tap	28.7	59.2	43.8
There is crack in the platform of the water tap	21.3	33.6	27.4
The water tap is fixed with a concert wall	34.0	50.0	41.9
The pipe of the water tap is exposed	63.9	30.3	47.3
The overall condition of the platform of the water tap is bad	12.7	34.5	23.4
The overall condition of the drainage system of the water tap platform is bad	17.6	51.3	34.2

The overall status of tubewells is better compared to water taps. If considered all 8 indicators, 14 per cent of tubewells are in good condition. The key problem of tubewells is also unclean environment, which is contributed by existence of latrine nearby (within 30 feet of tube well: 49.2%) as well as connectivity of tubewell to a drain that is cracked/ broken or accumulated filth/ garbage (27.6%). Also, 29.9 per cent of platforms of tubewells are cracked and require renovation and 7.9 per cent of tubewells have a weak or loose base.

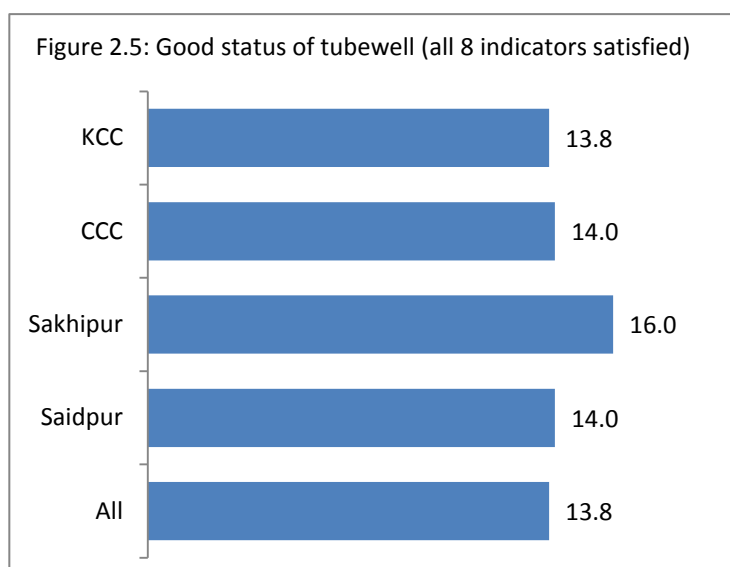


Table 2.13: Status of tubewells

Status of tubewell	CCC	KCC	Sakhipur	Saidpur	All
There is latrine nearby (within 30 feet) to the tube well	60.6	22.5	67.0	66.9	49.2
There is unclean environment/condition around the tube well	23.8	93.8	47.0	69.4	58.0
There is crack, broken part or accumulated garbage in the drain to which the tubewell platform in connected	10.6	56.7	14.0	23.1	27.6
Water accumulates on the tubewell plat form	10.6	64.6	7.0	8.3	25.7
There is crack in the tubewell platform	8.8	62.4	16.0	26.4	29.9
Tubewell base become weak/loose	3.1	1.1	10.0	24.0	7.9
The overall condition of the platform of the tubewell is bad	0.0	31.5	11.0	25.6	16.9

The overall condition of the drainage system of the tubewell platform is bad	5.0	60.7	15.0	39.7	30.9
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The poor status of water points are a possible result of lack of maintenance. Most of the target HHs are tenants. Table 2.14 reveal that 31.9 per cent of the HHs own their dwelling and this is because of the HH in Sakhipur and Saidpur where more than 95 per cent HHs own their dwelling. In Dhaka, only 3-5 per cent HH are owner of their dwelling. The discussants mention that in most cases, the tenants consider that maintenance of water point is the responsibility of HH owner, government, or the organization that installed the water point rather than their own. Another possible contributing factor for poor maintenance is lack of availability of WASH management committee (21.5%) which has a real scarcity in City corporations (6.2%).

Table 2.14: HH own the dwelling they are living in (%)

DNCC	DSCC	CCC	KCC	Sakhipur	Saidpur	Total
4.5	3.4	18.5	41.3	96.0	95.9	31.9

Unsurprisingly, most of the water sources especially piped sources are courtesy of Government of Bangladesh through WASA and DPHE⁶ (Table 2.15). Tube wells are installed by self (who are owner of HHs), owner of HHs, or NGOs (meaning NGOs implementing different projects/programs).

Table 2.15: Provider of water source

Provider type	DNCC	DSCC	CCC	KCC	Sakhipur	Saidpur	Total
Self	2.9	0.8	1.2	6.7	71.0	81.0	18.2
Owner of the house	6.6	16.8	45.7	20.7	12.0	7.4	18.3
Government Entity	88.9	77.7	53.2	48.6	13	4.1	56.8
NGO	1.6	4.6	0.0	24.0	4.0	7.4	6.7
N	244	238	173	179	100	121	1055

Overall, 6 out of 10 water points are legal as reported by the HHs (Table 2.16). However, most of the HHs is not owners of dwelling, and hence it is not surprising that many of them (34%) do not know whether the water points are legal or illegal. Moreover, the tenants reported what they learned from the land lord. The responses were not verified officially.

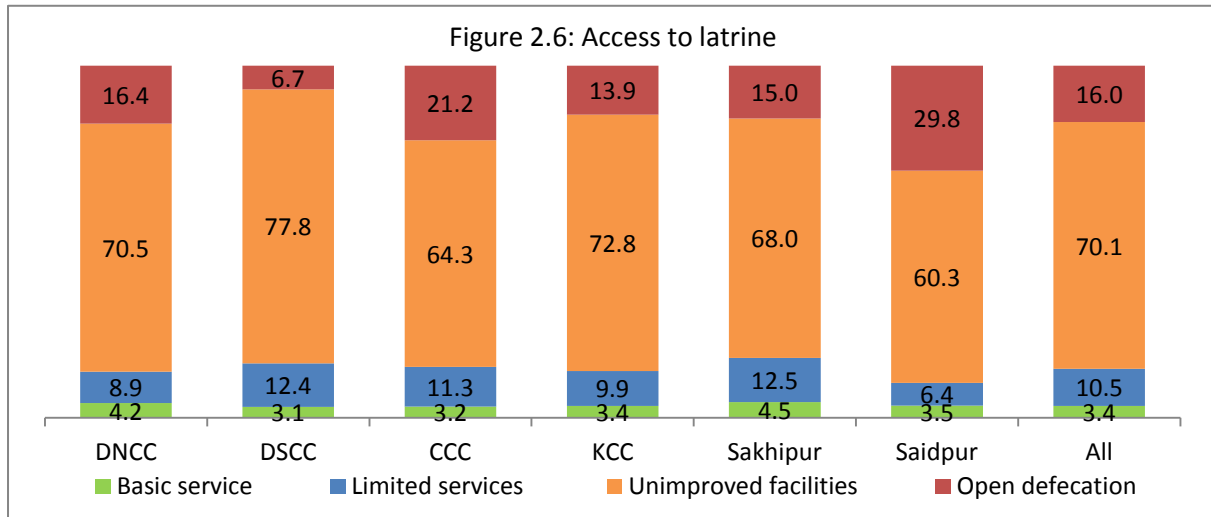
Table 2.16: Status of legality (perceived) of water points

Water Accessibility Status	DNCC	DSCC	CCC	KCC	Sakhipur	Saidpur	All
Legal	64.2	60.0	61.7	56.7	58.0	65.0	61.0
Not legal	2.5	8.8	2.2	3.3	9.0	5.8	5.0
Do not know	33.3	31.3	36.1	40.0	33.0	29.2	34.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Sample size (n)	244	238	173	179	100	121	1055

⁶ According to DPHE mandate, "DPHE is responsible exclusive for water supply and sanitation facilities throughout the country excluding Dhaka & Chittagong cities and Narayanganj and Kadamrasul Paurashavas where WASAs operate". Available in: <https://www.dphe.gov.bd>, accessed on 5 August 2018.

2.3 Access to Sanitation

Sanitation accessibility among surveyed HHs also followed SDG defined classification⁷. Majority of HH used unimproved sanitation facilities according to SDG definitions. Only 13.9 per cent of surveyed HHs was using improved sanitation facilities Figure 2.6. There was not much variance among survey locations. It is to note that the key factors contributing to the high rate of unimproved facility is the status of slab and the condition of drainage system. The proportion of pit latrines⁸ was 25.2 per cent and latrines with flush system⁹ was 58.8 per cent (Annex Table 2.5).



However, many of pit latrines with slab are broken and require renovation while most of the latrines flushing faeces are not safely disposed. The drainage system in most cases is not properly covered and the faeces is exposed. Out of 58.8 per cent HHs using latrines with flush system, only 11 per cent reported safe storage of faeces off site without exposure (Annex Table 2.6).

Also there is practice of shared latrine among 79 per cent HHs (Table 2.17), of which 12.6 per cent use public facility. On average, 12 HHs uses a shared facility, which is equivalent to 50 individuals¹⁰. Among other attributes of sanitation facilities, cleanliness was and safe disposal of faeces to a safe location is most important. The cleanliness of latrine was assessed using four key indicators: 1) visibility of faeces in latrine, 2) insect is able to enter pit, 3) latrine smells bad, and 4) faeces is flushed to open space. Considering all these indicators, only 7.2 percent HH used clean latrine. It is notable that none of the DSCC HHs use clean latrine.

⁷Improved sanitation

SAFELY MANAGED – Use of improved facilities that are not shared with other households and where excreta are safely disposed of in situ or transported and treated offsite.

BASIC – Use of improved facilities that are not shared with other households.

LIMITED – Use of improved facilities shared between two or more households.

Unimproved sanitation

UNIMPROVED – Use of pit latrines without a slab or platform, hanging latrines or bucket latrines.

Open defecation – Disposal of human faeces in fields, forests, bushes, open bodies of water, beaches or other open spaces, or with solid waste.

⁸ Pit latrine is combination of: Pit latrine with slab (2.8%) and Pit latrine without slab (22.4%) which adds up to 25.2 per cent (2.8%+22.4%) according to Annex Table 2.6.

⁹ Latrine with flush system is combination of: Flush to sewerage system through pipe (0.6%), Flush to septic tank (3.9%), Flush to septic hole/latrine (2.1%), Flush to drainage system (covered) [4.5%], Flush to drainage system (open) [39.4%], Flush but don't know where disposed (4.4%), and Flush to other place (3.9%) which adds up to 58.8 per cent (0.6%+3.9%+2.1%+4.5%+39.4%+4.4%+3.9%) according to Annex Table 2.6.

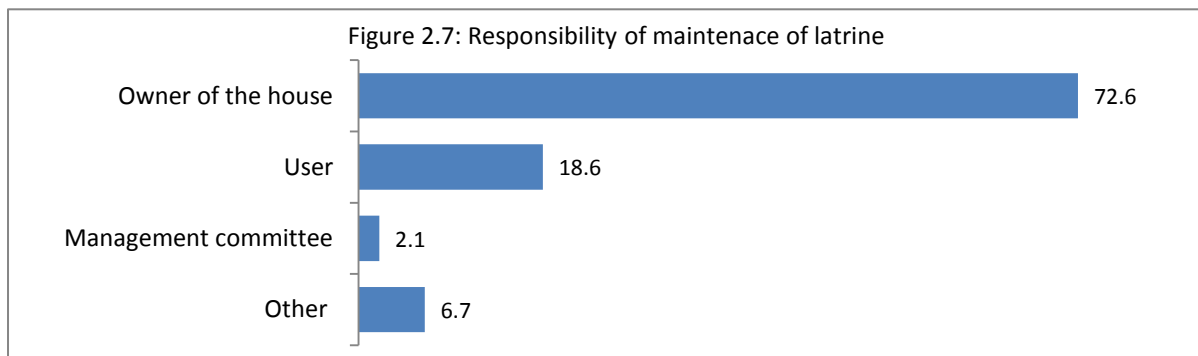
¹⁰ The average HH size is 4.21 (Table 2.1 of the report).

Availability of hand washing facility close to latrine is one of the most important WASH requirement. 26.7 per cent of HHs reported availability of cleaning agent within households and 32.4 per cent HHs reported availability of hand washing place within 10 feet of latrine. Most of the shared latrines are in bad physical condition. They require repairing and maintenance.

Table 2.17: Status of household latrine (%)

Status	DNCC	DSCC	KCC	CCC	Sakhipur	Saidpur	Total
HH has latrine within 20 feet	29.1	23.9	48.0	21.4	28.0	38.8	30.9
Feces are disposed in a safe location	11.5	18.9	13.4	10.4	17.0	9.9	13.7
Handwashing place within 10 feet of latrine	54.1	2.9	8.9	73.4	27.0	27.3	32.4
Availability of clean agent inside the latrine	20.9	39.1	12.3	26.6	40.0	24.8	26.7
Latrine was found clean	11.5	0.0	11.7	3.5	12.0	7.0	7.2
Latrine is not shared	13.9	6.7	14.0	17.9	73.0	33.9	20.9
Latrine condition is unhygienic	92.2	98.7	90.5	99.4	90.0	93.4	94.5
Pit or slab is not sealed	91.1	87.6	88.7	90.1	87.5	93.6	89.5
n	244	238	179	173	100	121	1055

The maintenance of latrine is considered the responsibility of house owner/land lord. Since majority of the HHs are tenants, they usually do not play much role in maintenance. They usually notify the house owner/land lord of any damage or problem with sanitation facility. The person responsible for maintenance is usually the one spending money. Figure 2.7 reveal that 72.6 per cent HHs reported that the owner is the one responsible for maintenance of latrine. Also 18.6 per cent mentioned that the users look after the latrine. These are usually latrines used by single HHs.



Very few HH (5.5%) reported management committee (Table 2.18). It is notable that, most of the HHs did not mention role of management committee except for DSCC. However, considering the status of DSCC, it can be said that the management committee are not functioning well since the status of sanitation in DSCC is not much different compared to other survey locations.

Table 2.18: Involvement of wash management committee

Response	DNCC	DSCC	KCC	CCC	Sakhipur	Saidpur	Total
WASH management committee Had involvement							
Yes	0.0	18.9	0.0	0.0	2.0	9.2	5.5
No	79.9	77.3	77.7	95.4	86.9	88.1	83.0
Donot know	20.1	3.8	22.4	4.6	11.1	2.8	11.5
n	244	238	179	173	100	121	1055
Type of involvement							
Do not play any role		2.2			50.0	50.0	1.8
Supervise regularly		20.0					15.8
Supervise and do the needful regularly		20.0				50.0	24.6
Do the needful if informed		42.2			50.0		35.1

Response	DNCC	DSCC	KCC	CCC	Sakhipur	Saidpur	Total
Supervise if informed but do not do the needful		4.4					3.5
n	-	45	-	-	2	10	57

Accessibility in latrine for people with specific demographic characteristics (i.e., elderly, physically challenged, children) was assessed. Data suggests that many HH believe the latrines are accessible to elderly and physically challenged person. However, physical verification suggests that no latrine has support system for elderly or physically challenged person. Discussion with community people reveal that the people are not aware (do not have knowledge) of any additional support mechanism within a latrine for elderly or physically challenged person. The people within in community need to be aware of such mechanism.

Among surveyed HHs 30.7 per cent HH had children aged less than 5 years and 12 per cent HH had children aged less than 2 years. Nearly one-fifth of under 5 children use latrine and another three-fifth use specific pot for defecation (Table 2.19). Children aged less than 2-2.5 years do not have any specific place for defecation which is understandable.

Table 2.19: Defecation place of children less than five years

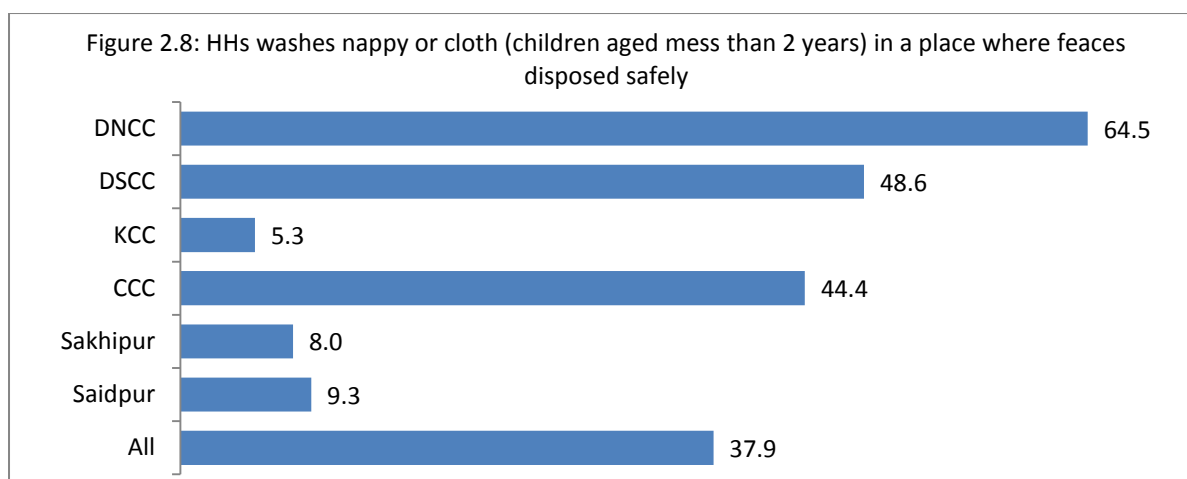
Response	DNCC	DSCC	KCC	CCC	Sakhipur	Saidpur	Total
Use household latrine	23.7	30.6	7.0	0.0	32.0	25.0	19.8
In specific pot	61.3	56.9	86.0	57.8	48.0	37.5	60.8
In specific hole	0.0		0.0	4.4	0.0	6.3	1.2
In drain	0.0	1.4	0.0	0.0	0.0	6.3	0.9
No specific place/in the courtyard	15.1	11.1	7.0	37.8	20.0	25.0	17.3
n	93	72	57	45	25	32	324

HH with children who do not use latrine, 70.5 per cent dispose children’s faeces in latrine used by HH (Table 2.20). The remaining 28.5 per cent HH do not dispose children’s faeces properly and such incidence is high in CCs compared to Paurashavas.

Table 2.20: Disposal place of faeces of children aged less than two years

Response	DNCC	DSCC	KCC	CCC	Sakhipur	Saidpur	Total
Disposed into household latrine	84.5	68.6	72.5	60.0	77.8	42.8	70.5
To drain/dustbin	4.6	19.6	13.7	13.3	0.0	33.3	13.2
In pond/canal/river	9.3	0.0	13.7	8.9	0.0	9.6	7.6
No specific place/in courtyard	0.0	0.0	0.0	0.0	0.0	4.7	0.4
Washed wih tap/tubewell water	1.6	9.7	0.0	2.2	0.0	9.6	3.6
Remain here and there	0.0	2.0	0.0	15.6	16.7	0.0	4.4
In a specific hole	0.0	0.0	0.0	0.0	5.6	0.0	0.4
n	71	50	53	45	17	24	260

Among HHs with children (aged less than 2 years) defecating in nappies or cloths, 37.9 percent washes nappy or cloth in a place from where faeces is disposed safely (Figure 2.8). There is great deal of variation in this regard among survey locations. HHs in Paurashavas and KCC are way behind than other locations in this regard. The HHs need to be aware of the impact of such negligence.



Only 5.7 per cent HH had earlier experience of emptying pit of latrine (Table 2.21). HHs in CCC and Sakhipur reported most instances of emptying pit. In most instances (53.3%) the contents of pit were buried in a covered pit. However, in 25 per cent instances, the contents were thrown in open place (ground/pit) and in 38.3 per cent instances it was thrown close to water body which is serious health concern.

Table 2.21: Instances of emptying pit by HHs (%)

Response	DNCC	DSCC	KCC	CCC	Sakhipur	Saidpur	Total
Emptied the pit of latrine	0.4	0.4	4.5	19.1	17.0	0.0	5.7
n	244	238	179	173	100	121	1055
Where were the contents emptied to (multiple response)							
Buried in a covered pit	0.0	0.0	25.0	36.4	105.9	0.0	53.3
To uncovered pit, open ground	0.0	100.0	0.0	42.4	0.0	0.0	25.0
Close water body or elsewhere	100.0	0.0	75.0	45.5	5.9	0.0	38.3
n	1	1	8	33	17	0	60

2.4 Use of Hygiene Facilities, Knowledge and Practice

Hygiene is multi-faceted and can comprise many behavioral issues including handwashing, menstrual hygiene and food hygiene. But, the new global SDGs have developed its indicators on the basis of availability of hand washing facilities with soap and water with a top priority in all settings. The new global SDGs have classified these facilities in three categories.¹¹ With a view to investigating the overall status of hygiene, it needs to explore the distribution of coverage of handwashing facility within the communities in all our study areas in terms of SDG definition.

¹¹ SDG Definition for Handwashing Facility

Basic: Availability of a hand washing facility on premises with soap and water

Limited: Availability of a hand washing facility on premises without soap and water

No Facility: No hand washing facility on premises

Among all our study areas, 62.6% have no facilities for handwashing within their premises. Further, 18.2% of the respondents have answered that they have basic facilities for handwashing with soap and water within their premises. And, finally, it is noticed that only 14.1% have limited facilities for handwashing without soap and water within their premises.

The FGDs participants expressed that most of them visited the water points in order to wash their hands when necessary though most of them have no handwashing facility at home and they also have admitted that they are unable to wash hands at every necessary time after every occasion. Even they have answered that they washed hands without soap but with only water from the water sources. A few of them have answered that they have water and soap for hand washing at home.

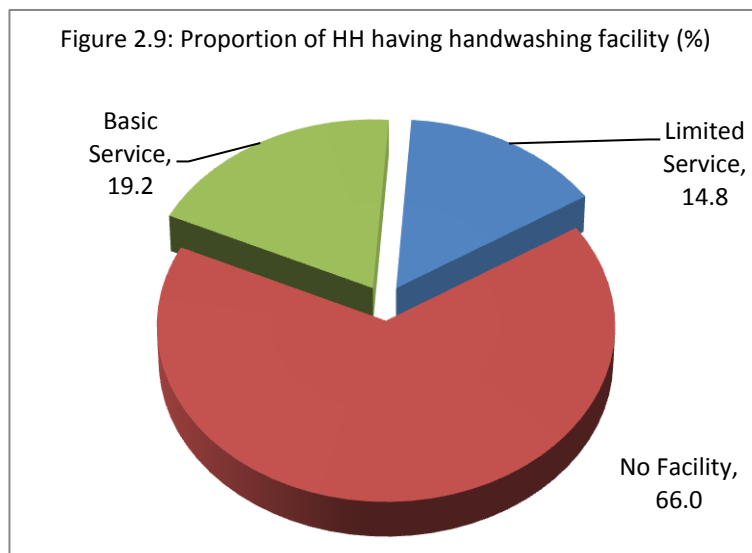


Table 2.22: Proportion of Community People with the service level of Handwashing Facility on their premises among the Study Areas

Service Level	DNCC	DSCC	CCC	KCC	Sakhipur	Saidpur	Total
Basic Service	16.0	2.6	54.1	9.0	24.2	25.8	19.2
Limited Service	42.4	0.4	32.2	0.0	3.0	1.7	14.8
No Facility	41.6	97.0	13.7	91.0	72.7	72.5	66.0

It is highly noticeable that in terms of basic services for handwashing, the highest percentage (45.7%) is identified in the slums of CCC while the lowest percentage (2.5%) is observed in DSCC. For the level of limited service for handwashing, 39.3% of DNCC, higher than any other areas, have ensured their limited service facility while there is no limited service in KCC.

Further, for limited service the percentages 0.4 and 1.7 detected in DSCC and Saidpur respectively are extremely low. Finally, for the option of no facility for handwashing among the study areas, 95.0% respondents of DSCC have reported that they have no facility for handwashing while the percentages 89.9, 72.0 and 71.9 existed in KCC, Sakhipur and Saidpur respectively are alarmingly high.

In order to know the hygiene practice including availability of soap among the study areas, it is necessary to understand what kinds of handwashing agents especially soap including others, are available at the handwashing places of their households.

Table 2.23: Proportion of Community People with handwashing agents at their handwashing places

Handwashing Agents	DNCC	DSCC	CCC	KCC	Sakhipur	Saidpur	Total
Soap	25.4	85.7	62.2	100	88.9	90.9	55.6
Ash	0	0	0.8	0	0	0	0.3
Nothing	74.6	14.3	37	0	11.1	9.1	44.1

Table 2.23 presents that among all areas, considerable percentage of all respondents have ensured the availability of soap except DNCC. In KCC, 100% of the respondents have ensured it while the

lowest percentage (25.4%) is observed in DNCC. Interestingly, in case of Ash/sand/mud, it is observed 0% among all areas except CCC with 0.8%. Among all the surveyed areas, overall 55.6% have answered that soap is available at the handwashing places while 44.1 have ensured there is nothing.

Knowledge and Practice

Slum dwellers are likely to be among the most deprived people in urban areas. Poor hygiene practices and inadequate sanitary conditions play major roles in the increased burden of communicable diseases within developing countries like ours. So it is necessarily important to search the level of knowledge and practice about hygiene behaviors among the community people of our study areas.

Table 2.24: Proportion of Respondents by handwashing Knowledge at Proper time/Occasions across the study Areas

Time/occasion	DNCC	DSCC	CCC	KCC	Sakhipur	Saidpur	Total
After defecation	100	97.5	94.8	97.8	100	100	98.2
After rinsing child's excreta	51.6	24.8	21.4	17.9	59	70.2	37.7
Before eating	74.6	70.6	60.7	74.9	79	77.7	72.2
Before cooking	2.9	10.1	22	16.8	19	14	12.8
Before Feeding Child	2.0	8.8	24.9	19.6	4.0	5.0	10.8

In regard of handwashing knowledge, a majority percentage of respondents with 98.2 have been able to inform that we should wash hands after defecation while 72.2 % have chosen the option of before eating. But the knowledge of the respondents for options of after rinsing child's excreta, before cooking and before feeding child, is comparatively too low.

Table 2.25: Overall Knowledge Proportion of the respondents by the consequence of unhygienic practice

Indicators	DNCC	DSCC	CCC	KCC	Sakhipur	Saidpur	Total
Diarrhea/dysentery	97.5	69.3	67.1	81.6	97	94.2	83
Spread out of water borne disease	21.7	38.2	13.9	0.6	29	23.1	21.4
Spread out of germs of diseases thorough flies or mosquito	54.5	54.6	37	47.5	59	33.9	48.5
Epidemic of disease	2.5	21	20.8	0.6	8	0	9.6
Financial loss due to medical treatment if fallen ill	0	8	16.2	2.8	13	4.1	6.6
Work day loss if fallen ill	0.4	7.6	14.5	1.7	3	5	5.3
Environment of the area polluted	49.6	43.7	38.2	60.3	31	33.9	44.6
Bad smell spreads all around	35.2	38.2	45.7	69.8	47	44.6	45.7
Other Diseases	13.1	0	0	0	0	0	3.2
N	244	238	173	179	100	121	1055

Among all the consequences of unhygienic practices, diarrhea/dysentery have been commonly known by the majority of the respondents (83%) while 48.5% of the total responded have knowledge that flies or mosquito carry the germs of diseases. Further, in case of open garbage disposal and defecation, 44.6% have knowledge on pollution the environment while 45.7% for spreading bad smell all around.

Table 2.26: Proportion of Respondents by main sources of knowledge on hygiene and sanitation behaviors across the study Areas

Media	DNCC	DSCC	CCC	KCC	Sakhipur	Saidpur	Total
Television	90.3	93	87.5	98.6	56.4	79.8	85.5
NGO worker	33.8	7	6.3	28.8	58.5	43.4	30.6
Poster	0.9	26.3	37.5	12.3	11.7	10.1	12.4
Theatre/Drama in village hut	5.6	9.4	0	8.2	5.3	0	5.8
Thana/Upazila Health Complex	0.5	9.4	0	1.4	3.2	5.1	3.9
Tea-stall	1.4	1.2	0	1.4	3.2	4	1.9
Radio	0	5.3	0	0	2.1	0	1.6

As a source of information for knowledge, television plays the most important role across all our surveyed areas while a majority of respondents (85.5%) have identified television as the main source of information for receiving knowledge on hygiene and sanitation. Further, it is noticeable that NGO workers also play a vital part for dissemination of knowledge in DSCC, KCC, Sakhipur and Saidpur. In addition, 12.4% of total respondents have indicated posters as a third source of information. Most importantly, only, 3.9% have answered that they have got from Thana/Upazila Health Complex which may play more vital role here.

According to the qualitative findings, the participants identified municipality, NGOs, television, from mouth of neighbors, signboards, teachers of schools, meeting, and posters as sources of information regarding WASH. In addition, more than two third of households have the ownership of television and more than this number have access to television and so, most of them have got knowledge from television. Further, NGO workers are functionally active in almost all our study areas and they work for rising awareness among the people and some NGOs have played role for setting up water points in the slums.

After discovering the knowledge level regarding handwashing, now, it is really important to know the handwashing practice trend among the community people in order to assess their awareness in a practical way. Most importantly, as it was too difficult to observe this handwashing practice by occasions physically or directly, so it was judged as they had reported at the time of conducting this study which has been presented through the Table 2.27.

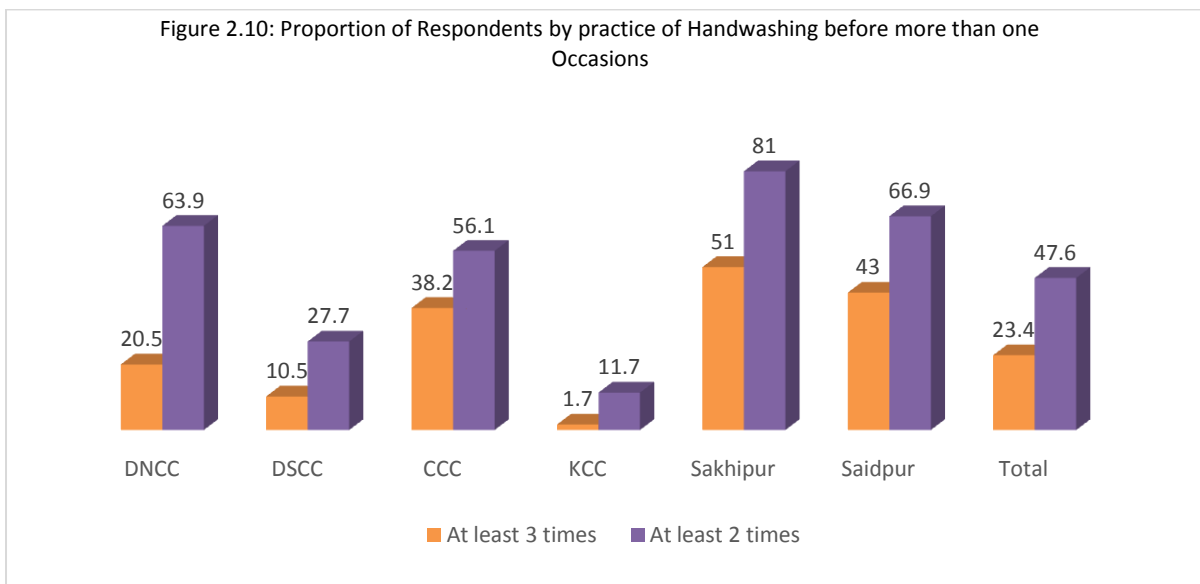
Table 2.27: Proportion of Respondents by handwashing practices at Proper time/Occasions across based on reporting of our respondents of the study Areas.

Time/Occasions	DNCC	DSCC	CCC	KCC	Sakhipur	Saidpur	Total
After defecation	93	57.6	89.6	27.9	100	98.3	74.7
After cleaning child's excreta after defecation	43.9	11.3	24.9	4.5	43.4	33.1	25.4
Before eating	34.6	21.8	43	8.4	63	50.4	33.1
Before cooking	3.7	5.5	30.6	0.6	48.5	42	16.5
Before feeding child	17.3	5.5	19.1	2.2	19	15	12.3
Total	38.5	20.3	41.4	8.7	54.8	47.8	32.4

According to the table, presented above, only in Sakhipur, 100% respondents maintain the practice of handwashing after defecation while the lowest percentage (27.9%) is identified in KCC in this regard. Most alarmingly, in case of handwashing practice for before eating, only the highest percentage (43.9%) is observed in DNCC while the lowest percentage (4.5%) is identified in KCC. But this practice is too low among all surveyed areas. On the other hand, regarding after cleaning child's excreta after defecation, the highest practice of handwashing is observed in DNCC with (43.9%) while the lowest practice is in KCC (4.5%). In addition, mostly CCC (19.1%) and Sakhipur (19%), higher practice than any other areas, maintain the handwashing practice for before feeding child.

Overall, comparatively the highest practice is observed for after defecation with (74.7%) among all other occasions and the lowest practice (12.3%) is for before feeding child. Importantly, the practice level for handwashing is worryingly low among the community people of our surveyed areas.

The graph has been presented to explore the frequency of handwashing practice for more than one occasion. In Sakhipur, 43% of respondents, the highest, have ensured that they practice handwashing for at least 3 times of all occasions while for at least 2 times this answer is 81% which is also highest in all areas. In this case, KCC is the lowest performed area for handwashing for more than 1 occasion and the percentage for at least 3 times is 1.7 and for at least 2 times is 11.7. In addition, comparatively, the frequency of practice for at least 2 times (47.6%) is higher than for at least 3 times (23.4%). Further, the overall frequency of handwashing, practiced by the community people, for more than 1 occasion, is not satisfactory as it is importantly connected to the attributes of hygiene.

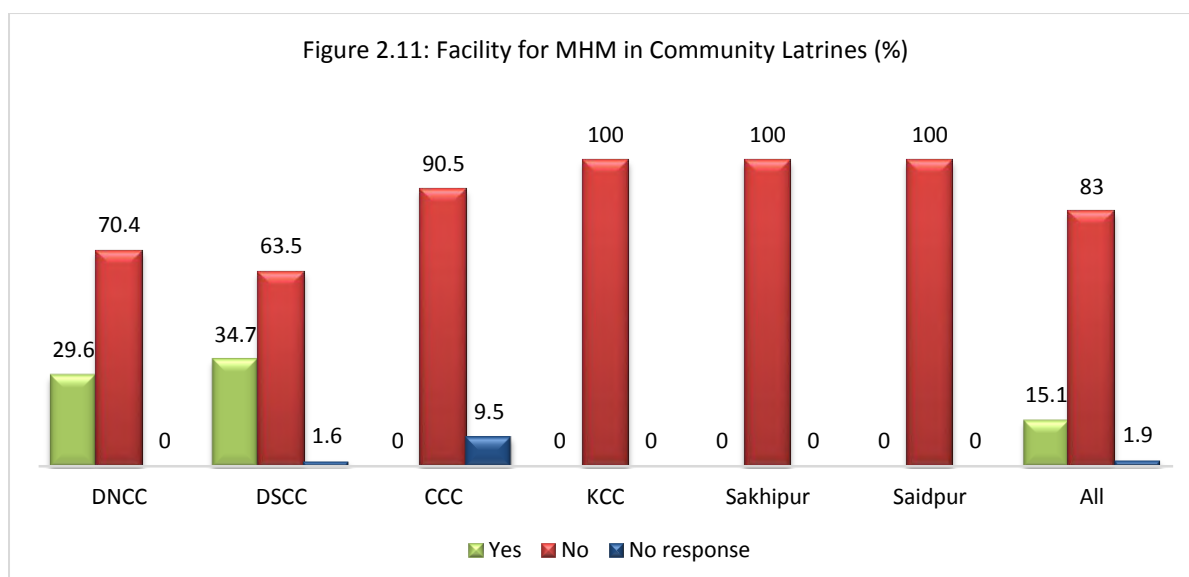


2.5 Menstrual Hygiene Management (MHM)

Menstruation is a natural part of women’s reproductive cycle. Menstruation, though natural process, is still regarded as something unclean or dirty in our society especially slum areas and linked with several misconceptions and practices which results in adverse health outcomes. Women and girls of reproductive age need access to clean and soft absorbent sanitary products and practice of cleaning of genital area during menstruation. Poor personal hygiene during menses, use of unclean napkins or cloth napkins, might cause serious complications. For this reason, it is needlessly said that as an important of hygiene management, menstrual hygiene behavior including facility and access in community latrines for MHM among the community people, should be explored among the community people of our surveyed areas.

Facility of MHM in Community Latrines

The graph shows that a majority percentage (83%) have reported that they have no facility for MHM in community latrines. In this case, 100% respondents of KCC, Sakhipur and Saidpur have claimed that they do not avail this facility. It is observed that only 34.7% and 29.6% of DNCC and DSCC respectively have mentioned that they have facility for MHM in community latrines.



Use of MHM Materials

The use practice of materials for MHM among the women of reproductive age categorized by adolescents and women needs to be known as, in case of reusable materials like cloth, proper disinfection process is highly important for safe hygiene management.

Table 2.28: Proportion of use of Materials for MHM among the Community Women segregated by Adolescent and Women

Location	Adolescent			Women		
	Reusable Materials (Cloth)	Disposable sanitary napkin	Cotton/Tissue paper	Reusable Materials (Cloth)	Disposable sanitary napkin	Cotton/Tissue paper
DNCC	47.5	52.5	0	73.3	26.2	0.4
DSCC	82	18	0	90	10	0
CCC	67.3	32.7	0	75.8	23.6	0.6
KCC	66	34	0	92.3	7.7	0
Sakhipur	73.3	26.7	0	91.2	8.8	0
Saidpur	93	7	0	94.8	5.2	0
All	69.9	30.1	0	84.8	15	0.2

Overall, reusable materials like cloths are highly used by both the adolescents (69.9%) and women (84.8%) than any other MHM materials. In comparison between adolescents and women, it is observed that the use of reusable clothe by the women is higher than that of adolescents. But in case of use of disposable sanitary napkin, this use is observed higher among the adolescents (30.1%) than the women (15%). But, cotton is hardly used by adolescents while a few percent of women (0.2) have reported that they use cotton/tissue paper.

The 52.5% adolescents of DNCC, higher than any other areas, use disposable sanitary napkin while the lowest percentage (7%) is observed in Saidpur as the highest percentage of them (93%) use reusable materials like cotton. On the other hand, in DNCC, 26.2% women, higher than any other areas, use disposable sanitary napkin while the lowest use of disposable sanitary napkin among women is observed in Saidpur (5.2%).

Cleaning, Drying, Changing and Disposal of Reusable MHM Materials

The reusable MHM materials like cloths must be hygienically washed and dried in the sunlight. The sun's heat is a natural sterilizer and drying the cloths under it sterilizes them for future use. These cloth pads are reusable so they are cost-effective, easily available, and eco-friendly. They also need to be stored in a clean dry place for reuse to avoid contamination.

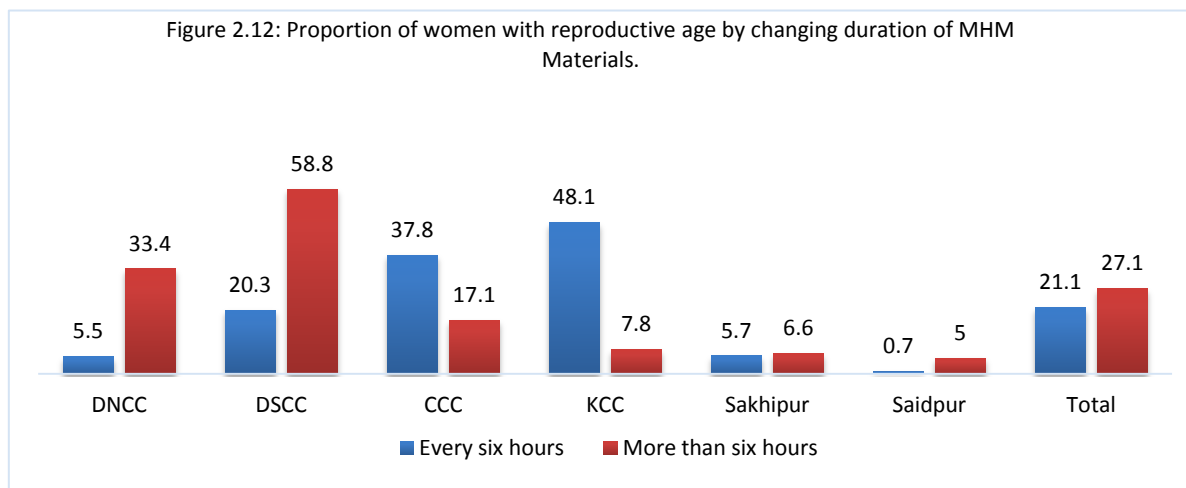
Table 2.29: Proportion of Respondents by Cleaning and Drying the Reusable MHM materials

Indicators	DNCC	DSCC	CCC	KCC	Sakhipur	Saidpur	Total
Cleaning of Reusable MHM Materials							
Wash with water and soap	98	98.9	97.5	99.5	100	100	98.9
WASH with only water	1.5	1.1	1.3	0.5	0	0	0.9
Don't Know	0	0	0.6	0	0	0	0.1
Not Applicable	0.5	0	0.6	0	0	0	0.2
Drying of Reusable MHM Materials							
Sun dry	50.7	23.2	10.2	39.5	46.8	59.5	36.3
Hidden drying	47.8	76	89.2	60.5	52.1	38.9	62.9
No response	1.5	0.7	0.6		1.1	1.5	0.9

98.9% respondents demand that they clean their reusable MHM materials like cloth with water and soap while 0.9% uses only water for this. But, 62.3% of the respondents have ensured that they dry their materials in hidden places in the room or under other clothes so that others cannot notice it. 89.2% respondents of CCC, higher than any other areas, dry their MHM material in the hidden places. The lowest percentage (38.9%) of hidden drying the MHM materials is noticed in Saidpur. Only, 36.3% of all respondents dry their materials in the sun directly and the highest 59.5% of Saidpur practice it while the lowest percentage (10.2%) is observed in CCC.

Changing of MHM Materials

As a part of best hygiene practice, timely changing of MHM materials has been a critical issue among the slum areas because of shortage of affordable facilities like privacy and space including water, toilet and hygiene amenities. The changing time duration has been categorized with two parts like within six hours and more than six hours and it is commonly known that the MHM materials should be changed within six hours.

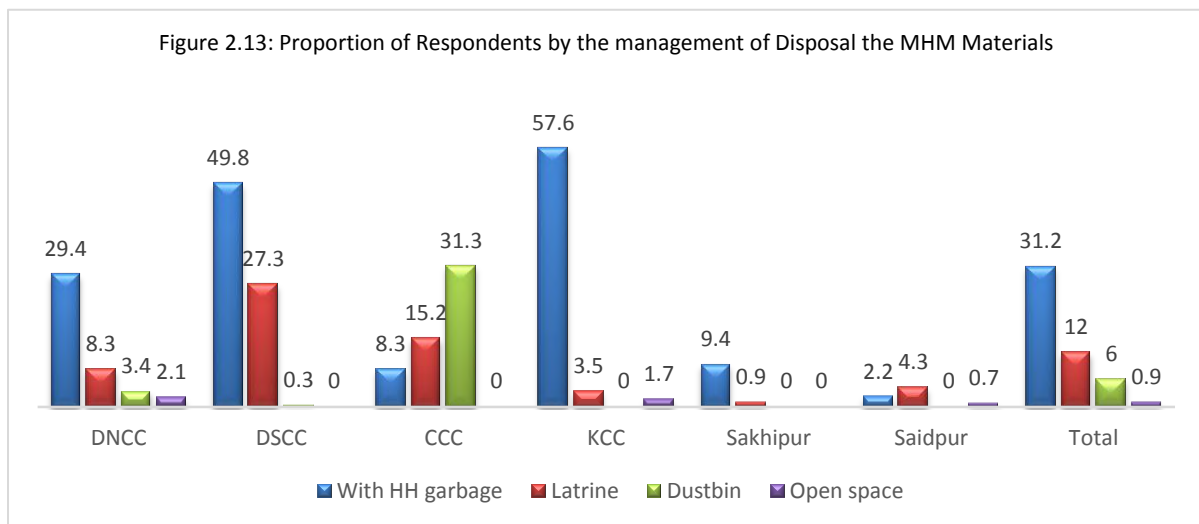


Only 21.1% of all the respondents change their MHM material every alternate six hours and this practice is mostly noticed in KCC with the highest percentage (48.1) while the lowest (0.7%) is in Saidpur. But, overall, the practice of changing the MHM materials in every six hours is worryingly

low. Further, 27.1% of total respondents opine that they change their MHM materials after more than six hours and the highest percentage (58.8) is identified in DSCC while the lowest in Saidpur with 5%.

Disposal of MHM Materials

Appropriate disposal of MHM material is still lacking in many areas especially in developing countries like ours. Further, in the urban slum areas, women face difficulties to dispose their MHM materials for lack of proper disposal facilities within their localities. It is highly noticed that women dispose their MHM materials according to their facilities they currently have access. So, it is necessarily important to know how the women of our study areas are currently like to dump their menstrual articles.



Among all the respondents, a majority percentage of respondents (31.2) dispose their MHM materials with HH garbage when the percentage of KCC (57.6) is highly noticeable. But the lowest 2.2% respondents of Saidpur dump the MHM material with HH garbage. Further, a noticeable percent of respondents (12%) prefer latrine for disposing these materials while the highest percentage is in DSCC (31.3%). But for disposal in dustbin, the highest percentage (31.3%) is highly noticed in CCC and even no respondents are shown in KCC, Sakhipur and Saidpur. Finally, disposal in open space is found only in DNCC, KCC and Saidpur though the percentage is too low. Here the main problem is that as a huge percentage has no response about the disposal of MHM materials, the percentage of disposal in Dustbin and open space might be increased.

Table 2.30: Proportion of Restriction in Movement for MHM among the Community Women segregated by Adolescent and Women

Areas	Adolescents				Women			
	Restricted outside	Selectively Movement	No Restriction	No response	Restricted outside	Selectively Movement	No Restriction	No Response
DNCC	1.2	9.9	87.7	1.2	0.4	13.1	84.9	0
DSCC	5.6	76.4	16.9	1.1	4.5	83.7	8.1	0
CCC	0	32.7	55.8	11.5	0	34.5	51.5	0
KCC	0	50	40	10	1.7	44.2	52.5	0
Sakhipur	6.7	86.7	6.7	0	4.4	84.6	11	0
Saidpur	4.7	88.4	7	0	0	93.8	6.3	0
All	2.7	51.2	42.1	3.9	1.8	52.2	42.2	0

The Table 2.30, indicates that the situation of restriction in movement at the time of menstruation is almost same for the adolescents and women of reproductive age. But, the restriction mainly slightly varies on the basis of surveyed areas. But, in case of restriction to go outside, the percentage (2.7) of adolescents is higher than that of women (1.8). The highest percentage of restriction for going outside for adolescents (6.7%) is noticed in Sakhipur. But, a majority percentage of respondents irrespective of adolescents and women, opine that they are allowed to go in selective places at the time of menstruation. Among adolescents, the highest 88.4% respondents of Saidpur are not allowed to go any other places except the selective places while for women the highest percentage (93.8) is notified in also Saidpur. On the other hand, the highest 87.7% adolescents and 84.9% women of DNCC express that they have no restriction for movement at time of menstruation.

2.6 Solid Waste Management and Sewerage System at Community

Waste management has been a chronic problem since a longtime due to illiteracy and lack of information in a large section of population. Nowadays urban waste management is a big challenge and a serious issue for city authorities. Further, this situation is considered as severely acute in slum areas as they are neglected in case of receiving all facilities like other population of the city. Further, slum dwellers, slum owners, slum authority do not pay proper attention because of shortage of scope or their responsibilities.

Further, City Corporation/Municipality, responsible for waste management, cannot meet growing demand for urban services. As a result, an unhygienic and filthy living condition has been developing rapidly in all the urban areas including residential areas.

So, in order to explore the system of waste management in our study areas, it is important to know how the community people manage their household wastes including their available opportunity for proper disposal and existing practices.

The graph (2.14) indicates that only on an average 70.8% do not have the facility of dustbin or public/private trash service for disposal of solid waste. Among them, the highest 97.2% respondents of KCC do not have this facility. More interestingly, the facility of dustbin or public/private trash service is remarkably lower than the other municipalities like Sakhipur and Saidpur.

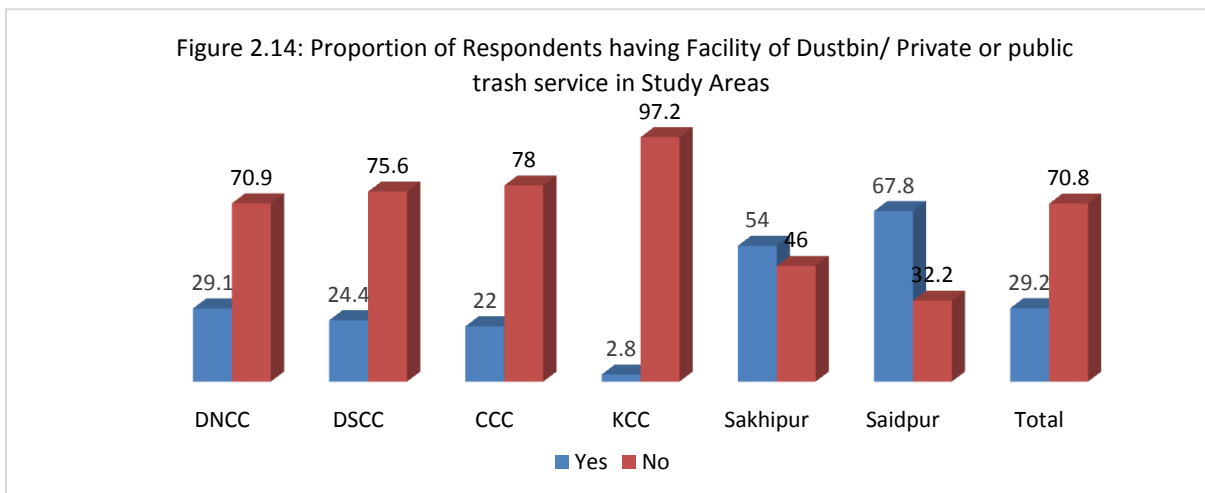


Table 2.31: Proportion of waste management among community people in study areas

Indicators	DNCC	DSCC	CCC	KCC	Sakhipur	Saidpur	Total
Safe Management (Private or public trash service or designated space/Dustbin)	56.2	83.3	28.9	0	50	51.3	47.4
Unsafe Management	43.8	16.7	71.1	100.0	50	48.7	52.6
Dump in own land	0.4	0.4	1.2	1	13	7.6	2.3
Dump on roadside	2.5	11.3	22.6	57.5	5	8.4	18.2
Burn	0.4	0	1.7	0	3	0	0.6
Throw in ditch or pond nearby	39.3	4.6	41.6	41.5	29	32.7	30.5
Drain	1.2	0.4	4	0	0	0	1

Regarding waste management, a majority percentage of the people (52.6%) do not dispose their waste in proper way while the highest unsafe management is observed in KCC. Further, in the portion of unsafe management, 30.5 per cent dump their solid waste in the ditches/ponds located nearby and even 18.2 per cent dump on roadside. On the other hand, 83.3 per cent of DSCC can manage the safe disposal of solid waste. It is highly noticed that no respondents of KCC have any access to the facility of safe management for solid waste.

Table 2.32: Proportion and amount of Payments for Garbage Disposal

Areas	Proportion of Population	Average Amount (BDT)	Minimum Amount (BDT)	Maximum Amount (BDT)
DNCC	45.1	48	20	100
DSCC	46.6	36	20	100
CCC	0.6	20	20	20
KCC	0.6	20	20	20
Sakhipur	7	50	50	50
Saidpur	0	0	0	0
Total	21.8	42	20	100

Average 21.8 per cent respondents pay for the garbage disposal and most of them are from DNCC and DSCC with percentage 45.1 and 46.6 respectively while in Saidpur, no one pays for this. But, in this purpose the amount of payment vary from area to area while the average amount is BDT 42, minimum amount is BDT 20 and maximum amount BDT 100.

Table 2.33: Availability of Drainage System and Water Logging Condition nearby Household in the Study Areas

Areas	Availability of Drainage System		Affected by Water Logging	
	Yes	No	Yes	No
DNCC	11.5	88.5	54.5	45.5
DSCC	27.3	72.7	87	13
CCC	0	100	11	89
KCC	0	100	91.1	8.9
Sakhipur	1	99	21	79
Saidpur	0	100	33.9	66.1
Total	8.9	91.1	55.4	44.6

Only a few of respondents have told that sewerage system is visible nearby the households while it is available only in the areas of DNCC and DSCC. Further, CCC, KCC and Saidpur have no sewerage system. On the other hand, as a result of shortage of drainage system, water logging nearby their household has become a great problem. In this case, KCC is the most affected areas as most of the respondents are affected by the water logging as because of no sewerage system. But, CCC is less

affected by water logging problem though there is no sewerage system. Further, water logging problem is considerably noticeable in all of our study areas because of shortage of drainage line.

2.7 Initiatives for Development of WASH in Communities

Among all the organizations or groups, WASH Support/Community Group play a role in all areas. Even more or less training/workshop/meeting have been arranged at community level for the development of WASH. And even, on the basis of the opinion/ of the community people, the community group has played a role to develop the situation. But inn CCC and KCC, they are not active. On the other hand, the role of government at community level is not so satisfactory though fund has been allocated for the WASH facility. NGO workers are active in overall all areas except CCC and have visited the slums frequently within 3 months. It should be highlighted here that NGOs are more active in DNCC and KCC than any other areas.

Table 2.34: Initiatives taken by the Government/NGO/Community/Support Group

Organizations/Groups	DNCC	DSCC	CCC	KCC	Sakhipur	Saidpur	Total
NGOs							
NGO Worker	4.9	12.6	0	0.6	85	49.6	17.8
Visit of NGO Worker/volunteer within 1 month	50	0	0	0	4.7	63.3	25.5
Visit of NGO Worker/volunteer within 3 months	33.3	6.7	0	100	5.9	13.3	10.6
WASH Support Group/Community Group							
Active	23.8	11.8	0.6	0.6	87	52.1	22.6
Training/workshop/meeting	10.3	39.3	0	0	93.1	90.5	65.1
Feedback	8.2	2.5	0.6	0	68	45.5	14.2
Government Initiatives							
Facility provided by Government (District)	23.8	0.8	0	0.6	2	2.5	6.3
knowledge about approach the local government	2	0	0	0	3	0	0.8
Fund for WASH Facility	0.4	2.5	0.6	0.6	2	0	1
WASH Related Campaign	88.9	72.2	9.2	40.8	94	81.8	63.5

Qualitative Findings

According to the qualitative findings, NGOs where active, Community Group and the government have taken some initiatives at different times for the development of WASH. The findings reveal that NGOs are not active in all areas. But NGOs have played a part awareness rising providing proper knowledge on WASH like rights of the WASH, water quality, safe drinking water, treatment of drinking water, improved latrine, behavior and practice for hygiene and sanitation etc. In addition, some NGOs have provided latrine at free of cost and set up water points.

Initially according to our qualitative findings, community group or WASH committee were more active in those areas where NGO had taken initiative for any projects. NGOs had played a part to form an active WASH committee in consultation and combination with community leaders or senior persons or responsible persons who would help them in development work. It should be notable that sometimes NGO had made the existing WASH group/committee active by holding a meeting. Further, through discussion with officials of municipality or City Corporation, they have created network between community group and govt. officials. In addition, at the time of court yard meeting with community people, NGOs had invited the officials of municipality or City Corporation to attend the meeting to realize their WASH problems. In other words, the project ensures active involvement of the government officials in WASH development activities through making a network with the community people.

Finally, with the help of the committee, they had organized community group for rising awareness regarding WASH.

Sometimes, NGOs had worked with govt. jointly. Suppose, NGO had set up latrines and on the other hand, municipality/city corporation had provided slab for latrine at free of cost.

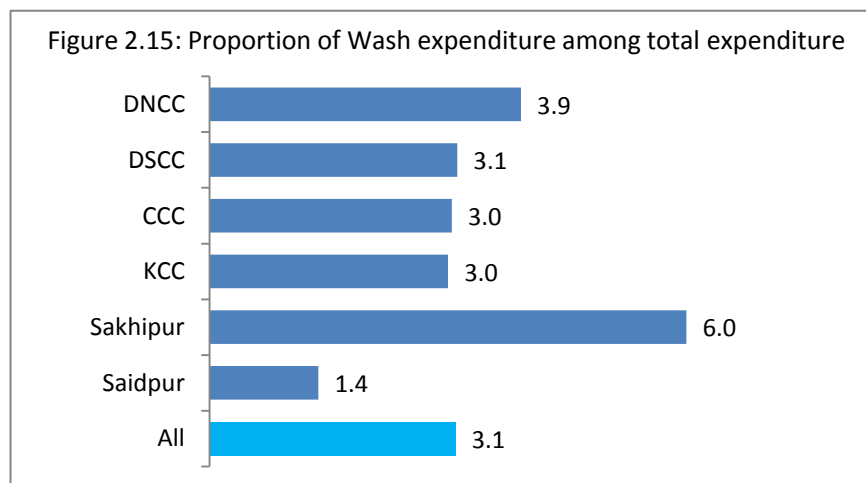
Further, the findings also give an idea that NGOs also have taken initiatives to set up water points. Again, Community group is available almost in all areas but not functionally active. Though, through arranging meetings with community people they try to take initiatives to develop the situation WASH but finally they are unable to solve all the problems.

Regarding the role of government, the findings articulate that government like municipalities are providing waters, manage place for set up latrines, sometimes clean the drain, and manage the dustbin for dumping garbage. But most of them have claimed that the quality of water is not good as water contains bad smell, the drainage are cleaned irregularly though it is filled with dirt and garbage and the condition of dustbin is not good as it is not repaired for a long time and even it is not properly cleaned. So though the government is providing so many facilities but there is a huge shortage of proper management.

2.8 Affordability and WASH Expenditure of the Community People

A promising proxy measure of affordability is the proportion of the household budget spent on water, sanitation and hygiene. A similar approach has been used to assess the affordability of other basic services, ranging from energy to transport. This baseline study presents a preliminary analysis of household expenditure on water; sanitation and hygiene (WASH) as a proportion of total expenditure. Actual levels of expenditure vary depending on socioeconomic characteristics and the costs of WASH and other essential services, but Governments and international agencies have often set an affordability threshold of between 2 and 6 per cent of total expenditure¹².

Among all the expenditure, generally, lion's share is spent for food, education and housing. Though, the share of WASH expenditure is too small, but in terms of affordability, this share is somehow managed by the community people as the share should be on target of between 2 to 6 percent. But it should be



articulated here that community people of Saidpur is unable to cope with this share as this share (1.45) is noticed below the 2 to 6 percent. Now, we can observe that the average proportion of WASH expenditure of the total expenditure is 3.1 while all these shares stand between 2 to 6 percent though these shares vary from area to area. But, in Sakhipur, this share (6.0) is noted as higher than any other areas.

¹²Governments and international agencies have often set an affordability threshold of between 2 and 6 per cent of total expenditure. Cited from: Progress on Drinking Water, Sanitation and Hygiene: 2017 Update and SDG Baselines. Geneva: World Health Organization (WHO) and the United Nations Children's Fund (UNICEF), 2017. Licence: CC BY-NC-SA 3.0 IGO.

Table 2.35: Average amount of Monthly Expenditure for separate items of WASH¹³ (in BDT)

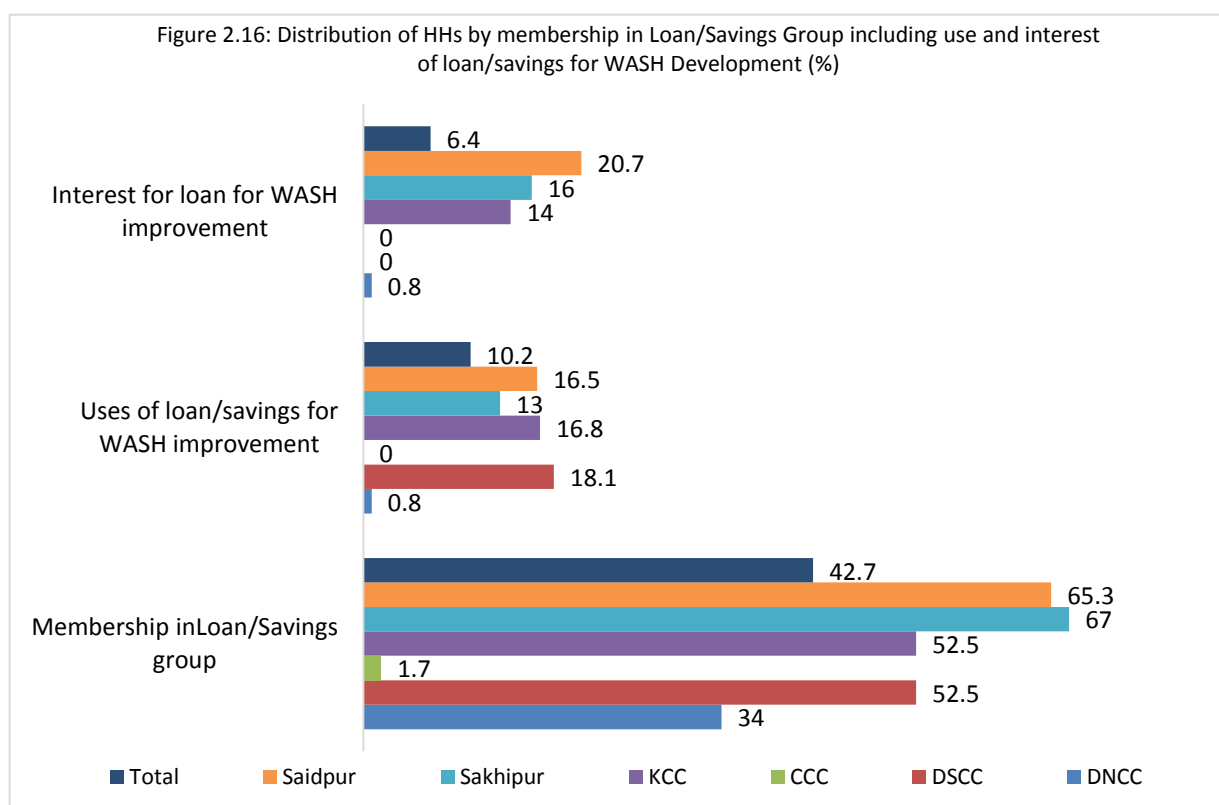
Items of Expenditure	DNCC	DSCC	CCC	KCC	Sakhipur	Saidpur	Total Average
Water	274	119	195	39	282	27	158
Sanitation	6	14	4	4	145	5	20
Hygiene	187	183	129	171	137	94	158
Average	467	315	328	214	563	126	337

Among all the WASH items, the highest expenditure includes the hygiene management while the lowest is for sanitation. The average expenditure for the purpose of water is 158 BDT while the highest average among all other areas is noticed in Sakhipur with 282 BDT. Further, the average cost for hygiene is 158 BDT and DNCC has the highest cost of 187 BDT. At last, it is highly noticed that the cost for sanitation is considerably lower than other two items of expenditures. The average cost for sanitation is 20 BDT while the highest cost is observed in Sakhipur with 145 BDT.

In Sakhipur, the highest average for WASH expenditure is measured with amount 680 BDT while the lowest average for WASH expenditure with amount 211 BDT exists in Saidpur. And among City Corporation, the highest average for WASH expenditure is noticed in DNCC with amount 630 BDT.

2.9 Membership in Loan/Savings Group and Uses with Interest of Loans for WASH Development

Loan might be an effective way for the development of the WASH situation among the community people. In order to understand this, it is important to know the membership proportion in loan/savings group and their interest and usages of loan or savings.



¹³ WASH expenditure includes expenditure of water (bill/payment, maintenance), sanitation (payment, maintenance, cleaning), handwashing (cleaning agents), Water safety (treatment of water), Menstrual hygiene management (purchase of sanitary pad, cleaning rug), and child faeces management.

The graph presents that overall, 42.7% have membership in loan or savings group while out of them, only 10.2% have used this loan/ savings for WASH development and only 6.4% have interest to take loan for WASH improvement.

In terms of membership, the highest percentage (67%) is noticed in Sakhipur while the lowest (1.7%) is in KCC. Further, the highest 18.1% of DSCC have used this loan or savings for WASH development while the lowest (1.7%) is observed in CCC. For interest of loan for WASH improvement, the percentage (20.7%) is noticed in Saidpur while the lowest (0.8%) is in DNCC. On the other hand, no respondent is interested to take loan for WASH improvement in DSCC and CCC.

2.10 WASH Situation in Centers for Pavement Dwellers

Pavement Dweller Centers (PDCs), established by different NGOs, have a core value to provide temporary shelter, safe drinking water, sanitation facilities and other essential services for extreme poor and homeless people including especially women and children in the capital.

Urban poverty and rising inequality is a sad reality in Dhaka and other major cities in Bangladesh. According to a survey conducted by Centre for Urban Strategies, about 44 percent of people living in the capital are deprived of any sort of housing facilities; of them, 8-9 percent is floating populations who live on roads, parks and rail and bus stations.¹⁴

So, it is important to observe the overall WASH condition among all our surveyed areas in order to assess the existing the sanitation and hygiene facilities in all our surveyed PDCs. In all the PDCs, official staffs are available at the office time and night guards are available for rest of the time. In some cases field team are also working to raise awareness among the floating people and children about the facilities of the PDCs. Mostly, The orphan street children, women of any ages, poor children including boys and girls within age range of 2-6 take shelter in the PDCs and also have facility to stay at night. But floating and poor men do not avail the facility to stay at night in these PDCs. Sometimes, some poor guardians visit these centers in order to keep their children for attending the classes. But, because of shortage of adequate room management, the sitting arrangement for classes is made on the floor for the children. The overall environmental condition of the PDCs is not so satisfactory. Some PDCs are filled with dirt and dust. The broken floors are visible.

There are public toilet facilities in some PDCs managed by Sajida Foundation while others do not have this facility. Further, poor and floating men have the access to toilet facility and bath but they are not permitted to stay at night. The toilets are dirt and may not be cleaned regularly. And even, no hand washing facility with soap is observed within toilet premises but water is available there for round the clock.

Within all the centers toilets are available for the children and women but the toilets are not cleaned regularly. Though, water is available but soap or handwashing agents are not available in all places. Further, no slipper was noticed to use in the toilets.

Foods are served timely at the PDCs for the women and children but there are no specific dining places. In some PDCs, water purifiers are available while some PDCs do not avail this.

¹⁴ Report on “Centre for pavement dwellers” published by The Daily Star on November 28, 2015.
Source: <https://www.thedailystar.net/editorial/centre-pavement-dwellers-179017>

Table 2.36: Observational Status of WASH facility at Surveyed PDCs

Service Status	No. of PDC where service available
Pre-primary Education in premises or nearby	11
Availability of safe drinking water (in terms of water purification/filter)	3
Toilet Facility for women and children	11
Public Toilet Facility (for Floating/homeless peoples)	5
Night shelter facility for women and children	11
Night shelter Facility for Floating/homeless peoples (Male)	0
Availability of handwashing points	5
Availability of handwashing agents (soap, detergent etc.)	2
N	13

2.11 WASH in School

WASH in Schools improves attendance, health and cognitive development, increases girls’ participation, establishes positive hygiene behaviors, offers the opportunity to introduce better WASH practices in families and communities and addresses issues of inequity and exclusion.¹⁵

WASH in schools acts as a pathway for ensuring an access to the Basic service of WASH creating a student friendly environment. WASH in schools includes so many issues like availability of sources of safe drinking water, improved sanitation facilities, hygiene facility as categorized by different service levels developed by SDGs. So, it is necessary to explore the existing situation of the WASH facilities among our surveyed schools.

Access to Drinking Water

For the option of availability of water sources among the schools, the SDGs definition is followed to assess its position within the service levels¹⁶. All our surveyed schools have only four types of improved water sources like shallow and deep tubewell, tap/piped water inside room and pipe/courtyard tap water. More interestingly, no unimproved water sources are observed in our surveyed schools. In most schools of DNCC and DSCC, tap or piped water sources are highly common. On the other hand, all the schools of municipalities use shallow or deep tubewells as source of water. (Annex table: 2.15)

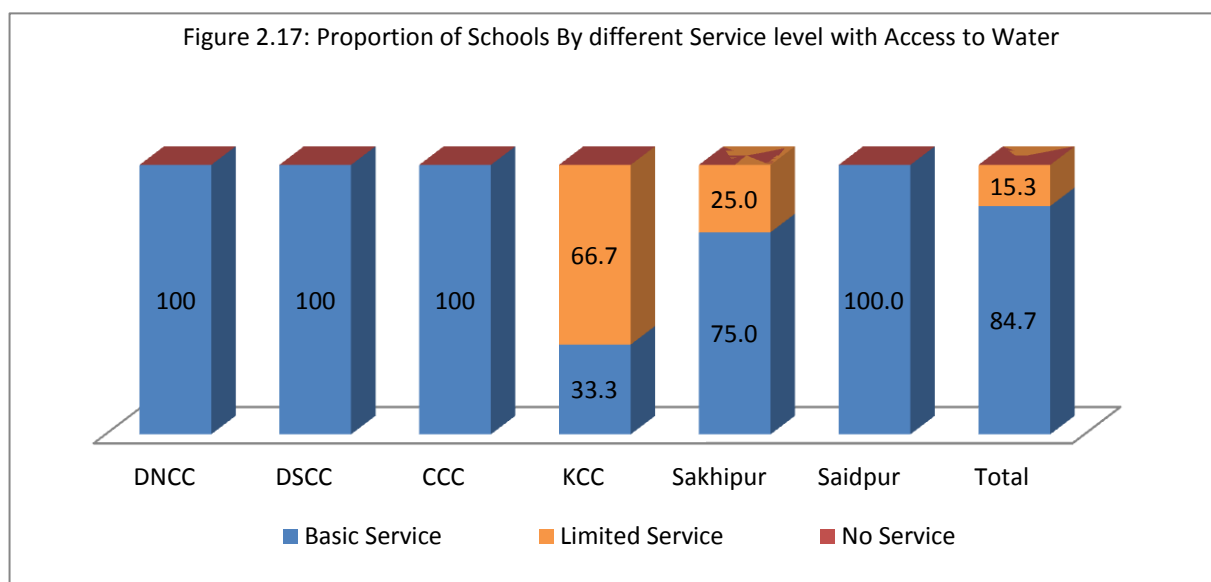
¹⁵ Report on “WASH for School Children” Developed and Published by UNICEF Regional Office for South Asia.

¹⁶ SDG Service of Level For Drinking Water

Basic: Drinking water from an improved source is available at the school

Limited: There is an improved source (piped, protected well/spring, rainwater, packaged/delivered water), but water is not available at time of survey.

No Service: No water source or unimproved source(unprotected well/spring, surface water)



The graph (2.17) shows that overall 84.7% schools are included in the level of basic service which indicates the availability of improved water sources and water for always. Schools of DNCC, DSCC, CCC and Sakhipur have the 100% facility of basic service level. And the lowest facility (33.3%) for basic service is observed among the schools of KCC. On the other hand, the highest 66.7% schools of KCC exist within the level of limited service while only 25% schools of Sakhipur have the same service level. Surprisingly, no school is available in the list of no service level.

Access to Sanitation

Just before observing the service level of the schools, it is important to know the status of latrines, categorized by single sex and common, which are in condition for use or functional, in hygienic condition and which are not in functional. Firstly, 45.8% girl toilets are noticed functional only in DSCC and CCC. On the contrary, 54.2% girls’ toilets are not usable. Secondly, 27.5% boys’ toilets are functional also only in DSCC and CCC while 72.6% are not usable at all. Thirdly, 50% common toilets are usable while 50% are not.

Most of the schools in Dhaka City Corporation have running water within toilet chambers while none of the schools in Paurashavas have such facility. One-third (33%) of schools in KCC has access to running water within toilet chambers while none of schools in CCC has such facility.

Table 2.37: Distribution of latrines in School in terms of availability, functionality and cleanliness in reference with hygienic/unhygienic way

Functionality of Latrines	Hygienic/Unhygienic	Latrine type	DNCC	DSCC	KCC	CCC	Sakhipur	Saidpur	All
Latrine in condition for use	Clean	Only for girls	0	63.3	0	29.6	0	0	32.5
		Only for boys	0	0	0	23.1	0	0	4.8
		Common	19.4	20.5	0	11.1	15	54.5	16.5
	Not clean	Only for girls	0	33.3	0	3.7	0	0	13.3
		Only for boys	0	63.2	0	15.4	0	0	22.6
		Common	11.1	59.1	43.2	55.6	20	45.5	33.5
	All	Only for girls	0	96.6	0	33.3	0	0	45.8
		Only for boys	0	63.2	0	38.5	0	0	27.4
		Common	30.5	79.6	43.2	66.7	35	100	50

Latrine not in condition for use	Only for girls	100	3.3	100	66.7	0	100	54.2
	Only for boys	100	36.8	100	61.5	0	100	72.6
	Common	69.4	20.5	56.8	33.3	65	0	50

It should be mentioned here that single sex based toilets are available in all schools except Sakhipur but single sex toilets are functional only in DSCC and CCC though all these functional single sex toilets are not cleaned in hygienic way always.

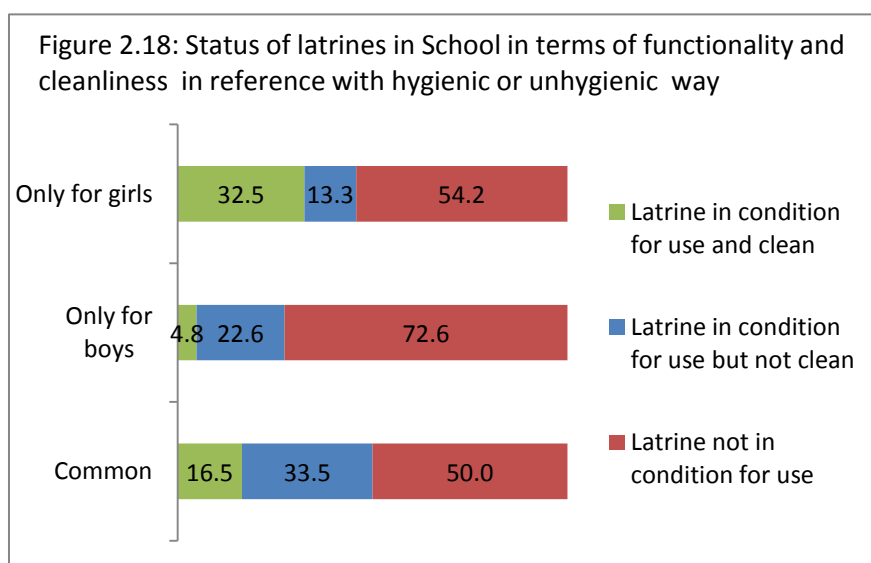
In order to assess the sufficiency of single sex and common toilets for the students, it needs to ascertain the ratio of students per toilets on the basis of functional toilets currently existed in all our surveyed schools. In this connection, the table 2.37, presented below, indicates that for the girls' toilets, 1,238 students are currently sharing per chamber or toilet. More articulately, in DSCC, per toilet is shared by 599 students while 920 students in KCC. For Boys toilets, this situation is considerable better than the facility of girls' schools. In DSCC, 223 students share per toilet while 292 students in KCC. And in average, 513 students share per toilet in these two areas. Common toilets are mostly functional in all surveyed schools which indicate that boys and girls share the common toilets as the existing single sex toilets are not mostly functional or usable.

Table 2.38: Ratios of usable toilets per chambers per students

Indicator	DNCC	DSCC	CCC	KCC	Sakhipur	Saidpur	All
Girls per usable toilet	0	595	0	920	0	0	1238
Boys per usable toilet	0	223	0	292	0	0	513
Students per usable common toilet	515	389	232	1205	242	206	405

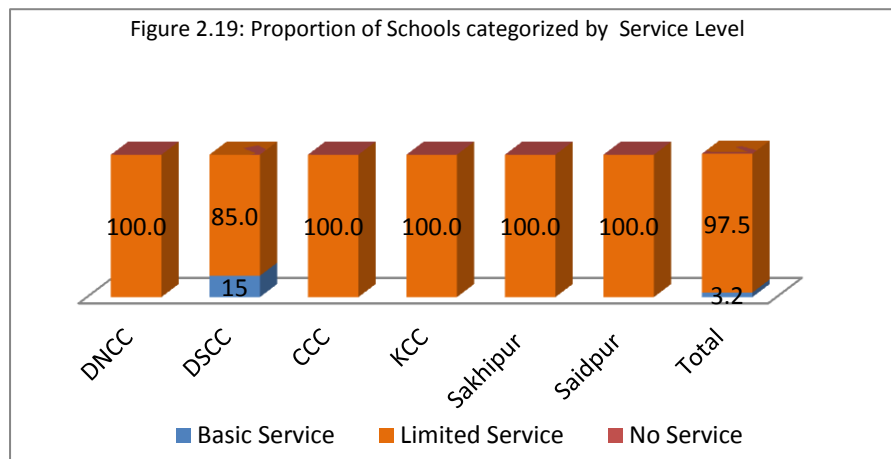
On an average, 405 students share per toilet while in KCC, the highest ration of students (1205) are sharing per toilet. More surprisingly, though among the schools of KCC, though, single sex toilets are available and functional, the ration of students are significantly higher for sharing of per common toilet indicating that the existing number of functional single sex and common toilets are certainly inadequate.

The figure (2.18) shows that among the functional girls' toilets, 32.5% are cleaned in hygienic way while 4.8% are not cleaned. On the other hand, 54.2% girls' toilets are not usable. But, among the functional boys' toilets, 4.8% are found clean in hygienic way while 22.6% are not cleaned and most of the boys' toilets (72.6%) are totally dysfunctional. Finally, among the 50% functional common toilets, 16.5% are maintained clean in a hygienic way while 33.5% are not hygienic.



In order to investigate the sanitation facility among the schools, SDGs classification is tracked.¹⁷ All the surveyed schools have improved latrines and there is no unimproved latrine. In terms of availability and usability, the improved toilets are categorized by boys, girls and common.

All the schools have improved separate latrines for single sex and almost all of those are not useable. So, all the schools are included in the limited service level. 100% schools of DNCC, KCC, CCC, Sakhipur and Saidpur have no basic service but they have limited service as it is already noticed that



either single sex or common improved toilets are available within all schools though some are not usable and some are usable. Only 15% schools of DSCC have the basic service. In addition, level of no service has not been traced here as all the schools have no unimproved latrines or have no lack of improved latrines. (Annex table 2.16).

Access to Hygiene

The condition of hygiene facility among the surveyed schools has been judged on the basis of SDG definition¹⁸. Mainly, the condition of handwashing facility was based on firstly, any handwashing place rather than water point, secondly soap and water thirdly only water for handwashing.

¹⁷SDG Definition for Sanitation

Basic Service: Improved facilities, which are single sex and usable at the school.

Limited Service: There are improved facilities (flush/pour flush toilets, pit latrine with slab, composting toilet), but not single-sex or not usable at time of survey.

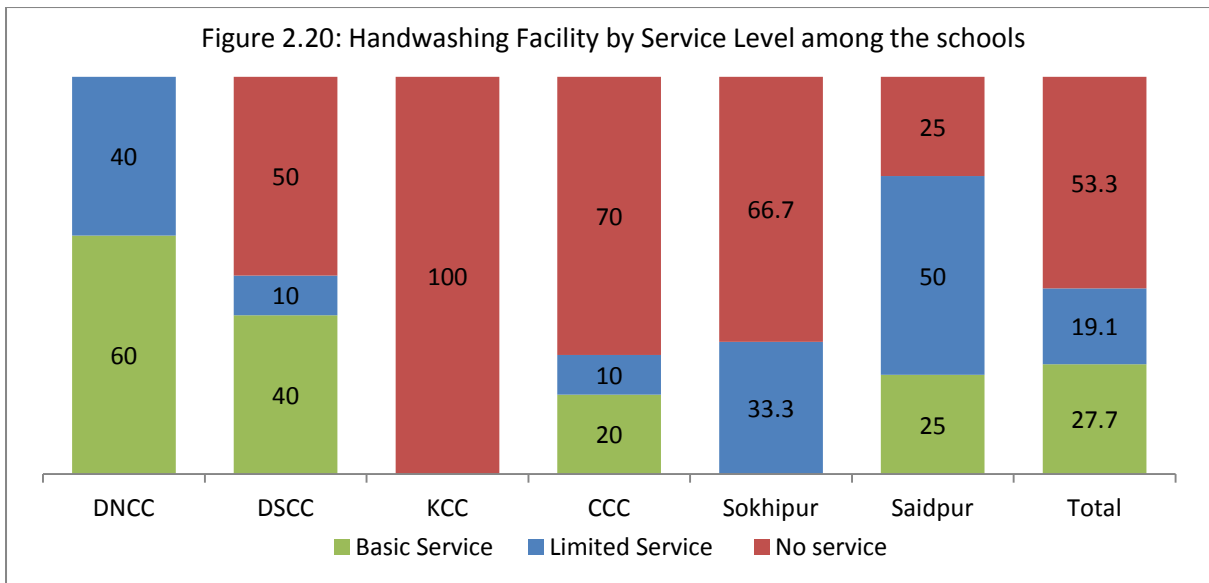
No Service: No toilets or latrines, or unimproved facilities (pit latrines without a slab or platform, hanging latrines, bucket latrines)

¹⁸SDG Definition on Hygiene

Basic Service: Handwashing facilities that have water and soap are available

Limited Service: Handwashing facilities with water, but no soap

No Service: No handwashing facilities at the school or handwashing facilities with no water



About 53.3 percent schools have basic service level for handwashing. Majority schools of DSCC (60%) have this facility while the schools of KCC have no such kind of service level. For the option of limited service, average 19.1 percent schools have this facility while highest percent (50%) schools for this service are recorded in Saidpur. In addition, no service is observed in any areas. KCC has neither basic nor limited service but been included in the level of no service as they have no other handwashing facility within their schools premises.

Menstrual Hygiene Management in Schools

Menstrual hygiene management is a critical issue for the school girls as because of misconception, shortage of proper knowledge, movement restriction. Further, lack of proper opportunity for MHM in schools might force them to miss the schools. For this reason, it is important to know whether the girls face any problems to attend school because of lack of opportunity for menstrual hygiene management at schools and for movement restriction at time of menstruation.

Overall only 32.8% students have opportunity to get pad from schools and there is no such kind of opportunity available in CCC and Saidpur. But 100% students of Sokhipur have an access to get pad from schools. However, the schools do not have separate MHM facilities for girls in toilets. Further, only 13.5% students have reported that they miss school at time of menstruation while the highest percent students (30%) of KCC have reported. The students of Sokhipur do not face this problem. Only 18.6% students have restriction to go outside at this time but no restriction is identified for the students of Sokhipur.

Interestingly, all the students of Sokhipur do not have any restriction and have opportunity to get pad from schools. On the other hand, none of them miss school at time of menstruation. In addition, the percentage of students in case of missing schools (13%) because of menstruation is lower than that of movement restriction (18.6%).

Table 2.39: Problems created because of shortage of MHM in Schools

MHM Materials	DNCC	DSCC	CCC	KCC	Sakhipur	Saidpur	All
Missing School at time of menstruation							
Yes	18.5	7.2	4	30	0	15	13.5
No	81.5	92.8	96	70	100	85	86.5
Opportunity to get pad in school during menstruation							
Yes	33.8	36.2	0	46	100	0	32.8
No	66.2	63.8	100	54	0	100	67.2
Movement Restriction							
Not Allowed for Outside	12.3	21.7	14.0	32.0	0	25.0	18.6
Movement in limited areas	16.9	4.3	2.0	12.0	0	0	7.7
No Restriction	70.8	73.9	84.0	56.0	100.0	75.0	73.7
N	65	69	50	50	20	20	274

2.12 Involvement of City Corporation and Paurashava in WASH Development

Semi-structured interviews were conducted with WASH service delivery providers in target locations. The interview was divided into two parts. One part collected information on their knowledge on standard WASH services and SDG targets while the other part was about WASH activities by local governance in pro-poor activities.

The local governance authority welcomes initiatives by NGOs and developing partners (donors). Usually they provide all necessary support (work force, logistics, office space, monitoring etc.) in project/program implementation. In recent years local governance supported implementation of many projects by developing partners for WASH development. The projects included access to safe water and sanitation to low income settlements, installation and renovation of WASH facilities in schools, and development of infrastructure.

The CCs and Paurashavas have their own revenue of which they spend for WASH activities. However, majority of WASH budget of CCs and Paurashavas are attributed to waste (solid and liquid) waste management. They receive additional budget from GoB and development partners under different projects and programs. In recent years there have been many projects focusing water, sanitation and hygiene were implemented by development partners targeting urban poor communities. CCs and Paurashavas propose policy, recommendation, and programs to GOB for WASH development. These proposals, however, are subject to approval from Government.

In the present fiscal year (2018-19), the national budget allocation for WASH in urban area has increased. Dhaka North City Corporation (DNCC), Dhaka South City Corporation (DSCC), and Chittagong City Corporation (CCC) has increased WASH budget for 2018-19. Khulna City Corporation (KCC) did not have any allocation in last two fiscal years but has received allocation for 2018-19.

2.13 WASH Policy, Planning and Strategies

The service providers and official persons responsible for WASH service in City Corporations and paurashavas were asked about WASH policy and strategies. Most of the cases, every year, they submit requisition to the Government for fund in order to intervene any project but it totally depends on government approval. However, most of them are demanding that the fund sometimes allocated by the government, is not adequate regarding this purpose. Further, they are informed regarding the change or amendment of policy or strategy initiated by the government.

In this regard, some documents have been reviewed in order to understand the current situation of the plan, policy and strategy regarding water and sanitation. The Government of Bangladesh’s long-term Perspective Plan (2010-21) attaches a high priority on ensuring access to drinking water, sanitation and good hygiene practice for all. The Government considers support to water supply and sanitation as vital for sustainable national development; raising the living standards and well-being of the population. In fulfilling its international commitments to sustainable development, the Government has submitted to the United Nations (UN) its post-2015 development agenda (2016-30) the goal of “Safe and sustainable sanitation, hygiene and drinking water used by all”. In order to further improve the services the government has prepared and is continuing to develop Acts, policies, strategies and plans.¹⁹

A review of the sector documents in the Sector Development Plan (SDP) for the Water Supply and Sanitation Sector in Bangladesh 2011-25 (SDP) revealed that although the policies were prepared long ago, they generally address the important issues in the sector.

The SDP will be applicable for a period of 15 years, starting in FY 2010-11. The planning period of 15 years is divided into long-term planning, medium-term planning, and short-term planning, each of five years’ duration, and will coincide with the Five-Year Plan cycles of the government’s development planning. The SDP will be a rolling plan, which will be updated every five years.

By setting up the achievement targets, The SDP will be implemented in collaboration with all sector partners. Accordingly, the investment cost would also be shared by the WSS sector partners like public sector, private sector and NGOs.²⁰

¹⁹ National Strategy for Water Supply and Sanitation- Policy Support Unit, Local Government Division, Ministry of Local Government, Rural Development & Cooperatives.

²⁰ Sector Development Plan (SDP) for Water Supply and Sanitation Sector in Bangladesh (FY 2011-25)

Chapter 3 Recommendations

The baseline status suggest that there is requirement of WASH support within the target area. The accessibility to water and sanitation among target households is inadequate. Faecal contamination and safe disposal of faeces needs to be taken care of. People are not aware of safe storage of drinking water as well as necessity of water treatment before drinking. Drainage system is insecure/ unsafe (not covered) causing water contamination and thee is existence of extensive water logging problem. Following are some recommendations:

- The project need to install additional water points for assuring safe drinking water in justified locations ensuring maximum potential outcome. Many of identified water points require repairing. The project should arrange repairing of such water points.
- The fecal contamination exists in almost all of the water points but very few HH treat water before drinking. So, awareness rising activities need to be initiated for treating water before drinking.
- Project needs to support target HHs by installation of latrines. Like water points, many sanitation facilities require repairing. Project can look to renovate selected sanitation facilities.
- Awareness rising is required for appropriate maintenance of latrines as well as throwing children’s faeces in open spaces.
- People need awareness as well as technical support for installation and maintenance of additional/user friendly support system in latrines for elderly and physically challenged persons.
- Awareness about hand washing before eating and defecation is significantly higher than for remaining three critical times. Therefore, The HHs members need to be aware about all five critical times for hand washing.
- As the drains are mostly not covered so the wastes/faeces are mostly responsible for contamination. So the project needs to take steps jointly with GoB towards ensuring safe drains/sewer system.
- About half of the community people face water logging problem as because of shortage of sewerage or drainage system management. The project should take necessary steps to solve this problem.
- WASH committee/WASH management committee has been a great concept towards improving WASH situation in urban areas. So, the project should ensure the active participation of WASH committee/group in not only indentifying their problems but also development activities.
- Schools have latrines and many of them have separate latrines for boys and girls but a large number of them are not functional. The project needs to involve and motivate school management committee to renovate the latrines.
- Opportunity to avail sanitary napkin is limited in schools. Project can take necessary steps to increase availability of sanitary napkin from school.
- Many of the PDCs are in shortage of sanitation and hygiene facilities (i.e., the centers and the toilets are not cleaned well, slippers are not available and handwashing agents are not available). Project can take necessary steps to ensure such facilities.

Annex 1: Data Tables

Table 2.1: Household size

No. of household members	DNCC	DSCC	KCC	CCC	Sakhipur	Saidpur	Total
0-2	9.8	10.9	5.0	12.7	14.0	13.2	10.5
3-4	51.6	48.3	61.5	54.9	57.0	42.1	52.5
4+	38.5	40.8	33.5	32.4	29.0	44.6	37.0
Average household size	2.29	2.30	2.28	2.20	2.15	2.31	2.26
n	244	238	179	173	100	121	1055

Table 2.2: Age distribution (%) of surveyed household members by sex

Age	Male	Female	Total
0-4	10.0	9.4	9.7
5-9	10.7	10.6	10.7
10-14	11.6	9.8	10.7
15-19	10.7	12.6	11.6
20-24	8.7	10.6	9.7
25-29	8.6	11.3	10.0
30-34	7.7	7.9	7.8
35-39	8.2	8.3	8.2
40-44	6.6	5.4	6.0
45-49	5.8	4.4	5.1
50-54	3.5	3.0	3.3
55-59	2.7	2.1	2.4
60+	5.3	4.5	4.9
n	2252	2190	4442

Table 2.3: Main source of drinking water

Main source of drinking water	DNCC	DSCC	CCC	KCC	Sakhipur	Saidpur	Total
Shallow Tubewell/Tubewell	1	0	20	24	96	117	258
Deep Tubewell	6	14	140	154	4	4	322
Pipeline into room/ Courtyard with reservoir	70	1	0	0	0	0	71
Pipeline into room/ Courtyard without reservoir	125	4	0	1	0	0	130
Pipeline into neighbors house with reservoir	14	0	0	0	0	0	14
Pipeline into neighbors house without reservoir	5	0	0	0	0	0	5
Stand pipe/tap water/pipeline	20	200	13	0	0	0	233
Tanker/Truck loaded water	3	19	0	0	0	0	22
Total	244	238	173	179	100	121	1055

Table 2.4: Water Source functionality and months of water scarcity

Response	DNCC	DSCC	KCC	CCC	Sakhipur	Saidpur	Total
Average months water point remain functional	11.95	11.89	11.13	12.00	12.00	12.00	11.82
n	244	238	179	173	100	121	1055
Month of water Scarcity							
Baishak (April-May)	66.7	46.2	100.0	-	-	-	85.5
Jaisthyah (May-June)	66.7	100.0	100.0	-	-	-	98.2
Ashard (June-July)	0.0	46.2	0.0	-	-	-	10.9
Sraban (July-August)	0.0	46.2	0.0	-	-	-	10.9
Bhadryah (August-September)	33.3	46.2	0.0	-	-	-	12.7
Ashin (September-October)	33.3	46.2	0.0	-	-	-	12.7
Kartik (October-November)	33.3	46.2	0.0	-	-	-	12.7
Agrayayan (November-December)	0.0	46.2	0.0	-	-	-	10.9
Paush (December-January)	0.0	46.2	0.0	-	-	-	10.9
Magh (January-February)	0.0	46.2	0.0	-	-	-	10.9
Falgun (February-March)	66.7	100.0	94.9	-	-	-	94.5
Chaitryah (March-April)	100.0	100.0	97.4	-	-	-	98.2
n	3	13	39	-	-	-	55

Table 2.5: Sanitation Accessibility Status by location

Sanitation Accessibility Status	DNCC	DSCC	CCC	KCC	Sakhipur	Saidpur	All
Safely managed service	1.3	2.1	0.0	1.1	1.0	0.0	1.2
Basic service	4.2	3.1	3.2	3.4	4.5	3.5	3.4
Limited services	7.6	10.3	11.3	8.8	11.5	6.4	9.3
Unimproved facilities	70.5	77.8	64.3	72.8	68.0	60.3	70.1
Open defecation	16.4	6.7	21.2	13.9	15.0	29.8	16.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Sample size (n)	240	240	180	180	100	120	1060

Table 2.6: Type of latrine used by households

Response	DNCC	DSCC	KCC	CCC	Sakhipur	Saidpur	Total
Flush to sewerage system through pipe	0.0	2.1	0.0	0.6	0.0	0.0	0.6
Flush to septic tank	4.5	5.0	3.4	2.3	4.0	3.3	3.9
Flush to septic hole/latrine	1.2	2.9	3.9	0.0	1.0	3.3	2.1
Flush to other place	0.0	8.4	11.7	0.0	0.0	0.0	3.9
Flush but don't know where disposed	4.5	8.4	8.4	0.0	0.0	0.0	4.4
Flush to drainage system (covered)	7.4	5.5	2.8	6.9	0.0	0.0	4.5
Flush to drainage system (open)	62.3	60.5	23.5	45.1	0.0	0.0	39.4
Pit latrine with slab	0.0	0.0	4.5	3.5	12.0	3.3	2.8
Pit latrine without slab	3.7	0.4	20.7	27.7	68.0	60.3	22.4
Composite latrine	0.0	0.0	1.1	0.0	2.0	0.8	0.5
Hanging latrine	15.2	6.3	8.9	5.8	10.0	18.2	10.4
No latrine/open defecation	1.2	0.4	11.2	8.1	3.0	10.7	5.1
n	244	238	179	173	100	121	1055

Table 2.7: Status of shared latrine use

Response	DNCC	DSCC	KCC	CCC	Sakhipur	Saidpur	Total
Not shared	13.9	6.7	14.0	17.9	73.0	33.9	20.9
Shared with other HH	65.6	82.8	77.7	71.7	23.0	48.8	66.5
Public facility	20.5	10.5	8.4	10.4	4.0	17.3	12.6
n	244	238	179	173	100	121	1055
Average no. of family shared toilet facility	9.65	18.37	11.64	8.12	2.92	10.79	12.00
n	210	222	154	142	25	68	821

Table 2.8: Responsible person for latrine maintenance

	DNCC	DSCC	KCC	CCC	Sakhipur	Saidpur	Total
Owner of the house	88.5	54.6	98.8	57.0	82.8	50.5	72.6
User	6.1	24.8	0.0	43.0	13.1	27.5	18.6
Management committee	0.0	5.9	0.0	0.0	0.0	7.3	2.1
Other	5.3	14.7	1.2	0.0	4.0	14.7	6.7
n	244	238	179	173	100	121	1055

Table 2.9: Place of washing nappy or cloth when child defecates in it

Response	DNCC	DSCC	KCC	CCC	Sakhipur	Saidpur	Total
Tube well	6.5	0.0	52.6	13.3	48.0	50.0	21.6
Pond	0.0	6.9	29.8	11.1	0.0	0.0	8.3
Public tap stand	0.0	1.4	0.0	0.0	0.0	0.0	.3
Any designated place not connection with pond or river	3.2	9.7	5.3	4.4	0.0	3.1	4.9
Latrine	1.1	12.5	0.0	0.0	0.0	3.1	3.4
Bathroom	60.2	26.4		40.0	8.0	3.1	29.6
No designated place	17.2	41.7	7.0	8.9	36.0	28.1	22.2
Non-resposnse	11.8	1.4	5.3	22.2	8.0	12.5	9.6
N	93	72	57	45	25	32	324

Table 2.10: Proportion of HHs by Knowledge on handwashing in critical times

Critical time/occasion	DNCC	DSCC	CCC	KCC	Sakhipur	Saidpur	Total
After defecation	100.0	97.5	94.8	97.8	100.0	100.0	98.2
After rinsing child's excreta	51.6	24.8	21.4	17.9	59.0	70.2	37.7
Before eating	74.6	70.6	60.7	74.9	79.0	77.7	72.2
Before cooking	2.9	10.1	22.0	16.8	19.0	14.0	12.8
Before feeding child	2.0	8.8	24.9	19.6	4.0	5.0	10.8
Number of knowledge of washing hands on specific/critical time/occasion:							
Knows at least 3	31.1	49.2	22.0	69.3	25.0	23.1	38.7
Knows at least 2	50.0	31.1	50.9	28.5	68.0	71.9	46.4
N	244	238	173	179	100	121	1055

Table 2.11: Proportion of Women by facility and access in Community latrines for MHM

Stratum	Facility for MHM in community latrines			Access community latrines for MHM		
	Yes	No	N	Yes	No	N
DNCC	29.6	70.4	304	100	0	90
DSCC	34.7	63.5	288	99	1	100
CCC	0	90.5	210	0	0	0
KCC	0	100	221	0	0	0
Sakhipur	0	100	103	0	0	0
Saidpur	0	100	136	0	0	0
All	15.1	83	1262	99.5	0.5	190

Table 2.12: Proportion of Women categorized by adolescents and Women by facility and access for MHM in Community latrines

Area	Adolescent						Women of reproductive age					
	Facility for MHM in community latrines			Access community latrines for MHM			Facility for MHM in community latrines			Access community latrines for MHM		
	Yes	No	N	Yes	No	N	Yes	No	N	Yes	No	N
DNCC	27.2	73	81	100	0	22	31	69	245	100	0	77
DSCC	33.7	65	89	100	0	30	35	63	221	99	1	77
CCC	0	96	52	0	0	0	0	89	165	0	0	0
KCC	0	100	50	0	0	0	0	100	181	0	0	0
Sakhipur	0	100	15	0	0	0	0	100	91	0	0	0
Saidpur	0	100	43	0	0	0	0	100	96	0	0	0
All	15.8	83	330	100	0	52	15	82	999	99	1	154

Table 2.13: Use proportion of MHM Materials by types among the Community Women

Indicators	DNCC	DSCC	CCC	KCC	Sakhipur	Saidpur	Total
Reusable (example old cloth etc)	62.8	88.2	72.4	87.8	89.3	94.1	80.1
Disposable sanitary napkin)	29.9	11.1	25.2	12.2	10.7	5.9	17.6
Cotton	0	0	0.5	0	0	0	0.1
Nothing	6.9	0.7	1.9	0	0	0	2.1
Tissue paper	0.3	0	0	0	0	0	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	304	288	210	221	103	136	1262

Table 2.14: Membership status of Loan/savings group or society and interest and uses status of loan/savings for WASH Development

Response	DNCC	DSCC	CCC	KCC	Sakhipur	Saidpur	Total
Membership in Micro-credit group	34.0	52.5	1.7	52.5	67.0	65.3	42.7
Uses of loan/savings for WASH improvement	0.8	18.1	0	16.8	13.0	16.5	10.2
Interest for loan for WASH improvement	0.8	0	0	14.0	16.0	20.7	6.4
Sanple size	244	238	173	179	100	121	1055

Table 2.15: Proportion of Schools by Water Sources

Water Sources	DNCC	DSCC	CCC	KCC	Sakhipur	Saidpur	Total
Shallow tubewell (< 250 ft.)	0	0	50	33.3	66.7	75	27.5
Deep tubewell (> 250 ft.)	0	0	50	33.3	33.3	25	20
Tap/Pipe water inside room	88.3	90	0	33.3	0	0	47.5
Pipe water/Courtyard tap	16.7	10	0	0	0	0	5
N (applicable, q2.7b=1)	12	10	8	9	4	4	47

Table 2.16: Sanitation Facility among the surveyed schools

Types of Latrine	DNCC	DSCC	CCC	KCC	Sakhipur	Saidpur	All
Drainage system	0	75	0	100	0	33.3	52.6
Septic tank	66.7	25	0	0	50	0	21.1
Pit latrine with slab and water seal	33.3	0	100	0	50	66.7	26.3

Annex 2: Household Questionnaire

HH Survey Questionnaire

Greetings

Hello, I am _____, on behalf of WaterAid, would like to request 30 minutes of your precious time. The purpose of this survey is to conduct a study of the water and sanitation facilities your household receives. Your answers to the following questions would be extremely valuable for our study and will help to improve the surrounding conditions of your household. Your information will be **used solely for research purpose** and kept **strictly private and confidential**.

Official Stats

a. Questionnaire Code:

b. Date: 1 7

Area Identification:

A) City Corporation/Municipality: _____ B) P.S.: _____

C) Mahalla/Road _____ D) Name of Slum _____

E) Household number: _____ F) Cluster number: _____

Respondent's Identification :

G) Respondent's Name: _____

H) Religion : 1 = Islam, 2 = Hindu, 3 = Christianity, 4 = Buddhism, 5 = Others (Specify) _____

I) Name and code number of interviewer/supervisor :

	Interviewer	Supervisor
Name :		
Signature and code :		
Date :/...../2017 MM / DD / YY/...../2017 MM / DD / YY

Team Number	:	<input type="text"/>	Editor/coder	:	_____ <input type="text"/>
Entry operator	:		Checker	:	

J) Result code: 1 = Completed, 2 = Partial, 3 = Refused, 4 = Not at home

SECTION 1: HOUSEHOLD MEMBER INFORMATION
(At first let me Ask about your household information)

101	Total household members				Persons						
102	Ask about every household member										
HH member's No	Name of household members (Start from household head)	Relation with household head	Sex	Age		Marital status	Continuing school now?	Highest grade passed	Occupation		Is disabled /incapable? If yes, write type of disability?
				Year	Month				Main	Secondary	
(1)	(2)	(3)	(4)	(5)		(6)	(7)	(8)	(9)	(10)	(11)
01		01									
02											
03											
04											
05											
06											

<p>Code:</p> <p>(3) Relationship with household head:</p> <p>01. Self 02. Husband/wife 03. Son 04. Daughter 05. Brother/sister 06. Mother/father 07. Daughter or son-in-law 08. Niece/nephew 09. Grandfather/mother 10. Grandson/daughter 11. Others _____</p> <p>(4) Sex</p> <p>1. Male, 2. Female</p> <p>5) Age:</p> <p>Write age of child less than 5 years in month. Write 97 for member 97 years or above.</p>	<p>6) Marital status :</p> <p>1. Never married 2. Currently married 3. Widow/widower 4. Divorced/separated/ deserted</p> <p>(7) Educational qualification</p> <p>00. Illiterate/can sign only 33. Can read and write only 40. Nurani 41. Hafezi 42. Qoumi madrasah 66. Non-formal education 88. Not applicable (<6 years) Write the highest grade passed</p> <p>(8, 9) Occupation code</p> <p>01. Day Labourer 02. Rickshaw/Van/Push Cart Driver 03. Mechanic(Rickshaw/Van /Push Cart 04. Mechanical Vehicle Driver 05. CNG/auto rickshaw driver 06. Transport Worker 07. Mechanic (Mechanical Vehicle/Welding/Lathe mechanic 08. Garments Worker</p>	<p>09. Electrical Mechanic 10. Mason/Carpenter 11. Helper of Mason/Carpenter 12. Night Guard/Darwan 13. House Wife 14. Student 15. Maid Servant 16. Paper/Garbage/Scrap material collector 17. Packet/Candle/Incense-stick maker 18. Handicraft/Cottage industry 19. Sweeper/Cleaner 20. Butcher 21. Tailor 22. Salaried employee 23. Government/Non government employee 24. Government/Non-government officer 25. Small/Medium business 26. Big business 27. Hawker 28. Professional(Teacher/Lawyer/Doctor/Engineer) 29. Tutorship</p>	<p>30. Imam/Moajjin of a mosque 31. Begging 32. Unemployed/Do nothing 33. Retired/Old man/Old woman 34. Homeopathic doctor 66. No secondary occupation 88. Not applicable (<6 years) 35. Others</p> <p>Is disabled /incapable? If yes, write type of disability?</p> <p>88. Not disabled 01. Sight impaired 02. Hearing Impaired 03. Speech impaired 04. Physically impaired 05. Intellect impaired 06. Hearing and Speech impaired 07. Physical and Intellect impaired 08. Speech and physical impaired 09. Speech and sight impaired 10. Others _____</p>
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Q. No	Question	Answer and code					Skip	
202 *M	Monthly Household Expenditure	Items of Expenditure		Monthly Expenditure (Taka)				
		01	Food -----	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
		02	Education -----	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
		03	House rent -----	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
		04	Electricity -----	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
		05	Gas/Fuel -----	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
		06	Water -----	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
		07	Soap for bathing and washing clothes -----	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
		08	Soap, Herpic etc. for Sanitation	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
		09	Garbage disposal -----	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
		10	Transportation -----	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
		11	Health service -----	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
		12	Others (clothes, entertainment, repair etc.) -----	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
203	Do you or any member of your household possess the following in good or working condision? (Ask one by one)						Yes	No
	A. Electricity/solar power -----	1				2		
	B. Almirah (wood/steel) -----	1				2		
	C. Sofa set -----	1				2		
	D. Chair/table -----	1				2		
	E. Cot/Bedstead -----	1				2		
	F. Radio -----	1				2		
	G. Mobile -----	1				2		
	H. Television -----	1				2		
	I. Fridge -----	1				2		
	J. Water filter/Dispenser -----	1				2		
	K. Bicycle -----	1				2		
	L. Motorcycle -----	1				2		

204. WASH Expenditure

Q. No	Issue	Expenditure purpose	Amount spent in last 1 years	Q. No	Issue	Expenditure purpose	Amount spent in last 1 years
01	Water (A)	Bill		07	Sanitation (B)	Bill	
02		Repair/maintenance		08		Repair/maintenance	
03		Installation		09		Installation	
04		Rent (share of HH rent may be included)		10		Rent (share of HH rent may be included)	
05		Purchase		11		Emptying pit latrine	
06		Water treatment cost*		12			
13	Hygiene C	Soap		23	Hygiene C	Air freshener	
14		Hand wash		24		Dish wash	
15		Detergent		25		Ash	
16		Toothpaste		26		Tissue	
17		Tooth brush		27		Nail clippers	
18		Shampoo		28		Razor	
19		Toilet cleaner (hapric/vixhol etc.)		29		Blade	
20		Toilet brush		30		Get/foam/cream	
21		Sanitary Pad		31		bleaching powder, chlorine etc. for sanitation	
22		Slippers for latrine		32		Payment for garbage disposal	
	A B C				A B C		

*boiling, water filter, bleaching powder, chlorine etc.

Q. No	Question	Answer and code	Skip
205	Are you member of any credit/savings group?	No	01
		Yes	02
205 A	Have ou even used saving/loan for WASH improvement	No	01
		Yes	02
205 B	Are you interested to take loan for improving WASH situation?	No	01
		Yes	02

SECTION 2A: HEALTHCARE STATUS OF THE HOUSEHOLD

Q. No	Question	Answer and code	Skip
206	Have any members of your household suffered from any disease in last three months?	Yes -----	1
		No -----	2
207	Is yes, how many members have suffered?	<input style="width: 50px; height: 20px;" type="text"/> persons	SEC3
208	If yes, provide information of each sick member in the following table, use separate row for each of then?		

HH Member No.	Diseases suffered or are suffering? (disease code)	Is he provided medical treatment/ health service? Yes =1, No= 2 (if 2 skip to 6)	If yes, with whom was he/she provided medical treatment/health service? (Health service code)	Reasons for not taking medical treatment/ health service? (Reasons code)	Number of times suffered from disease?	Number of days suffered from diseases?	How much money spent for treatment of diseases?	How many working days lost due to suffering from disease?	Monetary loss incurred?
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)

Column 3: Disease code: 01 = Hepatitis A , 02 = Jaundice, 03 = Typhoid, 04 = Dysentery, 05 = Diarrhea, 06 = Cholera , 07 = Bloating, 08 = Flu-like symptoms , 09 = Allergic reactions, 10 = Malaria, 11 = Dengue , 12 = Ascariasis , 13 = Anemia , 14 = Scabies, 15 = Ringworm, 16 = Trachoma, 17 = Fever, 18 = Cold/running nose/cough, 19 = Pneumonia, 20 = Skin disease, 21 = Ear disease, 22 = Tooth ailment, 23 = Eye problem, 24 = Mums/tonsillitis, 25 = Delivery problem, 26 = Gout/rheumatism. , 27 = Others _____

Column 5:Health care service code:01 = MBBS Doctor, 02 = Hospital/clinic, 03 = NGO clinic, 04 = Quack/village practitioner, 05 = Pharmacy, 06 = Homeopathic doctor, 07 =Ayurvedic practitioner, 08 =Thana/Upazilla Healthcare centre/comple 09=None/Self-treated, 10 = Others _____

Column 6.Reasons for not reciving health care/service: 01 =Financial insolvency, 02 =Health service centre is far away/Transportation problem, 03 =Insufficient health care, 04 =Unimproved health care service/facility, 05 =Did not think necessary, 06 = Others _____

SECTION 3: SAFE WATER SOURCE

Q. No	Question	Answer and code	Skip
300	The space/room/flat where you live now, is it rented or you own this?	Own it -----1	
		Rented -----2	
301	What is the main and alternative source of water for drinking, cooking, cleaning utensils and for other purpose?		

Source of water	Drinking		Cooking, cleaning utensils		Others household work		
	A. Main	B. Alternative *M	C. Main	D. Alternative *M	E. Main	F. Alternative *M	
Shallow Tubewell/Tubewell -----	01	01	01	01	01	01	
Deep tubewell -----	02	02	02	02	02	02	
Deep hand tubewell -----	03	03	03	03	03	03	
Submergable pump -----	04	04	04	04	04	04	
Rain water collection (RWH) --	05	05	05	05	05	05	
Well							
Protected well -----	06	06	06	06	06	06	
Unprotected well -----	07	07	07	07	07	07	
Spring water							
Protected spring water -----	08	08	08	08	08	08	
Unprotected spring water -----	09	09	09	09	09	09	
Pipeline/Supply water							
Pipeline into room/ Courtyard without reservoir -----	10	10	10	10	10	10	
Pipeline into room/ Courtyard with reservoir -----	11	11	11	11	11	11	
Pipeline into neighbors house without reservoir -----	12	12	12	12	12	12	
Pipeline into neighbors house with reservoir -----	13	13	13	13	13	13	
Government stand pipe/tap water/pipeline without permanent reservoir -----	14	14	14	14	14	14	
Tanker/Truck loaded water -----	15	15	15	15	15	15	
Sufarce water (river/canal/ pond etc) -----	16	16	16	16	16	16	
No alternative source -----		98		98		98	
Other (specify) _____							

Q. No	Question	Answer and code	Skip
302	(Observe physically and code) Is the source of water in functional useable?	Yes ----- 1 No ----- 2	
303	How many months does the water source remain functional/usable?	<input type="text"/> <input type="text"/> Month Throughout year ----- 12 →	305
304	If not functional/useable throughout the year, in which months it does not remain so? (multiple response)	Baishak (April-May) ----- 01 Jaisthyah (May-June) ----- 02 Ashard (June-July) ----- 03 Sraban (July-August) ----- 04 Bhadryah (August-September) ----- 05 Ashin (September-October) ----- 06 Kartik (October-November) ----- 07 Agrayayan (November-December) ----- 08 Paush (December-January) ----- 09 Magh (January-February) ----- 10 Falgun (February-March) ----- 11 Chaitryah (March-April) ----- 12	
305	Normally how many hours in a day do you get water from the main source of drinking water of your household?	<input type="text"/> <input type="text"/> Hours Always/24 hours ----- 24	
306	Do other people than your household members fetch water from the main source of drinking water of your household?	Yes ----- 1 No ----- 2 →	308
307	If yes, how many families including your family fetch water from this source?	<input type="text"/> <input type="text"/>	
308	Type of ownership of the source of drinking water from where the household fetch water?	Own ----- 01 Owner of the house ----- 02 Joint ownership ----- 03 Community ----- 04 Organization's ----- 05 Others ----- 06 Other (specify) _____	
309	Provider of the main source of drinking water of your household? (Observe physically)	Self ----- 01 Owner of the house ----- 02 Pourashova ----- 03 Union Parishad ----- 04 Govt. organization (DPHE) ----- 05 NGO ----- 06 Other (specify) _____	

Q. No	Question	Answer and code	Skip
310	Which organization or individual has installed the source of water where you fetch drinking water? (Observe physically)	Self ----- 01	
		Owner of the house ----- 02	
		Pourashova ----- 03	
		Union Parishad ----- 04	
		Govt. organization (DPHE) ----- 05	
		NGO ----- 06	
		Other (specify) _____	
311	Do you have to pay money to fetch water from that source?	Yes ----- 1	} 314
		No ----- 2	
		Not applicable ----- 8	
312	If yes, in what term you are to pay for that?	For each time fetched water ----- 1	
		Daily basis ----- 2	
		Weekly basis ----- 3	
		Monthly basis ----- 4	
		Other (specify) _____	
313	How much money do you have to pay for fetching water from the source?	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Taka	
314	Did you have to pay money for repairing and maintenance (repair of platform, change of pipe, head, filter of tubewell, total change of the tubewell)? If yes for what purposes did you have to pay?	Renovation/repair ----- 01	→ 317
		Making platform ----- 02	
		Install new pipeline ----- 03	
		Not needed ----- 04	
		Other (specify) _____	
315	How much money did you pay last for repair and maintenance?	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Taka	
316	By whom do you pay this money?	Myself spend the money ----- 01	
		By the caretaker ----- 02	
		By other user ----- 03	
		By the responsible person of the managing committee ----- 04	
		Other (specify) _____	
Q. No	Question	Answer and code	Skip
317	Is there a management committee that supervises WASH facilities in your area?	Yes, made of both government and community people ----- 01	If 01, 02, 03 ->318
		Made of only government representatives ----- 02	
		Made of community people ----- 03	
		No, WASH management committee ----- 04	
317A	Do you know personally someone from the committee?	Yes ----- 01 No ----- 02	
318	What role does the managing committee play?	Do not play any role ----- 01	
		Supervise regularly ----- 02	
		Supervise and do the needful regularly ----- 03	
		Do the needful if informed ----- 04	
		Supervise if informed but do not do the needful ----- 05	
		Do not do the needful even if informed ----- 06	
321	How is the quality of drinking water of the household?	Good ----- 1	→ 323
		Fair ----- 2	
		Not good ----- 3	
		Can't say ----- 4	
		Other (specify) _____	
322	If water quality is not good, what are the reasons for that?	Water contains Arsenic ----- 01	
		Water contains excessive iron compound ----- 02	
		Water is salty ----- 03	
		Water is impure/muddy ----- 04	
		Water is of bad smell ----- 05	

		Water is full of germs ----- 06 Other (specify) _____	
323	Do you do anything to treat drinking water?	Yes ----- 1 No ----- 2	→ 325
324	If yes, how do you treat water? Verifying: do you apply another means	By boiling ----- 01 By mixing bleaching powder or chlorine ----- 02 Stoning through cloth ----- 03 By filtering ----- 04 By settling down water ----- 05 Other (specify) _____	
325	From how far do you fetch drinking water of the household, (only to go to the point and come back home)?	<input type="text"/> <input type="text"/> <input type="text"/> Feet Point is inside the premises = 000 →	327
326	How much time does it require to fetch water including time required to go to the point of the water source and come back home?	<input type="text"/> <input type="text"/> <input type="text"/> Minutes	
327	Who among the household members generally fetch water from that point or source of water?	Male member aged 18 years or above ----- 1 Female member aged 18 year or above ----- 2 Boys less than 18 years of age ----- 3 Girls less than 18 years of age ----- 4	
328	How many times are you to fetch water from that point in a day by the above-mentioned person?	<input type="text"/> <input type="text"/> Times	
329	How much drinking water do you fetch each time for your household?	<input type="text"/> <input type="text"/> Liters	
329 A	The 'main' water source of your household is 'legal' or 'illegal'	Legal ----- 1 Illegal ----- 2 Do nor Know ----- 3	
329 B	How much does it cost to have a 'legal' water connection	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Do nor Know -----88	
329 C	How much does it cost to have a 'illegal' water connection	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Do nor Know -----88	
Q. No	Question	Answer and code	Skip
330	How much water do you require in your household each day for drinking?	<input type="text"/> <input type="text"/> Liters	
331	How much water do you require each day for other purpose?	<input type="text"/> <input type="text"/> <input type="text"/> Liters	
332	Use of safe drinking water [Don't ask directly but use technique to get the answer]		
A	Whether water pot cleaned with drinking water during water collection?	Yes, always ----- 1 Yes, Sometimes ----- 2 No ----- 3	
B	Whether water pot is covered during drinking water collection?	Yes, always ----- 1 Yes, Sometimes ----- 2 No ----- 3	
C	Whether water pot is covered during drinking water transportatrion?	Yes, always ----- 1 Yes, Sometimes ----- 2 No ----- 3	
D	Whether water pot is covered during preservation? (after observation)	Yes ----- 1 No ----- 2 Not preserve ----- 3	

Q. No	Question	Answer and code	Skip
E	Where do you keep the pot to preserve drinking water? (after observation)	Floor ----- 1 High place ----- 2 Don't preserve ----- 3	
F	Whether glass is cleaned with drinking water when served? (after observation)	Yes, always ----- 1 Yes, Sometimes ----- 2 No ----- 3	
333	Ask to give you a glass of water from the preserving container and observe the ways of taking water from the container?	While pouring water into glass fingers dipped into water ----- 01 While pouring water into glass fingers didn't dip into water ----- 02 Took water by dipping fingers into water ----- 03 Took water by not dipping fingers into water ----- 04 Other (specify) _____	
334	If source of drinking water is tubewell, observe the following and put reply.		
A	Is there any latrine nearby (within 30 feet) to the tubewell?	Yes ----- 1 No ----- 2	
B	Has any un-cleaned environment/ condition or an abode of flies and mosquitoes been formed by accumulating water around the tubewell base?	Yes ----- 1 No ----- 2	
C	Is there any crack, broken part or accumulated garbage in the drain to which the tubewell platform in connected?	Yes ----- 1 No ----- 2 No platform ----- 3 →	F
D	Does water accumulate on the tubewell platform?	Yes ----- 1 No ----- 2	
E	Is there any crack in the tubewell platform?	Yes ----- 1 No ----- 2	
F	Has the tubewell base become weak/loose?	Yes ----- 1 No ----- 2	

Q. No	Question	Answer and code	Skip
335	(Observe physically and put reply) Overall condition of the tubewell platform?	Good ----- 1 Fair ----- 2 Bad ----- 3	
336	(Observe physically and put reply) Overall condition of the drainage system of the tubewell platform?	Good ----- 1 Fair ----- 2 Bad ----- 3	
337	Whether arsenicosis of water has been tested in last one year?	Yes ----- 1 No ----- 2 Don't know ----- 7	} 340
338	If yes, whether water is arsenic free?	Yes ----- 1 No ----- 2 Don't know ----- 7	
339	If tested, what colour has been put on the tubewell?	Red ----- 1 Green ----- 2 No colour ----- 7	
340	If source of drinking water is water tap observe the following physically and put the reply.		
A	Has any unclean environment/ condition or abode of flies and mosquitoes been formed by accumulation water around the water tap?	Yes ----- 1 No ----- 2	
B	Is there any crack, broken part, or accumulated filth/garbage in the drain connected to the water tap?	Yes ----- 1 No ----- 2 No platform ----- 3 →	F

Q. No	Question	Answer and code	Skip
C	Does water accumulate on the platform of water tap?	Yes ----- 1 No ----- 2	
D	Is there any crack in the platform of the water tap?	Yes ----- 1 No ----- 2	
E	Is the water tap fixed with a concert wall?	Yes ----- 1 No ----- 2	
F	Is the pipe of the water tap exposed?	Yes ----- 1 No ----- 2	
G	Is there any meter connection to the water tap?	Yes ----- 1 No ----- 2	
341	(Observe physically and put reply) How is the overall condition of the platform of the water tap?	Good ----- 1 Fair ----- 2 Bad ----- 3	
342	(Observe physically and put reply) How is the overall condition of the drainage system of the water tap platform?	Good ----- 1 Fair ----- 2 Bad ----- 3	
343	Whether objection raised in collecting drinking water?	Yes ----- 1 No ----- 2	→ SEC5
344	If objective raised, show reasons?	Not allowed to collect due to feud ----- 01 As it is on others land, not always available ----- 02 Belongs to institution, so not available when closed ---- 03 As don't give money for repair or render labor ----- 04 Other (specify) _____	

SECTION 4: SANITATION FACILITIES

Q. No	Question	Answer and code	Skip	Q. No		
401	What type of latrine do the members of the household generally use? (Observe physically, be sure and encircle appropriate code)	Flush latrine Flush to swerage system through pipe ----- 01 Flush to septic tank ----- 02 Flush to septic hole/latrine ----- 03 Flush to other place ----- 04 Flush but don't know where disposed ----- 05 Flush to drainage system ----- 06 Pit latrine Pit latrine with slab ----- 07 Pit latrine without slab ----- 08 Twin pit ----- 09 Others Compositet latrine ----- 10 Hanging latrine ----- 11 No latrine/open defecation ----- 12 Other (specify) _____				
402	Do others, except members of your household use this latrine? (Is that a shared latrine?)	Yes ----- No -----	1 →	405		
403	If yes, do members of other household known to you jointly use this latrine or is it open for public use?	Member of other households jointly use ----- Open for public use -----	1 2			
404	How many families including your family use this latrine?	<table border="1" style="display: inline-table; width: 80px; height: 20px;"><tr><td style="width: 40px;"></td><td style="width: 40px;"></td></tr></table>				

Q. No	Question	Answer and code	Skip	Q. No						
404A	How many people in total (including your family members) use this latrine?	<input type="text"/> <input type="text"/>								
405	Ownership of the latrine, which is used by members of your household?	Own ----- Owner of the house ----- Joint ownership ----- Community ----- Others ----- Other (specify) _____	1 2 3 4 5							
406	Who has installed or financed installation of the latrine? (Observe physically and put reply)	Self ----- Owner of the house ----- Pourashova ----- Union Parishad ----- Govt. organization (DPHE) ----- NGO ----- Other (specify) _____	01 02 03 04 05 06							
407	Does the managing committee definite role in matters of management, repair and maintenance of the latrine?	Yes ----- No ----- Don't know -----	1 2 7	} 510						
408	Number of managing committee members?	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td></td> <td style="text-align: center;">Female</td> <td style="text-align: center;">Male</td> </tr> <tr> <td style="text-align: center;">Total</td> <td style="text-align: center;"><input type="text"/></td> <td style="text-align: center;"><input type="text"/></td> </tr> </table>		Female	Male	Total	<input type="text"/>	<input type="text"/>	77	
	Female	Male								
Total	<input type="text"/>	<input type="text"/>								

Q. No	Question	Answer and code	Skip	Q. No
409	What role does the managing committee play?	Do not play any role ----- Supervise regularly ----- Supervise and do the needful regularly ----- Do the needful if informed ----- Supervise if informed but do not do the needful ----- Do not do the needful even if informed ----- Other (specify) _____	01 02 03 04 05 06	
410	Who does repair, renovate and maintain the latrine?	Self ----- Owner of the house ----- User ----- Management committee ----- Lease holder ----- Owner of the latrine ----- Other (specify) _____	01 02 03 04 05 06	
411	Who spends money for repair, renovation and maintenance of the latrine?	Self ----- Owner of the house ----- User ----- User and committee jointly ----- Don't know ----- Other (specify) _____	01 02 03 04 77	
412	Do you need to pay money for using te latrine?	Yes ----- No ----- Not applicable -----	1 2 8	} 415
413	On what terms are you to pay money for using the latrine	For each time use basis ----- Daily basis ----- Weekly basis ----- Monthly basis ----- Other (specify) _____	01 02 03 04	

Q. No	Question	Answer and code	Skip	Q. No
414	How much money do you have to pay for using the latrine?	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Taka		
415	Had you paid money for repair and maintenance of the latrine? If yes, for what purpose had you paid?	Renovation/maintained ----- Cleaning off filled up latrine pit/tank ----- Install new latrine ----- Not needed ----- Other (specify) _____	01 02 03 04	→418
416	How much money had you paid last for repair and maintenance?	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Taka		
417	With whom money is to deposit?	I spend myself ----- To caretaker ----- To other user ----- Responsible person of community group----- Other (specify) _____	01 02 03 04	

Q. No	Question	Answer and code	Skip	Q. No																		
418	Where is the household latrine situated? (Ask as well as observe)	Inside the room ----- Adjacent to the room ----- In the courtyard ----- Outside the courtyard ----- Community latrine ----- Other (specify) _____	1 2 3 4 5																			
419	(Observe physically and put reply) Where or to which out going arrangement the pipe line of the latrine is connected?	To open space (river/canal/pond) ----- To septic hole/specific hole ----- To swerage system through pipe ----- Other (specify) _____	01 02 03																			
420	(Observe physically and put reply) How far the latrine is situated from the main dwelling room of the household?	<input type="text"/> <input type="text"/> <input type="text"/> foot																				
421	(Observe physically and put reply) Is there any soap inside the latrine?	Yes ----- No -----	1 2																			
422	(Observe physically and put reply) Overall condition of the latrine?	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td></td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">NO</td> </tr> <tr> <td>A. Excreta has come outside and spread out</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>B. Insects can enter into latrine pit -----</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>C. Bad smell emits from latrine -----</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>D. Latrine pipe stays in open space connected to ditch/canal/pond/river -----</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>E. Other (specify) _____</td> <td></td> <td></td> </tr> </table>		Yes	NO	A. Excreta has come outside and spread out	1	2	B. Insects can enter into latrine pit -----	1	2	C. Bad smell emits from latrine -----	1	2	D. Latrine pipe stays in open space connected to ditch/canal/pond/river -----	1	2	E. Other (specify) _____				
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D. Latrine pipe stays in open space connected to ditch/canal/pond/river -----	1	2																				
E. Other (specify) _____																						
423	(Observe physically and put reply) Is the latrine of the household suitable for the use of children, women, elderly and disabled?	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td></td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">NO</td> </tr> <tr> <td>A. Suitable for children use-----</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>B. Suitable for Women's use -----</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>C. Suitable for disabled person's use -----</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>D. Suitable for elderly person's use -----</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> </table>		Yes	NO	A. Suitable for children use-----	1	2	B. Suitable for Women's use -----	1	2	C. Suitable for disabled person's use -----	1	2	D. Suitable for elderly person's use -----	1	2					
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D. Suitable for elderly person's use -----	1	2																				
424	Where do the children of household less	Use household latrine ----- In specific pot -----	01 02																			

Q. No	Question	Answer and code	Skip	Q. No
	than five years defecate?	In specific hole -----	03	
		In drain -----	04	
		No specific place/in the courtyard -----	05	
		Not applicable -----	88	
		Other (specify) _____		

Q. No	Question	Answer and code	Skip																								
425	Where are the excreta of children (deficated Potty / diaper / courtyard disposed) of household less than five years disposed of?	Children use household latrine ----- 01 Disposed into household latrine ----- 02 To drain/dustbin ----- 03 In pond/canal/river ----- 04 No specific place/in courtyard ----- 05 Washed wih tap/tubewell water ----- 06 Remain here and there ----- 07 Not applicable ----- 88 Other (specify) _____																									
425 B	If the child defecates in the nappy or cloth, where it is washed?	Tube well ----- 01 Pond ----- 02 Inside the bathroom / or any designated places where there is no connection with pond or river-- 03 Public tap stand ----- 04 Latrine ----- 05 No designated place ----- 06 Not applicable ----- 07 Other (specify) -----																									
426	In last seven days has any member of your household defecated in any latrine other than household latrine?	Yes ----- 1 No ----- 2 →	SEC5																								
427	If yes, which latrine s/he has used?	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Male (A)</th> <th>Female (B)</th> </tr> </thead> <tbody> <tr> <td>Other's latrine -----</td> <td>01</td> <td>01</td> </tr> <tr> <td>Mosque's latrine -----</td> <td>02</td> <td>02</td> </tr> <tr> <td>Community latrine -----</td> <td>03</td> <td>03</td> </tr> <tr> <td>Public latrine -----</td> <td>04</td> <td>04</td> </tr> <tr> <td>Mobile latrine -----</td> <td>05</td> <td>05</td> </tr> <tr> <td>Open space -----</td> <td>06</td> <td>06</td> </tr> <tr> <td>Other (specify) -----</td> <td></td> <td></td> </tr> </tbody> </table>		Male (A)	Female (B)	Other's latrine -----	01	01	Mosque's latrine -----	02	02	Community latrine -----	03	03	Public latrine -----	04	04	Mobile latrine -----	05	05	Open space -----	06	06	Other (specify) -----			
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Open space -----	06	06																									
Other (specify) -----																											
428	Has your toilet / latrine ever been emptied?	Yes, emptied ----- 01 No, never emptied 02 Not yet filed 03 DK 04																									
429	The last time it was emptied, where were the contents emptied to?	Removed by service provider A To a treatment plant 01 Buried in a covered pit 02 To uncovered pit, open ground water body or elsewhere 03 To don't know where 04 Emptied by household B																									

Q. No	Question	Answer and code	Skip
		Buried in a covered pit 06	
		To uncovered pit, open ground 07	
		water body or elsewhere 08	
		Other (specify)	
		DK 09	

SECTION 5: HAND WASHING AND WASH KNOWLEDGE

Q. No	Question	Answer and code	Skip
501	Do you know on which specific/critical time/occasion one should wash hands with soap?	After defecation ----- 01	
		After rinsing child's excreta ----- 02	
		Before eating ----- 03	
		Before cooking ----- 04	
		Before feeding child ----- 05	

Q. No	Question	Answer and code	Skip				
502	Now I will say some hand washing time or event. Would you please tell, how often do you wash your hand with soap at that time/in that event?	Hand washing time/event				How frequently hand washed	
			Never	Sometimes	often	always	N/A
		A. After defecation -----	1	2	3	4	8
		B. After cleaning child's excreta after defecation -----	1	2	3	4	8
		C. Before eating -----	1	2	3	4	8
		D. Before cooking -----	1	2	3	4	8
		E. Before feeding child -----	1	2	3	4	8

Q. No	Question	Answer and code	Skip
503	Is there any specific place/arrangement for hand washing in your household?	Yes ----- 1	506
		No ----- 2	
504	Is the specific place/arrangement for hand washing is within 10 feet of any latrine?	Yes ----- 1	
		No ----- 2	
505	If yes, where do the members of your household generally/normally wash hand? (Ask as well as observe)	Basin with tap ----- 01	
		With water from bucket ----- 02	
		With water from pitcher/pot etc. ----- 03	
		Other (specify) _____	
506	Is there any soap/detergent/cleaning material in hand washing place of your household? (Observe physically and put reply)	Nothing ----- 01	
		Soap ----- 02	
		Detergent/soap dust ----- 03	
		Liquid soap ----- 04	
		Ash ----- 05	
		Mud/sand ----- 06	
507	What harms do happen to us if we drink unsafe water, use unhygienic latrine, defecate in open space, here and there and dump garbage nearby our houses?	Diarrhea/dysentery ----- 01	
		Spread out of water borne disease ----- 02	
		Spread out of germs of diseases thorough flies or mosquito ----- 03	
		Epidemic of disease ----- 04	
		Financial loss due to medical treatment if fallen ill ----- 05	
		Work day loss if fallen ill ----- 06	
		Environment of the area polluted ----- 07	
		Bad smell spreads all around ----- 08	
		Don't know ----- 77	
		Other (specify) _____	

SECTION 6: Initiatives in Community regarding WASH

Q. No	Question	Answer and code	Skip
601	Is there any active hygiene promoters/ volunteers/ social mobilizers/ front line health workers working in WASH in your area?	Please mention briefly.	
601A	When was the last time she/he visited?	There was no such personnel 01 Yes, within the last 1 month 02 Yes, within the 1 to 3 months 03 Yes, more than 3 months ago 04	
601B	Is there any WASH support group/community group? (group of people that volunteer to help with WASH services for the community)	No----- 01 Yes (please specify)----- 02	
602	Is there any community training/workshop/meeting for capacity building plan for delivery of WASH services in the past 1 year/till date?	Yes ----- 01 No----- 02	60 4
602A	Who does it?	UP chairman.....01 Pourashova..... 02 WASH community group..... 03 NGO (please specify)04 Other (please specify)05	
603	How many people of your household participate in the Community-based WASH meeting?	Give number <input type="text"/> If zero, put 88	
603A	What type of activity do these people of your household participate in the Community-based WASH meetings?	Participate in meeting ----- 01 Conduct meeting ----- 02 Express own opinion ----- 03 Provide leadership or organize activities ---- 04 Participate in different activities ----- 05 Do not participate in anything ----- 06 Other (specify) _____	
603B	Is there any participation of disabled people/women in the WASH groups/meetings ?	Yes, both women and disabled 01 Yes, only women 02 Yes, only disabled 03 No 04	
603C	Was there any changes due to the feedback given by the community in the past 6 month to 1 year, for the WASH facilities?	Yes ----- 01 No ----- 02	
603D	How many people of your household participate in the Ward/paurashava WASH budget meeting?	No HH members know about such meeting 99 Give number <input type="text"/> If zero, put 88	
604	Is there any water/sanitation facility that are build by the district level government?	Yes ----- 01 No----- 02	
605	When your community needs a WASH facility (water pump/ community toilet etc.), do you know how to approach the local government for it?	Yes, clear idea 01 Yes, some idea 02 No idea 03	

Q. No	Question	Answer and code	Skip
606	When a government WASH facility is not working properly, do you know how to submit a complaint to duty-bearers/representatives for dysfunctional WASH facilities?	Yes, clear idea 01 Yes, some idea 02 No idea 03	
607	Do you know of the existing procedures to claim your right to WASH?	Yes, clear idea 01 Yes, some idea 02 Don't No 03	
608	Is there separate toilet facility for girls in the schools?	Yes 01 No 02 Don't know 03 Don't have girl students in household 04	

609	Is there separate toilet facility for disabled children in the schools?	Yes 01 No 02 Don't know 03 Don't have disabled students in household 04	
610	Have you visited any health facility/complex in the last 3 months?	No----- 01 Yes, I went myself ----- 02 One of my family members went----- 03	01 1
610A	What was the name of the health facility/complex?	Please specify_____	
610B	Does the health facility in your area have supply of drinkable water/clean latrines/soap and water for washing hands?	Yes, access to drinking water 01 Yes, access to clean latrine 02 Yes, soap and water for handwashing 03 Don't know/ cant remember 04	
611	Is there any local fund for WASH facilities in your area?	No 01 Yes 02	
612	If yes, what is the source of fund?	Government source 01 Community-raised fund 02 NGO source 03 Other (please specify)	
614	Do you remember any notable WASH related campaign that you saw?	No 01 Yes 02	
614A	Where did you see or hear about it?	Television 01 Radio 02 Natok/Drama in village hut 03 Poster 04 Thana/Upazilla Health Complex 05 Tea-stall 06 NGO worker 07 Other (Please specify)	
615	Where do you usually dispose your household garbage?	Dump in own land 01 Compost 02 Dump on roadside or field 03 Private or public trash service or designated space/Dustbean 04 Burn 05 Throw in ditch or pond nearby 06 Other (Please specify)	
615A	Do you pay for garbage disposal?	No 01 Yes 02	
615B	How much do you pay for garbage disposal in a month?	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Taka	

615 C	Do you have any garbage disposal/dustbin within 100 feet of your household?	No	01	
		Yes	02	
615 D	Do you face water logging nearby (within 100 feet) your household?	No	01	
		Yes	02	
615 E	Is there any sewer system adjacent to the household? (Observe physically and put reply)	No	01	
		Yes	02	
615 F	Is the sewer system covered/protected properly? (Observe physically and put reply)	No	01	
		Yes	02	
615 G	Is the sewer system filled/flooded with dirty water? (Observe physically and put reply)	No	01	
		Yes	02	

616 Menstrual Hygiene management

Applicable for women who are in their reproductive age/experiencing menstruation

HH Member No.	Age	What type of material do you use for MHM? (code)	If 'reusable' then how this cleaned? (code)	How that is dried? (code)	If disposable, then how often do you change (code)	If disposable, Where do you dispose them (code)	Any movement restriction during the menstruation period? (code)	Any food restriction during the menstruation period? No = 1 Yes = 2	Do you have any facility for MHM in community latrines No = 1 Yes = 2	If 'yes', Do you access community latrines for MHM No = 1 Yes = 2	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
What type of material you mainly used for MHM: (Column 3) Reusable (example old cloth etc) = 1 Disposable sanitary napkin = 2 Cotton = 3 Nothing = 4		How MHM materials disinfect: (Column 4) Wash with water and soap = 1 WASH with only water = 2 Noting = 3 Don't Know = 4 Not Applicable = 5		How that is dried: (Column 5) Sundry = 1 Hidden drying = 2		How often do you change: (Column 6) Every six hours = 1 More than six hours = 2		Where do you dispose them (Column 7) With HH garbage = 1 Latrine = 2 Dust bin = 3 Sewerage = 4 Open space = 5 Other (specify) 3		movement restriction during the menstruation period (Column 8) Family do not allow going outside = 1 Move around selectively = 2 Move around freely = 3	

K) Ending time of Interviews

		Hours			Minutes
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End interview with Thanks