Baseline Study on WASH for Community Development in Banglabazar, Gazipur

Prepared by

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Dhaka: 21 May, 2017

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SUMMARY TABLE OF KEY FINDINGS

Topic	Indicator	Value in %	N
WASH at Household Level			
Water Supply	Access to improved drinking water facilities	69.8	225
	Water facilities with broken or no platform and loose base	30.2	225
	Household with access to bacteria (Coliform) free drinking water source [TC(< 10CFU)/100ml]	88.5	96
	Household with access tofree of excess amount iron in drinking water (Fe < 1 mg/L)	100.0	96
	Household with access tofree of excess amount arsenic in drinking water (As < 0.05 mg/L)	100.0	96
	HHs with access to safe source of drinking water facilities	88.5	96
	HHs with effective use of WSP	7.1	225
Sanitation	Access to improved (not shared) sanitation facilities	27.6	225
	Access to shared latrine otherwise improved	50.7	225
	Cleanliness of latrine	53.8	225
	HHs with hand washing place with water at or near the latrine	87.1	225
	Hand-washing place with soap and water near to latrine	57.7	196
	Hand-washing place with water near to Kitchen	80.0	225
	Knowledge of hand-washing at critical times		225
	Before taking food	87.7	
	Before preparation/cooking of food	48.9	
	After using latrine	98.7	
	After cleaning baby's bottom	30.2	
	Before feeding baby	15.6	
	Before serving food	11.6	
	Practice of hand-washing at critical times		225
	Before taking food	69.8	
	Before preparation/cooking of food	37.8	
	After using latrine	96.9	
	After cleaning baby's bottom	12.4	
	Before feeding baby	4.0	
	Before serving food	0.9	

Topic	Indicator	Value in %	N
	Safe disposal of child's faeces into improved latrine	78.0	444
Topic	Indicator	Value in %	N
Menstrual management	Knowledge on appropriate material to be used during the period		225
	Rag of clothes	57.8	
	Sanitary napkin	26.7	
	Others	2.2	
	Menstruation sopped	13.3	
	Material commonly used during the period		195
	Rag	72.8	
	Sanitary napkin	23.6	
	Disposal of sanitary pad		51
	Waste basket	17.6	
	Drain	23.5	
	Latrine	13.7	
	Buried	13.7	
	Pit/hole	31.4	
	Availability of place of disposal at work place	85.2	115
Waste disposal	Disposal of solid waste		225
	Specific place	15.1	
	Randomly around	4.9	
	In the open field	4.4	
	Taken by private sweeper	4.9	
	Ditch/drain /canal	9.3	
	In a specific pit with or without lid	60.9	
	Disposal for faecal sludge/liquid waste		225
	Canal/bill/marshy land	83.6	
	Pit/hole/soakage pit	16.4	
WASH Situation at Schools			
Water supply	Access to improved drinking water facilities	33.3	15
	Water facilities with broken platform	44.4	9
	School with access to bacteria (Coliform) free drinking water [TC(0CFU)/100ml]	73.3	15
	School with access tofree of excess amount iron in drinking water (Fe < 1 mg/L)	100.0	15
	School with access tofree of excess amount arsenic in drinking water (As < 0.05 mg/L)	100.0	15
	Distance of drinking water source from the latrine		
	Less than 30 ft	66.7	9
Sanitation	Access to improved sanitation facilities	26.7	15
	Clean latrine	73.3	15

Topic	Indicator	Value in %	N
Hygiene	School having hamd-washing facility	86.7	15
	Hand-washing facility with soap and water	46.2	13
	Distance of hand-washing place from latrine		
	Less than 10 steps	66.7	15
	Observed practice of washing both hands with soap and water after using latrine		
	Boy	9.9	161
	Girl	9.9	191
	Observed practice of washing both hands with soap and water before taking food		
	Boy	13.0	161
	Girl	3.1	159
Environment	Cleanliness of the class room	93.3	15
	Cleanliness of the school premises	73.3	15
	WASH Situation at Community Clinics		
Water supply	Access to improved drinking water facility	0.0	2
	Distance of drinking water source from the latrine	<30ft	NA
Sanitation	Access to improved/sanitary sanitation facilities	1	2
	Clean of the latrine	1	2
	Separate latrine for		2
	Staff	No	
	Male patients	No	
	Female patients	No	
Hygiene	Hand-washing facility with soap and water for		2
	Staff	No	
	Male patients	No	
	Female patients	No	
Waste management	Mode of solid/medical waste management	Burning	2

Acknowledgements

WaterAid, is working in Bangladesh for improving access of the poor and marginalised population to safe drinking water, sanitation and hygiene since 1986. Recently, WaterAid Bangladesh together with other development partners and Universities have selected Banglabazar to address the dire WASH situation of the area.

We express our deep gratitude to the relevant officials of WaterAid, Bangladesh for entrusting Human Development Research Centre (HDRC) to carry out this important survey to measure WASH situation in the project areas.

We owe our profound gratitudeto Dr. Md. Khairul Islam, Country Director of WAB for his very timely decision about the urgency to conduct the assessment WASH situation ofpoor andmarginalised population in Banglabazar, Gazipurstudy and for his unstinted support extended throughout the study.

We are true grateful particularly to Mr. Aftab Opel, Head of Programme, Ms. Amina Mahbub, Manager, Monitoring and Evaluation, and Mr. Md. Muktadirul Islam Khan, Programme, Officer, WaterAid for their valuable inputs at different stages of this Study, including finalization of methodology and data collection instruments and strategic guidance. We are also thankful to Mr. Sanjoy Mukherjee, Programme Manager-Urban, WaterAid for ensuring support from partner side.

We gratefully acknowledge the cooperation from Gazipur City Corporation officials, and Ward Commissioner of Ward 22, Beat Officer, Forest Department Gazipur, Aslam Khan, Project manager, DSK for supporting during field data collection and providing us with required information. We are overly indebted to the respondents who have allowed us to interview them and provided support through their time and cooperation during the process of data collection. We are grateful to FGD participants as well who provided us with lot of valuable information during the process of interview.

We are thankful to the field team members of HDRC for their commendable work done with utmost sincerity in study areas.

We also acknowledge all the in-house staff of HDRC whose constant support and sincere efforts helped compilation of scattered and raw data and information into a research in order to deliver this report.

Should the analysis presented in the study be useful in understanding not only a particular water, sanitation and hygiene project led by WaterAid in Bangladesh, but also the multidimensional and complex real life issues of water, sanitation and hygiene in a newer horizon, our efforts put in the study would be considered worthwhile.

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Dhaka: April, 2017

ACRONYMS

DTW	Deep Tube-well
GCC	Gazipur City Corporation
HDRC	Human Development Research centre
HH	Household
JMP	Joint Monitoring Programme
KII	Key Informant Interview
LGI	Local Government Institution
MHM	Menstrual Hygiene Management
NGO	Non Government Organization
PSU	Primary Sampling Unit
STW	Shallow Tube-well
SWM	Solid Waste Management
TTC	Thermotolerant Coliform
UNDP	United Nation Development Programme
WASH	Water Sanitation and Hygiene
WSP	Water Safety Plan

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EXECUTUVE SUMMARY

Background: Banglabazar is one of the nine wards in Gazipur City town, a growing industrial area on the outskirts of Dhaka City where the number of slums and low income settlements are increasing as a result of growing number of factories. It has a population of more than 100,000. Living conditions in Banglabazar is poor, not least in relation to water and sanitation and hygiene (WASH). Overall environmental sanitation (waste management, faecal sludge management, drainage, public sanitation facilities) is dire or almost non-existent. Hygiene practices are also very poor. WaterAid Bangladesh together with H&M Bangladesh, Mohammadi Group (owner of factories supplying H&M), UN Women, the United Nations Development Program (UNDP), Solidarity centre, Warwick University and Dhaka University have selected Banglabazar to address the dire WASH situation in Banglabazar community. The selection is based on its manageable size, strong industrial growth, and harsh living conditions for the rapidly increasing number of residents.

Objectives: The broad objective is to understand and analyse present WASH situation of Banglabazar. The specific objectives are to – (i)know the proportion of households have access to safe drinking water facilities, (ii) find out the level of Thermotolerant Coliform (TTC), Iron and Arsenic in the water of the facilities, (iii) know the proportion of households have access to improved sanitation facilities, (iv)understand the proportion of households are practicing water safety plan (WSP)(v)know proportion of households have hand-washing facilities with soap and water near the latrine and kitchen, (vi)measure knowledge and practice of the target population regarding hand-washing at critical times, (vii) know proportion of households dispose faeces of under five children safely, (viii) measure the knowledge and practice of the female of reproductive age about Menstrual Hygiene Management (MHM), (ix) understand the Solid Waste Management (SWM)[4] practices of HHs and communities(x)know the present situation of faecal sludge management in the project target area, (xi) assess the WASH situation of 2 Community Clinics in the project targeted area, (xii)analyze WASH situation at 15 schools in the project targeted area, and (xiii) understand present capacity of LGI, WASH service providers and duty bearers to deliver WASH service effectively.

Methodology: The study design is a combination of quantitative and qualitative techniques. Data were primarily collected through individual interviews at household level for quantitative survey. Qualitative techniques were four focus group discussions (FGD), and eight key informant interviews (KII), check lists for fifteen schools and two community clinics survey. In addition water samples were collected from selected water sources and corresponding households in community and water source from all surveyed schools and community clinics to understand the level of Total Thermotolerant Coliform (TTC), Iron and Arsenic.

In the project area, targeted 2,500 households were listed using a household listing format. The households were then segmented into a group of 100 HHs yielded a total of 25 segments/clusters. These clusters were considered as Primary sampling Units (PSU) or cluster. From each selected cluster, 9 households (Total 225) were selected following systematic random sampling using household list prepared prior to survey.

Key findings

Background characteristics: Some 31.1 percent of respondents is either illiterate or has non-formal education. A 12.5 percent respondents is primary passed and 14.7 percent has passed SSC or higher. Reportedly, 92.9 percent is currently married. A 52 percent of surveyed households are made of brick and cement with tin on roof and 41.8 percent is made of tin exclusively. Some 47.1percent respondents live in own houses and others in rented houses. Almost all households are connected to electricity and 62.7% has TV, that mostly watch "STAR Jalsha" channel and enjoy Indian bangle drama/serial accounts 84.4 and 85.8 percent respectively. Half of the respondents use mobile phone, 15.8 percent of those are smart phone. Average monthly income and expenditure of the households are Tk. 18,244 and 17,530, where 60.4 percent can save portion of their income.

Water supply facilities: All (100%) of the surveyed households use improved source of water for drinking as well as for other domestic use. However, 30.2 percent of the tube-wells either have no platform or broken platform or week/loose at base, which are at risk to contaminate the source water. Access of the households to improves source of drinking water 69.8 percent. The most (96%) pronounced source is shallow tube-well without marking. Water sources are largely (61.3%) owned by landlords and shared with other households.

Access to safe water: Water sample of 11 randomly selected water sources demonstrates that none of the households are likely to collect water from these 11 sources, and are exposed to excess amount of arsenic and/or iron. However out of 11 water sources water sample 2 sources were found microbiologically contaminated, thus 11 households of 96 beneficiary are exposed 2 contaminated water sources reportedly fails to meet WAB standard of coliform (CFU < 10/100 ml of water) and is microbiologically contaminated water.

Water safety plan (WSP): Considering indicators of WSP as container is cleaned with drinking water before collection of water for drinking, lid of the container is in place while transportation to home, the water is stored at home in a clean and covered container and rest the container in a little elevated place, and finger or part of the hand is not dipped into water while drinking and serving the water. Thus estimated percentage of households with effective practice of WSP is 7.1.

Adequacy of water: All (100%) households of the surveyed respondents have access to adequate (≥ 20 liters per person per day) amount of water to meet their different domestic basic need like drinking, cooking and cleaning up, maintaining personal hygiene, and washing clothes.

Time spend for water collection: Average time taken for water collection (travel and queue) is 2.6 minutes. In 43.1 percent households, water point is either inside the dwelling, yard or plot. Another 41.8 percent households takes less than 5 minutes to collect water. It is less than 10 minutes to others.

Hand washing place: In 87.1 percent households, water is found in hand washing place at or near the latrine and in 80 percent of hand-washing place at or near to kitchen. Among the households having hand-washing place, soap at or near the hand-washing place for latrine and kitchen is observed in 57.7 and 80 percent households respectively.

Hand-washing at critical times: The most widely known critical times of hand washing are after using latrine (98.7%) and before taking food (87.6 %); and to some extent after cleaning baby's bottom (48.9%). On the other, reported common practice of hand-washing are 96.9 percent after use of latrine and 69.8 percent before taking food. Reportedly, 89.9 percent of the respondents wash their hands with soap and water after use of latrine.

Disposal of child faeces: Percentage of households likely to dispose child faeces safely into improved latrine is 78.

Menstrual hygiene management (MHM): The most familiar absorbent material during menstruation known to the respondents is re-usable rag (57.8%), followed by sanitary pad/napkin (26.7%). However, 72.8 percent of the respondents uses rag and sanitary napkin/pad by 23.6 percent. Among rag users, 98.7 percent wash the rag with soap and water before the next use. Some 42.9 percent dry the washed rag under sun by placing beneath a cloth, others do it in a hidden place inside room. Napkin users dispose of the pad indiscriminately into drain, waste basket/bin, pit/ditch and latrine.

Sanitation facilities: Overall, 78.3 percent households uses sanitary means of excreta disposal. However, 50.7 percent households shares the latrine with two or more households. Thus adjusted percentage of households using improved (not shared) sanitation facility is 27.6 percent.

Access to sanitation facility: A 14.7 percent households cannot use latrine during rainy season due to water logging. Household having access to improved sanitation has bees estimated as 66.2 percent.

User friendliness of latrine: Latrines are not user-friendly to 32.9 percent households because of dirty/filthy condition. Males and females have to stand in queue together at the same line and get little time to complete the task due to overcrowding.

Disposal of solid waste: Largely (60.9%), households dump the solid waste into ditch/marshy land. Nevertheless, 15.1 percent households dispose of the solid household waste in a specific place and in 4.9 households, waste are removed by locally paid carrier.

Liquid waste is usually drained out indiscriminately to surrounding land and canal/marshy land (83.6%). Few (13.8%) drains the household liquid waste to a nearby pit.

Capacity of LGI/WASH service providers and duty bearers:

As regard to capacity of delivering WASH services, at present GCC is experiencing challenges in solid waste management, water supply, water logging due to lack or absence of proper drainage system, land crisis for dumping solid waste, and inadequate fund. For the first time GCC has proposed Taka 1,00.00 lakh for 100% Sanitation Programme in its annual budget for Year of 2016-2017.Therefore, GCC is not in a capacity to extend the WASH services to a new area other than Tongi and Gazipur proper. According to them it will take time to initiate WASH services in Banglabazar.

WASH in school: Physically 33.3 percent of the surveyed schools has own improved source of drinking water within the school premises. However,28.6% platform of the water source in 4 out 14 are broken and potentially at risk for source water contamination. Shallow tube-well

is the most widely observed source. Regarding access to safe drinking water source, tested water source of all the surveyed schools is devoid of excess level of arsenic and iron. However, water source of 5 (26.7%) schools are contaminated with coliform group of microorganism. Distance between the water source and latrine is less than 30 feet in 66.7 percent of the schools having own water supply source. Among the surveyed schools, 99.3 percent of the schools have latrine for the students within their campus and improved in nature. On average there is one functional latrine and/or urinal for 99 students in the surveyed schools against the national standard of 50-60 students for one latrine or urinal. In 86.7 percent schools, hand-washing place is less than 10 steps from the latrine and soap was observed in 46.2 percent of hand-washing places. Regardless one or both hands, direct observation reveals that 23 percent boy and 33.5 percent girl washes their hands with soap and water after use of latrine. Corresponding figures are 21.1 percent and 13.2 percent for the boys and girls before taking food. Except one, class room of the other surveyed schools is found neat and tidy. Solid waste, largely rubbish, is usually disposed of beside the schools or nearby pit/ditch. Most of the schools have no formal drainage system.

WASH in community clinics

None of the observed community clinics (CCs) have functional source of water supply. Both the clinics use neighborhood water source. There is an improved functional latrine in one community clinic but not in use due lack of water. In other community clinic none of the latrines are suitable for daefecation as one is found blocked and exit pipe other latrine found ruptured.. Irrespective of staff and patients, no hand-washing place is seen with water and soap. At both clinics, medical waste is disposed of incinerator. None of the community clinics have formal drainage system to pays the storm water from the courtyard.