# FINAL REPORT

## Post Implementation Monitoring Survey (PIMS) for WASH services provided by WaterAid Bangladesh during the last 10 years (2005-2014)



SUBMITTED BY

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SUBMITTED TO

WaterAid

# Contents

## Acronym

| | |
|---|---|
| ASEH | Advancing Sustainable Environmental Health |
| AIRP | Arsenic Iron Removal Plant |
| BDT | Bangladeshi Taka |
| CAIRP | Community Based Arsenic Iron Removal Plant |
| CBO | Community Based Organization |
| CLTS | Community Led Total Sanitation |
| DfID | Department for International Development |
| DTW | Deep Tube Well |
| EEHCO | Enhancing Environmental Health by Community Organisation |
| FI | Field Interviewer |
| GFS | Gravity Flow System |
| HH | Household |
| LMC | Latrine Management Committee |
| NGO | Non-government Organization |
| O&M | Operation & Management |
| PCSL | Pathways Consulting Services Ltd |
| PIMS | Post Implementation Monitoring Survey |
| PSF | Pond Sand Filter |
| RWH | Rain Water Harvesting |
| SMC | School Management Committee |
| SMT | Study Management Team |
| STW | Shallow Tubewell |
| WAB | WaterAid Bangladesh |
| WASH | Water Sanitation and Hygiene |
| WMC | Water Management Committee |
| WSS | Water Supply and Sanitation |

# Executive Summary

## Background

WaterAid has been operating in Bangladesh since 1986 in Water, Sanitation and Hygiene (WASH). Services of WaterAid Bangladesh (WAB) are focussed onurban slums, hard-to-reach areas and eco-hazardous zones (such as hill tracks and hillocks, dry and Barind tracts, salinity-prone coastal belt, haor and flood-prone chars). WAB claims to have reached so far around 9.5 million people across the country with WASH services.

ASEH project of WAB concluded in March 2009 and thereafter 7 projects popularly known as Post-ASEH (Rural WASH, Urban WASH, Inclusion, Climate Change, Small Town, ASEH Plus, EECHO) followed since 2009.

WAB has been sponsoring PIMS for WASH for quite a long time at regular intervals. In 2014 WAB had planned to conduct the survey in a larger scale covering facilities installed in the past 10 year (2005-2014).Pathways Ltd has conducted the survey as per the design supplied by of WAB and produced this report.

## Specific objectives of PIMS 2014

- To know the present number of users of installed/rehabilitated water and sanitation facilities;
- To assess the physical condition of the technology installed/rehabilitated;
- To assess households' access to water and sanitation facilities;
- To appraise to what extent the management committees are presently functional; and
- To see the availability of external financial and technical support in case of major renovation of the facilities.

## Methods used

It was mostly a quantitative survey with some element of qualitative investigations at the end. Four set of questionnaires were administered: Community questions- 1237, Water Points- 1975, Household questions- 2770and Institutional latrine- 48. Two-stage random sampling procedurewas used and the samples were drawn by WAB. The sample covered all WAB programs so far been implemented. After the compilation of the field survey findings, the results were shared with the representatives of WAB partner NGOs, conducted FGDs with Water Point(WP) caretakers and discussed with local government representatives at the union level.

## Major Findings on Water use

Twelve types of WPs were sampled/surveyed from both urban and rural areas. WAB either installed them new or rehabilitated or upgraded them specially constructing the TW platforms. The number of WPs sampled in different technologies and sub-segments is widely skewed as 95% of them are from rural locations, 85% are rehabilitated/ upgraded and 93% are tubewells (shallow 65%, deep 28%). Thus 10 technologies (other than TWs ) constituted only 7% of the WP samples. The number of sample WPs for these ranged between 1 and 48 with 3 technologies (RWH at HH level, PSF and Supply line without reservoir) covering major portion of them.

### a) Users of water points: reported vs. present

Estimated total number of households using water from WAB supported water pointsis 597,300 (or nearly 0.6 million HHs). The number has been arrived by multiplying Total number of WAB-installed/rehabilitated WPs with the estimated proportion WP functional and Estimated number of households using water per WP. This was calculated separately for rural and urban and added. The detail has been presented in section 3.2 of the report.

The estimated average number of households using water presently from combined WAB supported WP technologies is 5.3, which is the same for the reported (to have been used)although the estimates are seen to vary by WP technologies and other sub-segments. Numbers of households using water presently from one STW is 2.4 as against reported 2.7, and for DTW it is 8.6 as against 8.3. The estimates for present and reported are also near for other WP technologies. For example,

for ‘RWH at HH level’ the present and reported estimates are 59.7 and 60.3, for PSF 55.7 and 51.8 and for ‘Supply line without reservoir’ 19.4 and 18.8 respectively. However, the estimates vary a lot by year of installation/rehabilitation. For example, the present number of user HHs per WP (combined all) during ASEH period (2005-2008) ranged between 10.8 and 19.5 and during post-ASEH (2009-2014) it ranged between 2.8 and 4.1 per year. WP mix might have some contribution to the estimates.

**b) Functionality**

About 80% of the WPs surveyed were functioning well, 6% partially and the remaining 14% were non-functional. Higher rate of non-functioning of WPs was reported/ observed for DTW (27%), RWH (29%), Ring/Dug well (33%) and PSF (35%). It was also found that the rate of functionality decreased over time but the WPs installed during last 6 years are functioning better than those installed before.

Reasons for non-functionality were: mechanical breakdown (72%) followed by drying of source (29%). Functionality of the facilities is decreasing over time. Relation between functionality and year of installation is statistically significant (correlation coefficient is -0.406). There is a 9% drop of functionality in the first year of the installation. With the regressed rate 50% of the water points surveyed may become dysfunctional after 9 years and, all facilities may dysfunctional after 17 years.

**c) Accessibility, affordability and quality**

Almost all (99%) of the sampled households could get water from the source any time of the day. 98% rural and 57% urban households do not pay any fee for the water they use. Of the few households who had to spend money for water, more than 84% of them reported that they could easily afford it.

Average estimated expenditure on water point during past 12 months were: BDT 3,083 for GFS, BDT 1,750 for dug well, BDT 1,627 for supply line without reservoir, BDT987 for PSF, BDT 842 for RWH, BDT 565 for DTW, and BDT 242 for STW. Average expenditure per household on water point calculates Tk.128.

Majority of the WP caretakers perceived the quality of water to be good (86%). The perceived quality of water did not differ for rural and urban. 94% of the HH respondents described the water quality to be good for drinking.

**d) Management committee and functionality of WPs**

Overall 17% of the WPs had any Management Committee (MC) and 33% of them are reportedly active. 58% of the MCs are not active at all, and another 9% is somewhat active. Significantly more urban (57%) than rural (15%) and more new (24%) than rehabilitation/upgraded (14%) WPs had an MC. Average number of MC members has declined from 10 at the time of inception to 4.1 presently.

Existence of management committee does not show any impact on functionality of the WPs as 80% of the WPs both with or without having an MC were found good and functional.

## Major findings on Sanitation

**a) Households latrine**

More than 8% of the WAB water beneficiary households surveyed practiced open defecation and another 5% used hanging or open pit latrine. Open defecation was much higher in rural than urban.

61% of the latrine using households shared their latrine with others, which is more in urban (79%) than rural (59%), Number of households sharing a latrine seat was much higher for urban (15.6 hhs) than rural (2.7 hhs). Almost all the latrines were said to be installed by the respondent households either individually (54%) or in group (39%). About one-third of the latrines were observed poor and others were good to reasonable.

**b) Institutional latrine**

Out of 48 institutional latrines surveyed 45 were found functional. They constituted with Community latrine (21), Public toilet (7) and School toilet (20). 85% of the Institutional latrines were built new by

WAB. Apart from school toilets, average number of users of other latrines remained almost unchanged over the years. Users in case of community latrine and 'committee' in case of public toilet bore the major expenses (both 86%). 23% of the situation the users directly paid for use of the latrines. This proportion is low because of school toilets.

Although 86% of the facilities were in good/ reasonable structure, 23% reported the need for major repair. The needs expressed were mainly as regards septic tank/pi and roof/wall/inside. Among other findings, 29% of the latrines were found locked, 77% were clean (at least reasonably), 86% had working hand washing facility in or near toilet and 50% had running or stored water inside the latrine.

## Community engagement in WASH

Out of 1,237 communities surveyed 451 were supported in ASEH period and the remaining 786 were from Post-ASEH. On an average, there are four newly constructed and 13 rehabilitated/upgraded WPs supported by WAB in each community; this number varied widely among communities and programmes. Average number of households receiving improved latrine per community during WAB intervention was 56 and average number of community latrine seats per community was seven. Average number households receiving improved latrine (56) seems quite significant as compared to the average number of household per community (146). 60% of the communities surveyed were ever declared open defecation free (ODF) and most of them (88%) had declared this status during the time of their intervention. The ODF status was claimed by 50% of the communities during the survey.

## Conclusion and Recommendation

### a) Conclusions

Overall the survey shows positive results especially in respect of functionality of the water points (81% good and 6% partial) and the average number of households using water per WP (5.3 HHs). The perceived quality of water for drinking is also quite high (85% of WP caretakers and 94% of the HH respondents saying this). It is also very encouraging to notice that most of the WP caretakers felt confident about repairing their units by themselves and knew about the sourcesavailabilityof the accessories. Another remarkable finding is that about 98% of the rural and 57% urban households were getting the water without any payment.

However, question may be raised whether there was any possibility to see the situation better than it was found. This is because the survey results show some pocket areas where there was room for improvement. For example, larger proportion of DTWs (27%) were non-functional, WPs installed/rehabilitated during 2005-2008 are showing high non-functionality (33-44%), simple/small problems are keeping more than 5% of the WPs partially functional, lack of any initiative to repair 71% of the non-functional WPs for long time etc. WAB supported PNGOs also reported to have hardly any mandate or mechanism to follow-up the CBOs and the WPs after the projects end.

As regards latrine use, the survey of households as well as FGDs conducted with the WP caretakers and the discussion with the UP Chairmen confirmed that open defecation is still in practice in almost all the rural communities and was estimated as high as 50% in a union of Koira upazila. Lack of attention from senior administrators on sanitation and inadequate supply of latrine units as compared to the need of the poor were identified by the UP Chairmen as the main reasons behind the return of open defecation to many.

### b) Recommendations

- WAB takes initiative to prepare an organized and corrected database of the WPs by union or ward with contact address and mobile number of the WP caretakers.
- Once the database is ready, WAB takes up action plan to repair and rehabilitate the repairable non-functional and partially functional WPs.
- The roles of CBOs are reassessed and alternatives developed for a sustainable arrangement to attend WASH activities in the community after the PNGOs leave the area.

- Special attention is given in sustained use of latrine by the WAB beneficiaries. Maintaining/ achieving ODF status should be emphasized in all WAB supported areas. The successful models may be replicated with close monitoring and research.
- For externally designed and software supported multi-country survey like PIMS, WAB should confirm about the completeness and applicability of the support services, allow more preparatory time to the agency to verify those, give solution to the problem faced by the agency and remain flexible for adjusting data collection instruments as per local conditions.

# Chapter-1
# BACKGROUND OF THE STUDY

## 1.1 Introduction

Pathways Consulting Services Ltd (PCSL) under an Agreement with WaterAid Bangladesh (WAB) has been conducting the Post Implementation Monitoring Survey (PIMS) on water, sanitation and hygiene (WASH) services provided by WAB. WAB has been sponsoring PIMS for quite a long time at regular intervals in order to update itself about the field situation of the water and sanitation facilities installed by its partner organizations in the communities. This year WAB planned to conduct the survey in a larger scale covering facilities installed in the past 10 year (2005-2014).

As per the Agreement, this is the second deliverable -- the draft report on the quantitative field survey conducted among four groups of respondents (CBO Representative, Water Point Caretaker, Institutional Latrine Caretaker and Household) during the month of November-December 2014. During the reference 10 year period, Advancing Sustainable Environmental Health (ASEH) program of WAB continued up to 2008 and thereafter several other programs on WASH known as Post-ASEH have been implemented. WAB had designed the survey plan and its global partner (mWater) developed the mobile phone based data collection software. PCSL has been mainly responsible for the field data collection and preparing short reports on the collected data.

## 1.2 About WaterAid Bangladesh

WaterAid has been operating in Bangladesh since 1986 as one of the lead actors in WASH sector and is well experienced in innovating, scaling up and managing large-scale projects targeting to poor, vulnerable and excluded. The geographic focus of WaterAid in Bangladesh includes urban slums, hard-to-reach areas and eco-hazardous zones such as hill tracks and hillocks, dry and Barind tracts, salinity-prone coastal belt, haor and flood-prone chars keeping an eye over the climate change implications.

With the support of its partners, WaterAid has successfully developed and implemented models and approaches for providing sustainable community managed WASH services and facilities for poor and marginalised in different hydro-geological contexts of Bangladesh. The organisation has reached so far around 9.5 million people across the country with WASH services. It continues to enhance sector stakeholders' capacity for establishing system in programme delivery, facilitates communities to demand their WASH rights, capacitates and sensitizes government and other duty bearers to respond to the people needs, and advocates for the essential role of WASH in human development. Currently the organisation manages six programmes, divided into several individual projects, being operated by 29 partner NGOs in 26 districts including 11 cities and towns.

## 1.3 Interventions under ASEH

Advancing Sustainable Environmental Health (ASEH) is the largest programme ever undertaken by WaterAid. Starting in 2003, WAB implemented ASEH over a period of five and a half years in Bangladesh. Funded by the Department for International Development (DfID) and WaterAid to the tune of £17.5 million, an estimated 1.2 million households were reached when it concluded in March 2009. ASEH's outputs as per the end of project evaluation study are:

- Number of community-based organisations : 15,730
- Number of water beneficiaries : 1.8 million
- Number of sanitation beneficiaries : 5.6 million
- Number of hygiene beneficiaries : 6.8 million

## 1.4 Interventions under Post ASEH

While the ASEH programme has established the fact that Community-led Total sanitation (CLTS) can turn a village Open Defecation Free (ODF) within a given period of time, further facilitation is necessary to support the community to maintain its collective hygienic practices, sustain the use of sanitary latrine and their maintenance, which may be withered in flood and rains. Sanitation in urban areas especially in urban slums is appalling and paucity of space to build latrine and sludge disposal still represent acute problems both in urban and rural areas.

On this backdrop, a new programme has been designed named Enhancing Environmental Health through Community Organisations (EEHCO), as a forward linkage of ASEH, aimed at capacity development of relatively young CBOs as CLTS and hygiene actor, sustaining behaviour change, activating action committees for WASH rights and meeting WASH demand in underserved areas. The geographic focus of the programmes after ASEH includes both urban and rural areas with emphasis on excluded, climate vulnerable and hard-to-reach areas, consolidation of accomplishments, replication of successful models, undertaking new initiatives, knowledge generation, capacity development, influencing and institutional sustainability.

After the completion of EEHCO in 2011, the country programme consists of six programmes:

- Urban WASH -- aims to meet the crisis of WASH affecting the environmental health in general and low-income communities in major cities),
- Rural WASH -- with an overall goal to contribute to the achievement of the MDG related to water and sanitation through creating access to the services in favour of the rural poor and disadvantaged groups in difficult and hard to reach areas,
- Climate Change -- for building resilience of climate vulnerable poor people for WASH.
- Inclusion -- aims at inclusive WASH approach for socially excluded population,
- Small Town -- for ensuring WASH services for poor of C graded towns), and
- Influencing and Enabling Programme -- a cross-cutting supplement to other programmes and is focused at national level, influencing policymakers through network and civil society movement.

## 1.5 Objectives of the Study

The main objective of the PIMS has been to assess the condition of water and sanitation facilities provided by WAB during the last 10 years prior to 2013 from sustainability point of view. The specific objectives were:

1) To estimate the present number of users of the WAB installed/rehabilitated water and sanitation facilities;
2) To assess the physical condition of the technology installed/rehabilitated;
3) To assess households' access to water and sanitation facilities;
4) To appraise the functional status of the management committees at present; and
5) To see the availability of external (GO/NGO) financial and technical support (e.g. spare parts etc.) in case of need for major renovation of the facilities.

## 1.6 Methodology

The survey has two phases. In the first phase quantitative data have been collected using mobile phone based technology and in the second phase qualitative information will be collected through FGD and In-depth interviews. The following paragraphs elaborate the process:

**Quantitative data collection:** WaterAid Bangladesh provided both water and sanitation facilities in all the communities it intervened and has detail inventory, more or less, of water services it provided particularly since 2005. The basic sampling unit was decided to be the water points (WP) or facilities installed/rehabilitated during the past 10 years. As done before, two-stage cluster sampling procedure was followed to draw the sample units.

Water facilities provided by WAB are clustered as unions/wards/slums. Therefore, at the first stage such clusters were selected randomly. Based on 5% margin of error, 1518 water points (WP) installed by WAB (new, rehabilitated, upgraded and platform constructed) during 2009-2014 as post-ASEH from 19 districts were targeted. Samples for pre 2009 facilities (ASEH) were determined based on the latest information of the facilities installed during the period. The set target was 554 WPs. The sampling frame was finally prepared jointly with WAB and the sampling plan was finalized. For each water facility, two households were selected at random based on availability and interviewed. The finally completed sample WPs and water user households have been presented at section-3. Information on the latrines were collected in fair details at the household survey.

Apart from the water facilities and household latrines, structured information on WaterAid supported institutional latrines (at schools, market and community) were collected as per the availability through interview of the caretakers and also observation.

Four questionnaires (CBO/Community, Water point, Institutional latrine and Household) were administered to the more appropriate respondent available around. The community questionnaire for capturing historical perspective of WASH situation, water facility questionnaire for information on water services, institutional latrine questionnaire for obtaining information on school WASH and community latrines, and household questionnaire were used for getting households' access to WASH services.

Data collection for this phase was done by using smart mobile phones. mWater had developed the platform and interface for data collection, storage and management on behalf of WAB. WaterAid also provided 20 mobile phone sets used for the data collection in the survey.

**Qualitative data collection:** The purpose of collecting qualitative information has been to supplement the quantitative findings in a bid to greater understanding why and how the estimates were like that and to get any learning and direction from it. Due to prevailing condition of the country we had to limit field visits. After the compilation of the field survey findings, the results were shared with two rural and one partner NGO of WAB. Moreover, in two areas four FGDs with WP caretakers and four KII with local government representatives at the union level were conducted. This report combines those findings with the quantitative findings as and when applicable.

# Chapter-2
# IMPLEMENTATION OF THE SURVEY

## 2.1 Management of the Survey

The survey has been managed by a four member team comprised of Mohidul Hoque Khan - Team Leader, Asraul Haque Khan - Data Analyst, Kazi Monirul Islam - Field Manager and Asif Hasan Shakil, Research Officer. They were supported by the regular staff members of PCSL. In addition, a total of 19 field surveyors experienced in mobile based survey and four qualitative field researchers collected the field data as per the design under guidance of the study management team. From the client side, Mujtaba M. Morshed, Program Officer, WaterAid Bangladesh continuously worked with the team specially to coordinate with mWater, who provided the mobile survey software.

## 2.2 Data Collection Instruments (DCI):

For the quantitative survey, four sets of questionnaires were supplied by WAB in the mobile format. They are about Community, Institution, Water point and Household. The questionnaires were thoroughly reviewed and feedback given by the study management team for updating the software. The process continued both before and during the orientation of the field interviewers.

## 2.3 Field data collection

**Recruitment and training:** 20 field interviewers (FI) having experience in conducting mobile surveys were recruited and trained about the task and finally 19 of them were sent to the field. The training was conducted for four days including one day's field practice. WAB officials had actively taken part in the training specially to orient the FIs about the questionnaires they had developed and also about the mWater sponsored web based data collection software.

**Field placement:** A detail field schedule was prepared based on the sample spread. The FIs moved in groups of 3 or 4 but worked individually. The FIs selected and interviewed the respondents in a particular area following a random procedure as under for which they were thoroughly trained.

**Selection of sample respondents:** Reaching a district/sample region, the FIs contacted the local PNGO of WAB in the WAB supplied contact address and made detail planning for the data collection in the area with their advice and support. They collected all possible information and contacts from the PNGO about the listed Water Points and the respective CBO/communities so that they are able to locate them as quickly as possible. Then the FI interviewed concerned CBO representative (if available), the caretaker (or the most appropriate person of the WP), maximum of two randomly drawn households using water of the sample WP and any WAB supported Institutional latrine available around. In places where PNGO was not available, the FIs directly moved to the community and used multiple approaches taught to them to reach the listed sample WPs and do the stated interviews.

**Replacement of samples:** Initially it was planned not to replace any WP sample. For that it was decided to take all out efforts to locate the sample WP and if any sample was not found the reason would be recorded. However, in certain areas due to dearth or absence of any local support, some of the samples were not being located. Various local techniques were applied by the FIs including use of tubewell mechanics. While informed about such non-availability, the WAB officials sometimes gave decision of replacement from the neighbouring locations. Ultimately with a few replacements the number of completed WP interviews was 1975 as against the targeted 2072.

**Sample size:** Finally the total sample coverage of the four categories is presented in the following table by rural and urban break-down. It may be seen that the samples are mostly rural. Further break-down of the sample may be seen in the following chapters and also in the Annex tables.

Table-2.1: Completed sample size of four categories

| Area | Community | Water point | Household | Institutional latrine |
|---|---|---|---|---|
| Rural | 1,206 | 1,878 | 2,606 | Community latrine-21, Public toilet-7&School toilet-20 |
| Urban | 31 | 97 | 164 | |
| **All** | **1,237** | **1,975** | **2,770** | **48** |

**Period of Field Data Collection:** The field survey was conducted simultaneously by the surveyors divided into 6 field teams. After the training, the field survey started on 08-11-2014 and the last team had returned on 14-12-2014.

## 2.4 Data Analysis and Reporting

The survey data have been tabulated separately for four questionnaires and placed in Annex-2. In order look at the variations, the tables have been grouped by rural and urban, by technology, by new and rehabilitated and also by year of installation. The findings presented in the report are brief and divided in two chapters. Chapter-3 presents those relate to the five stated objectives of PIMS and Chapter-4 presents the remaining important findings that have been gathered in the survey process that may be supportive to the main findings.

## 2.5 Challenges and mitigation steps

There was a tight schedule for the FIs in the field. Also they had to face both technical and non-technical problems throughout the data collection process. The mWater supplied questionnaire software showed various problems including sudden errors and interruptions. The quality of training also suffered due to lack of timely support from the software agency. Often the WAB representative was found reluctant to accept genuine problems in the questionnaire saying that 'it was pretested before and finalized'. This attitude kept the senior WAB officials away from the study implementation process. Moreover, due to ignoring the local factors in the study design labelling it as a multi-country survey, the quality of data has suffered. Downloading the questionnaire afresh at times invited problems than solution. There was also delay of several hours in showing records in the server and even a few data loss occurred for some of the Field Interviewers. Non-technical errors included improper address and long distance between samples. For these reasons, the FIs had to work hard from morning to evening and remain in continuous exchange with the head office over telephone.

The problems were partially addressed by engaging additional manpower at the level of sample drawing, giving decisions on the problems raised instantly over telephone by the senior management and sometimes consulting with WAB official, allowing flexibility to the FIs in some conditions, and increasing supervision at work. Continuous exchange between WAB representative and the PCSL officials have been instrumental for successful completion of the survey.

# Chapter-3
# PRESENTATION OF FINDINGS
**(As per objectives)**

## 3.1Introduction

This Chapter presents the findings of the field survey highlighting the five objectives of the PIMS. Addressing the five objectives outlined in Section-1.5 needed sample estimates mainly from the water point and household survey and a part of the community survey. Therefore, this Chapter presents all important findings of the WP and household survey in addition to those required to address the five survey objectives. In situation where survey findings from multiple layers have been used to address a particular objective, the sources have been mentioned.

## 3.2 Estimated number of present beneficiaries of WAB facilities

(**Ref.Objective-1**)

The survey design only enables estimation of the number of households presently using WAB supported water facilities. It was not designed for the same on toilet use although status of that has been gathered from all the sample WAB water using households. The method of estimation of the total water using householdshas been shown in Annex-1 and the summary is presented in the table below. The information in the second column of the table is supplied by WAB and that of 3$^{rd}$and 4$^{th}$column estimated from the survey. The 5th column is a calculated field and it gives the total estimated household using WAB supported water points, which is 597,300 (or nearly 0.6 million household).

Table-3.1: Calculation of Estimates for Water users

| Area | Total # installed& Rehabilitated WP by WAB | Estimated proportion functional (Good &pertially) | Estimated # of HH using water per WP | Estimated present water using HH From WAB WPs |
|---|---|---|---|---|
| **1** | **2** | **3** | **4** | **5-2x3x4** |
| Rural | 130,785 | 0.84 | 4.8 | 527,325 |
| Urban | 1,801 | 0.98 | 13.0 | 22,945 |
| **All** | **132,586** | **0.85** | **5.3** | **597,300** |

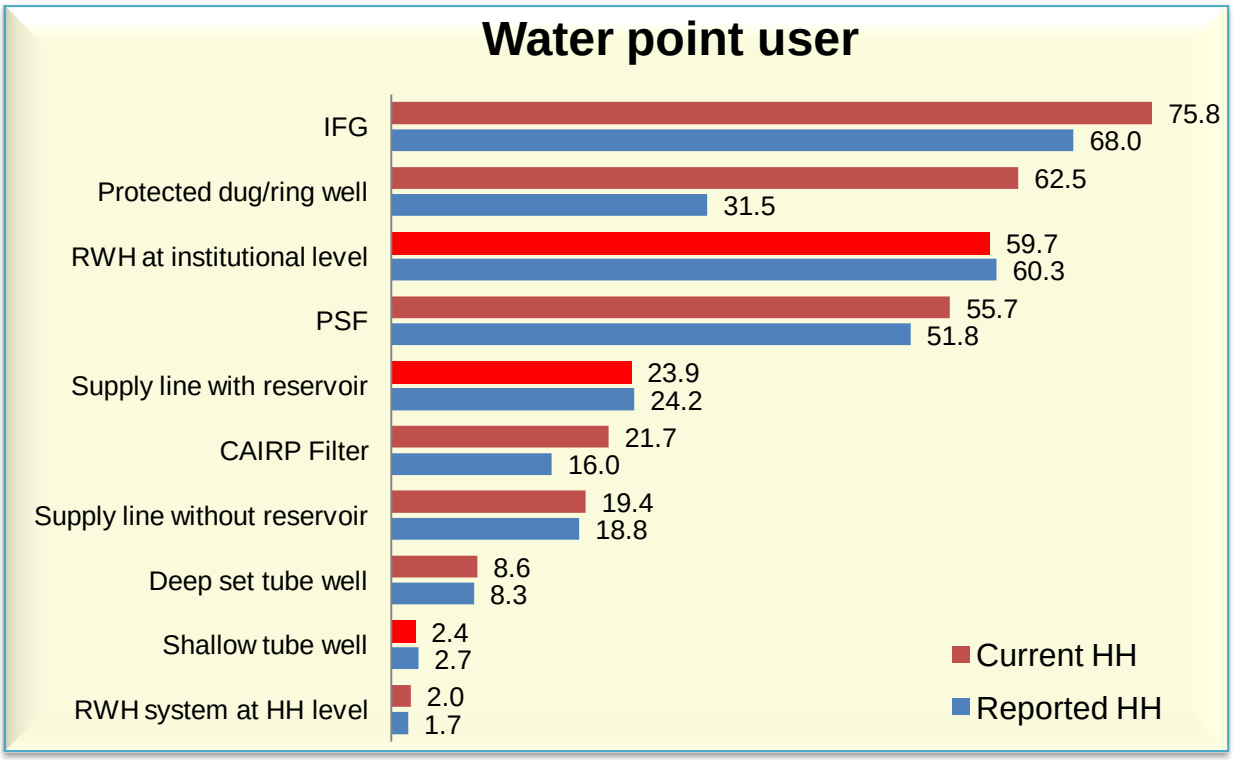
It may be mentioned that twelve types of WPs were surveyed from both urban and rural areas. WAB either installed (New) or upgraded/rehabilitated them. The number and combination of sample WPs in different sub-segments is widely skewed as 95% of them are from rural locations, 85% are rehabilitated/ upgraded and 93% are tubewells (shallow 65%, deep 28%). Thus, only 7% of the sample WPs are distributed among 10 WP technologies. The number of sample WPs for these ranged between 1 and 48 with 3 technologies (RWH at HH level, PSF and Supply line without reservoir) covering major portion of the 10 Non-TW types.

Ideally it was necessary to calculate the user estimates separately for each technology and add those up separately for urban and rural (as shown in Annex-1), which could not be done due to lack of technology-wise WAB installed/rehabilitated information ready at hand. The water users of the institutional latrines have also remained outside the calculation. Needless to mention that the more the population and survey data will be accurate, representative and exhaustive, the more the final estimate will be near to the reality. Here the compromise is multiple and therefore the efficiency of the estimates may not be high.

As regards compromise, we have not taken into consideration the proportion of WPs that are abandoned or out of list. The few replacements done on sampling may also have influenced the estimate positively. Also since STW and DTW constitutes the majority of WPs in rural areas, it was necessary to calculate the user households with actual number installed or rehabilitated of the two for a near correct estimate. This is especially because average number of households using water from a DTW and a STW varies widely (8.6 and 2.4 respectively). Moreover, question may arise whether all the water using households of a rehabilitated WP could be labelled as WAB source user. For urban the reliability of the estimate seems to be high as there is no such questions that can arise.

**Users of water points: Present Vs Reported**

The estimated average number of households using water presently from combined WAB supported WPs is 5.3, which is the same for the reported (to have been used) although the estimates vary a lot by WP technologies and other sub-segments. The Bar diagram below shows the average number of users for the 12 WP technologies both current (at present) and reported.It may be noticed that average numbers of households using water presently from one STW is2.4 as against reported 2.7, and for DTW it is 8.6 as against 8.3. The estimates are also near for other WP technologies. For example, for RWH at HH level the present and reported estimates are 59.7 and 60.3 households, for PSF 55.7 and 51.8 households and for Supply line without reservoir 19.4 and 18.8 households respectively. The estimates also vary a lot by year of installation/rehabilitation. The earlier installed WPs are used by more number of households as compared to the recent ones. The present number of user HHs per WP (combined all sample) during ASEH years (2005-2008) ranged between 10.8 and 19.5 in different years and during post-ASEH (2009-2014) it ranged between 2.8 and 4.1 only. However, the estimates have not considered the WP mix sampled in different years and it shows to vary a lot (See table 3.2 at page 10).



**Validity and acceptability of the estimates**

The WAB officials/ reviewers and the representatives of the PNGOs more or less accepted the estimates while the findings were shared with them and they discussed those in a workshop setting. Those who had raised some questions were clearedstating the limitation of the methodology and the process of calculating the estimates in the line discussed above.

As a part of methodology a few In-depth Interviews (IDI)were conducted with the WAB Partner NGOs in rural areas. Either they had little to comment on the reliability of the estimates (WP functionality and Water using HHs per WP) or they had endorsed it. The senior management of Dhaka Ahsania Mission (DAM) and UnnayanSahojogi Team (UST) admitted that they had hardly any mechanism to follow-up the CBOs or WPs of the completed projects and thus they were unable to comment on the calculated estimates from the field survey. At the same time both the PNGOs expressed their confidence on WAB as regards monitoring of the facilities that are done independent of them, although they cooperate if asked. For urban component, the sample size was small and more so for Dhaka city slums. While the total urban estimate was shared with DusthaShasthyaKendro (DSK), they could not accept any non-functionality of WP (survey found 15%) and variety of WPs (DSK only uses DWASA source). However, they said that even if projects discontinue in any slum, they do some sort of monitoring through their staff members in all the slums they have worked. Moreover, the slum dwellers also seek their assistance whenever they face any major problem. DSK said that they can give this support because their staff members are around almost all slums and many of them are personally known to the CBO leaders. This service also keeps DSK up to date about the slums enabling them in negotiating new projects.

## 3.3 Physical condition and Functionality of facilities

**( Ref. Objective-2**)

### 3.3.1 Water Points

**Distribution of sample WPs:** Before addressing the main issue of physical condition and functionality of the WPs, let us see the sample distribution.

Total 1,975 Water Points (WP) were surveyed under the Task. They were established new by WAB or rehabilitated/upgraded (including platform construction) during 2005 through September 2014. The distribution of the sample WPs in different years by location (rural vs. urban), Technology types (12 Nos.) and by the nature of intervention (new vs. rehabilitated/upgraded/platform constructed) are presented in the table below.

Table-3.2: Distribution of the sample WPs

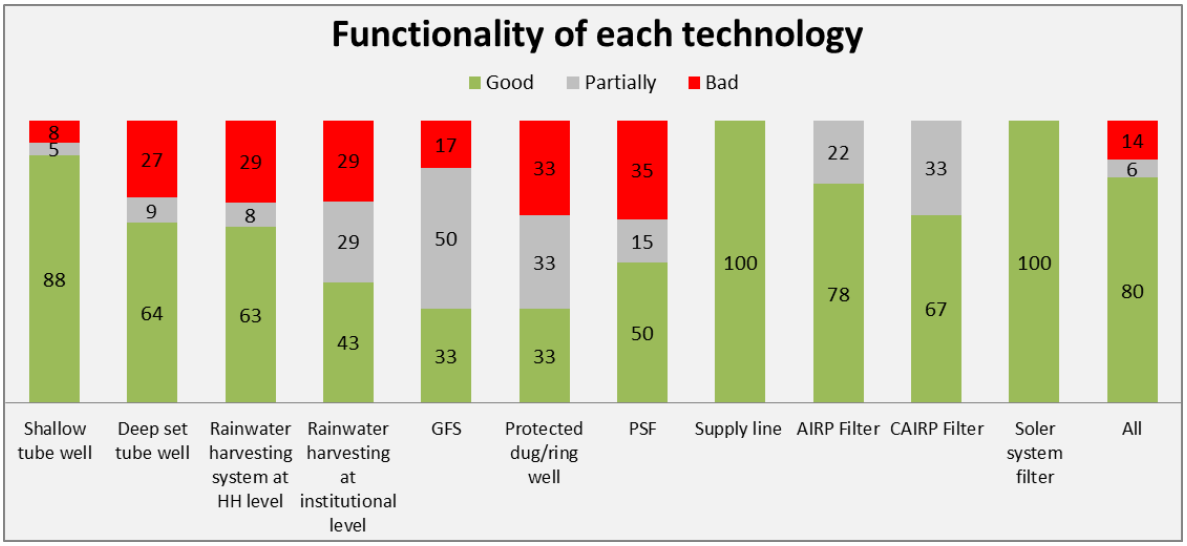
| Description | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Intervention area** | | | | | | | | | | | |
| Rural | 39 | 78 | 216 | 168 | 135 | 149 | 215 | 292 | 469 | 117 | **1878** |
| Urban | 6 | 8 | 12 | 10 | 2 | 12 | 5 | 12 | 20 | 10 | **97** |
| **Water source** | | | | | | | | | | | |
| Shallow tube well | 11 | 22 | 57 | 44 | 124 | 124 | 184 | 261 | 380 | 81 | **1288** |
| Deep set tube well | 24 | 49 | 160 | 120 | 12 | 28 | 11 | 18 | 86 | 41 | **549** |
| RWH at HH level | 1 | 2 | - | - | - | - | 17 | 13 | 15 | - | **48** |

| Description | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| RWH at institutional level | 1 | 1 | - | - | - | - | 3 | 1 | 1 | - | **7** |
| IFG | 2 | - | - | 1 | - | - | 2 | - | - | 1 | **6** |
| Protected dug/ring well | - | 2 | 1 | - | - | - | - | - | - | - | **3** |
| PSF | - | 2 | 2 | 3 | | 1 | 2 | 5 | 5 | | **20** |
| Supply line with reservoir | 2 | 6 | 1 | 1 | | 3 | - | - | - | - | **13** |
| Supply line without reservoir | 4 | 2 | 7 | 9 | 1 | 5 | - | - | - | - | **28** |
| AIRP Filter | - | - | - | - | - | - | 1 | 4 | 1 | 3 | **9** |
| CAIRP Filter | - | - | - | - | - | - | - | 1 | 1 | 1 | **3** |
| Solar system filter | - | - | - | - | - | - | - | 1 | - | | **1** |
| **Intervention type** | | | | | | | | | | | |
| New | 17 | 46 | 81 | 33 | 7 | 16 | 28 | 32 | 30 | 9 | **299** |
| Rehabilitation and Upgrade | 5 | 8 | 23 | 16 | 20 | 11 | 10 | 18 | 16 | 5 | **132** |
| Platform construction | 23 | 32 | 124 | 129 | 110 | 134 | 182 | 254 | 443 | 113 | **1544** |
| **Total** | **45** | **86** | **228** | **178** | **137** | **161** | **220** | **304** | **489** | **127** | **1975** |

## **Functionality of WPs**:

As mentioned before, the distribution of sample WPs is widely skewed and except for STW and DTW, the number of sample in other WP technologies is too low to calculate reasonable estimates. Interviewing the sample WP caretakers and through observation of the physical condition of the WPs, their functionality was determined. The queries constituted with the following: 1) Technical functionality now; 2) Number of days the water point was non-functional when it failed last time; 3) Incidence of discontinuity for more than 2 days in the last 2 weeks; and 4) Whether or not the water source is currently providing potable water. While the details of the findings by location (rural-urban), year of installation, type of water point and intervention type (new-rehabilitation-platform construction) may be seen in the Annex WP Tables, the summary findings are presented below along with graphs.

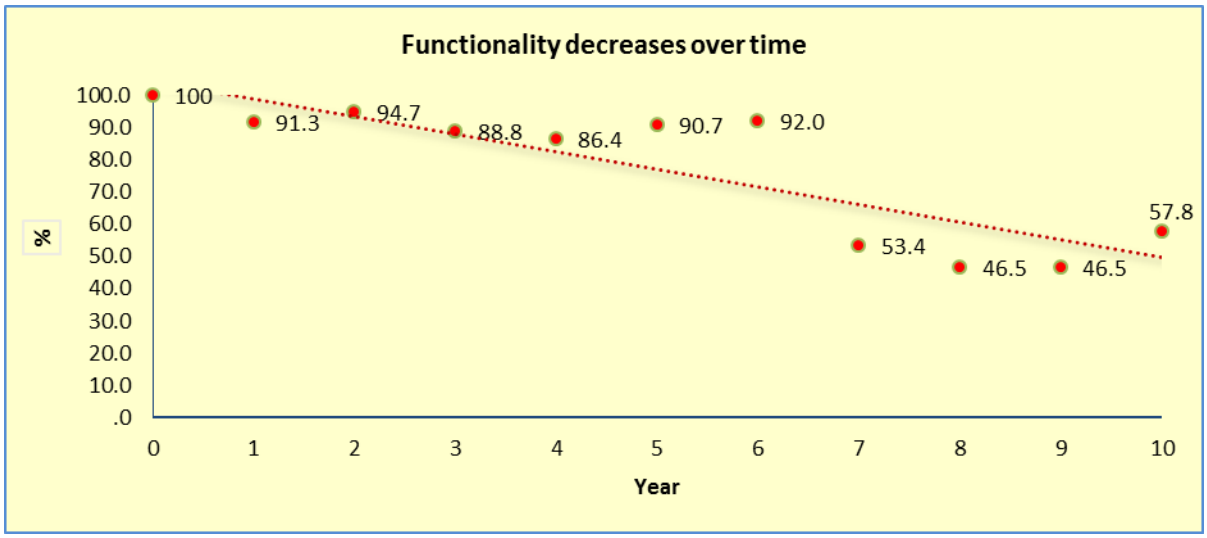
About 80% of the WPs surveyed were functioning well, 6% partially and the remaining 14% were non-functional.



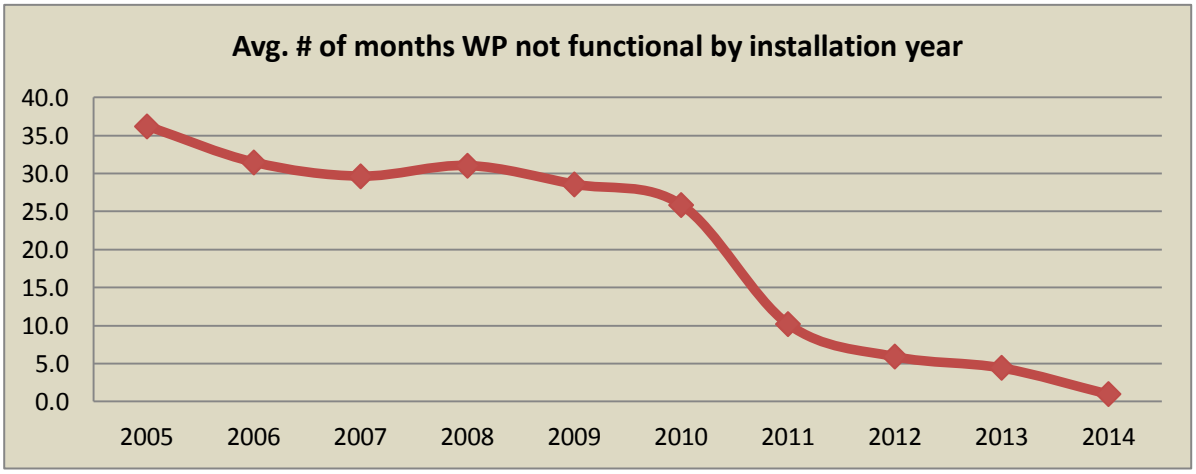

**Functionality of WPs:** About 80% of the WPs surveyed were functioning well, 6% partially and the remaining 14% were non-functional. Higher rates of non-functioning WPs as compared to average were reported/ observed for DTW (27%), RWH (29%), Ring/Dug well (33%) and PSF (35%). The

functionality of other WPs may be seen in the annex tables. However, the discussion on non-functional WPs below gives some picture of the same.

Plotting of the functionality index of the entire sample WPs by age of installation/ rehabilitation (0-10 year) shows the extent of decrease in functionality over time. It is interesting to notice that the WPs installed during last 6 years (during post ASEH) are functioning in much higher proportion (89%-100%) than those installed before (during ASEH), which ranged between 46% and 58%.




**Non-functionality status:** The average number of days of non-functionality of WPs during last time failure (including at present) estimates very high for PSF, Dug well, DTW and RWH at institutional level (ranging in descending order from 296 to 149 days). The said estimates are moderate for RWH at HH level (65 days) and STW (55 days). In other WP types this was negligible although the base is very small for them. Looking at the estimates by year it shows very high among the WPs built during 2005-2008 (more than 300 days) and fell sharply to less than 25 days thereafter.




Inclusion of long time non-functional WPs specially those in 2005-2009 into this calculation appears to have resulted in the above higher non-functionality estimates. However, the non-functionality of WPs appears to be highly prevalent even at present while we see the incidence of discontinuity for more than 2 days in the last 2 weeks. This is about 15% combined all. Such estimate is especially

high for IFG, PSF, RWH, Dug well and DTW (ranged from 67 to 31 percent). Earlier installed, WAB-new and Rural WPs show more such non-functionality than others in the respective groups.

**Multivariate logistic regression analysis** (STW and DTW)

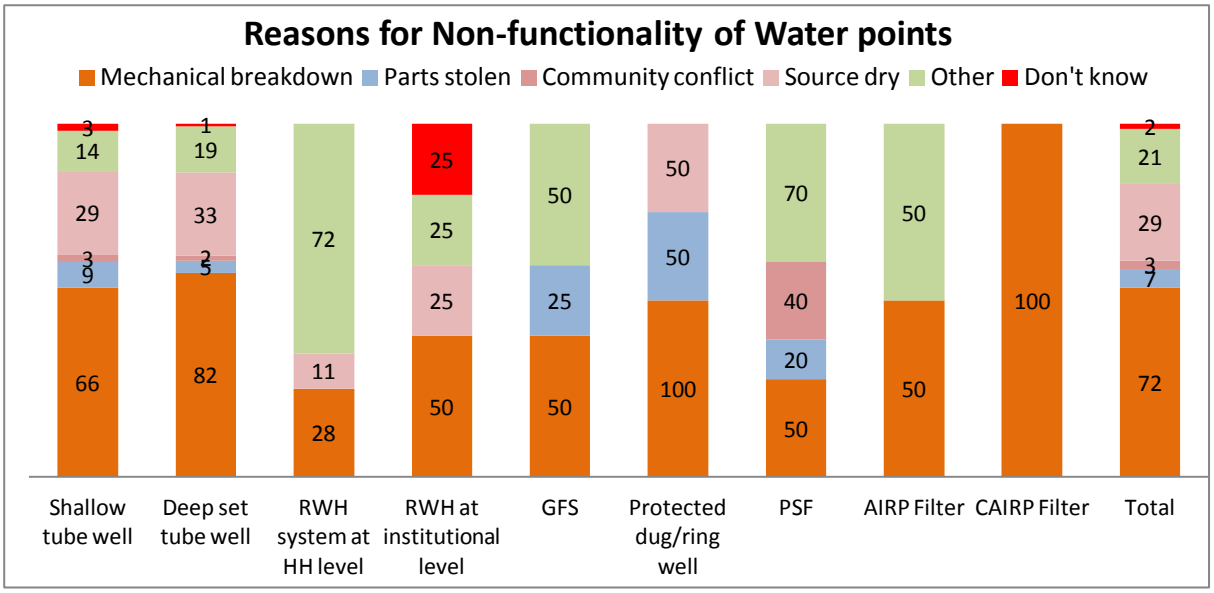
The regression analysis was done separately on the major two sample water points (STW and DTW) established or rehabilitated by WAB to identify the factors responsible from among the probable ones that contributed significantly on the functional status of the WPs. Although the application of the tool was not appropriate due to absence of all possible information or factors considering this in the design stage, it is important to notice from the regression analysis results below that for both the WPs the functionality differs significantly by the nature of intervention (New vs. Rehabilitated) and also on the WAB program (ASEH vs. Post ASEH). However, the year of intervention did not contribute additionally to the functionality.

Table-: Multivariate logistic regression analysis results

| Variables and values | Total # of WPs | Functional WPs No. (%) | Odds Ratio | P>\|z\| | 95% Conf. Int | |
|---|---|---|---|---|---|---|
| | | | | | Lower | Upper |
| **STW (Rural)** | **1275** | **1189 (93.3)** | | | | |
| **Nature of WAB Intervention:** | | | | | | |
| Platform const. & others | 1214 | 1141 (94.0) | 1 | | | |
| New installation | 61 | 48 (78.7) | 3.14 | 0.00$ | 1.41 | 6.97 |
| **WAB Program:** | | | | | | |
| Post ASEH | 1149 | 1128 (98.2) | 1 | | | |
| ASEH | 126 | 61 (48.4) | 0.03 | 0.00$ | 0.01 | 0.09 |
| **Length of establishment #** | | | 1.22 | 0.07* | 0.98 | 1.52 |
| **DTW (Rural)** | **537** | **398 (74.1)** | | | | |
| **Nature of WAB intervention:** | | | | | | |
| Platform construction & others | 440 | 324 (73.6) | 1 | | | |
| New installation | 97 | 74 (76.3) | 0.63 | 0.00$ | 1.34 | 3.91 |
| **WAB Program:** | | | | | | |
| Post ASEH | 187 | 183 (97.9) | 1 | | | |
| ASEH | 350 | 215 (61.4) | 0.05 | 0.00$ | 0.01 | 0.21 |
| **Length of establishment #** | | | 1.12 | 0.30* | 0.91 | 1.37 |

# Continuous variable
$=Significant (≤ 0.05), *=Not significant

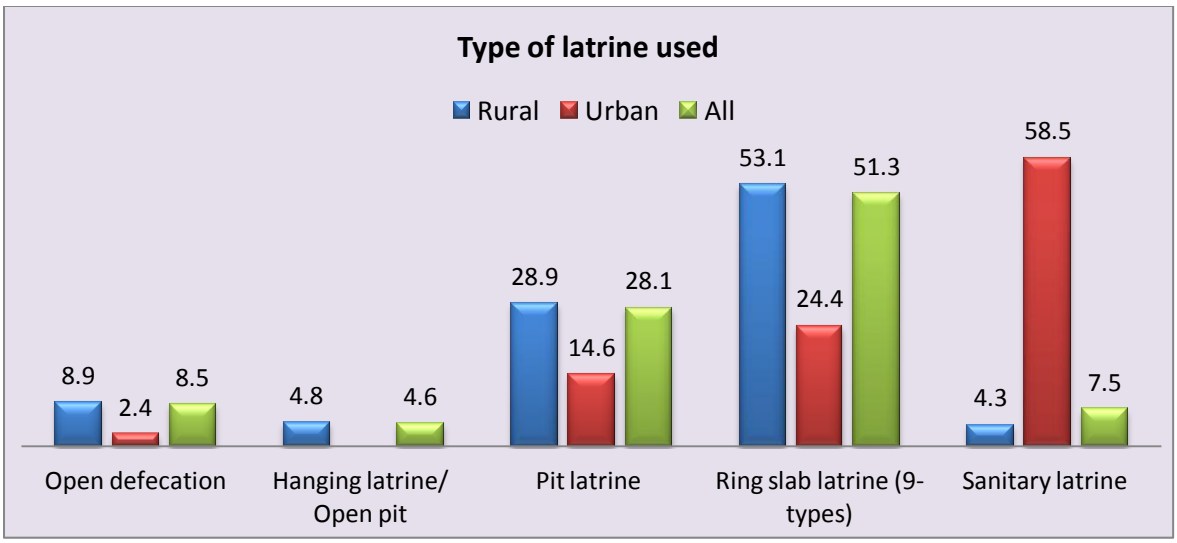
**Reasons for Non-functionality of Water points:** The 397 respondents (20% of all sample WP surveyed) who reported their WPs as non-functional or partially functional were asked about the reasons for the same. Multiple reasons were received with highest 72% reporting Mechanical breakdown followed by Drying of source (29%) and Other(21%). Source drying was almost equally reported by deep and shallow tubewell. Parts stolen as a reason for non-functionality was mentioned by less proportion of STW (9%) and DTW (5%) but higher for other WPs specially Dug well, IFG, PSF (50-20%) although the base was low for them.




**Steps taken to make this functional:** Only 27% of the non-functional and partially functional WPs were attempted to repair. The proportion was similar for STW and DTW. Among other WPs with small base, highest 50% of the IFG and AIRP filters and lowest 11% of the RWH at HH level took any attempt to repair. It was also reported that individuals mostly took the initiative (71%) followed by committee (26%).

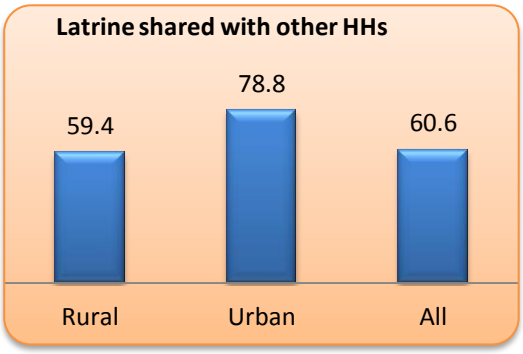
### 3.3.2 Latrine use and Sanitation

**Type of latrine used:** About 13% of all the survey households (2,770) were practicing open defecation or using a hanging or open pit latrine without slab or cover. Others were using some kind of larine, some of which are hygienic by construction and some are not. The listed categories of the formal latrines are Pit latrines (3-types), Ring slab latrine (9-types) and Sanitary latrine. Table-q4.1 at Annex-2 presents the defecation practices (latrine use) of the sample household by five social class and by rural/urban. The summary of the same is shown below:




**Shared latrine:** 61% of the survey households using any kind of latrine said that they were sharing their latrine with others with higher proportion in urban (79%) than rural (59%). Number of households sharing a latrine seat was much higher for urban (15.6hhs) than rural (2.7 hhs). Almost

all the latrines were said to be installed by the respondent households either individually (54%) or in group (39%). About one-third of the latrines were observed poor and others are good to reasonable. The problem areas of the existing latrines as mentioned by the respondents in order of frequency are about super-structure (door, roof, walls), pit & slab and finally about drainage/ventilation/lid etc.



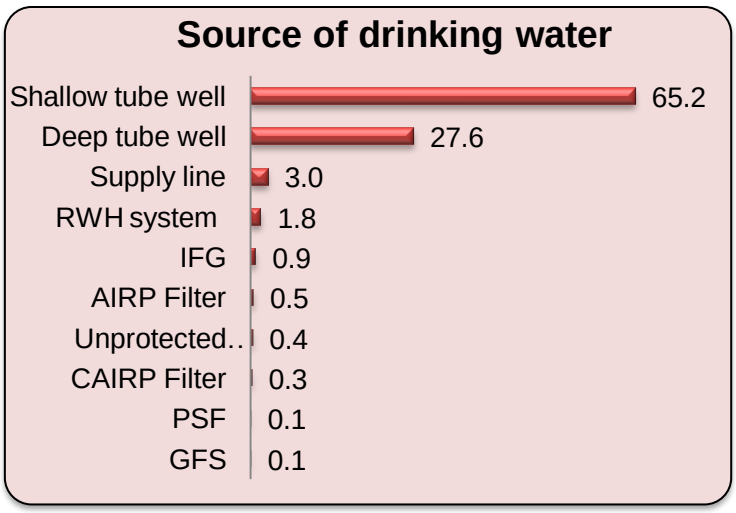

Almost all the respondents said that the latrine they use can also be used in monsoon. In another query 14% of the latrine using households reported that any of their members more than 5 years of age still practice open defecation. They were mostly from rural segment of the sample.

## 3.4 Households' access to water and sanitation facilities (Ref.Objective-3 )

### 3.4.1 Access to waterand related issues

**Accessibility:** Almost all (99%) the household respondents surveyed reported that they could get water from their reported sources any time of the day and 96% said that they use to get water throughout the year. This status did not vary much among the segments. For the 4% of the respondent reporting otherwise, more than 90% of them said that they faced supply problem during dry season.

**Source of drinking water:** Total 2,770 households were interviewed mostly from rural areas (94%). The large majority of the respondents were female (74%) and they belonged mostly to the poor (36%) or extreme poor (37%) segments of the population. Shallow tubewell or deep tubewell (mostly handset pump) has been reported as the source of drinking water for most (94%) of the sample households. The remaining households used piped water (3%), RWH (2%), IFG (0.9%), AIRP/CAIRP Filter (0.8%) and others (0.6%). It was also gathered that around 11% in rural and 4% in urban households had access to alternative sources of water point.

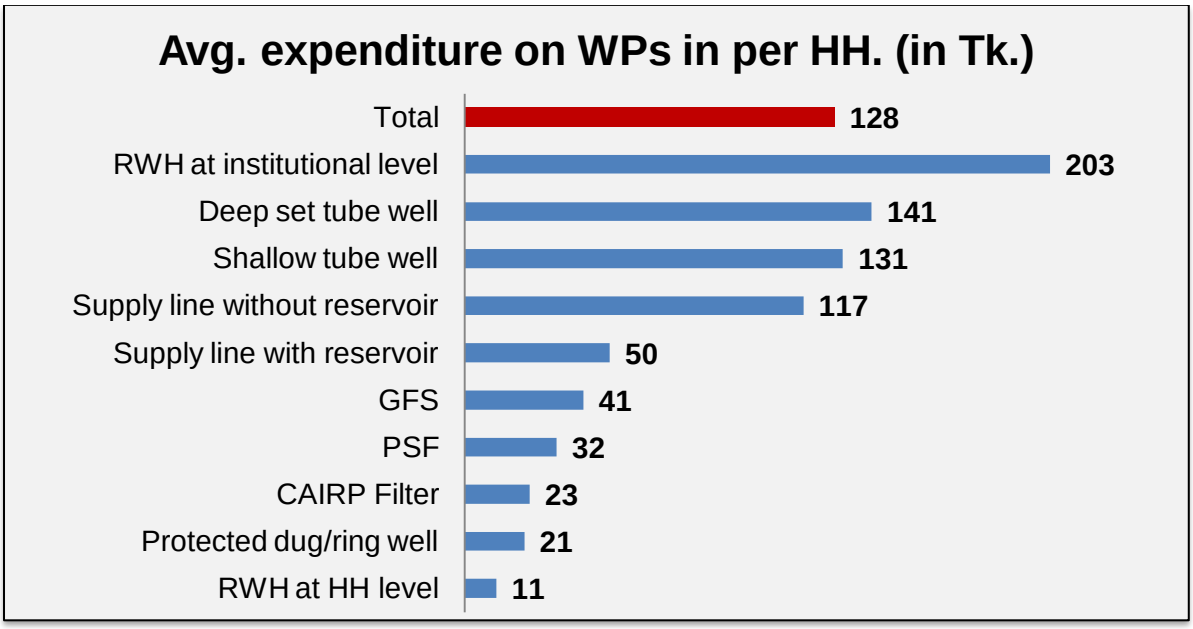



**Water expenses and Affordability:** Almost all rural (98%) and majority (57%) of the urban households reported that they did not pay any fee for the water they used. Overall this is 95%. They said that it was not necessary or not applicable as they owned it. Of the households who paid, affordability was not reported to be a problem for more than 84% of them. However, the extreme poor segment of the respondents reported somewhat more problems than the remaining.

**Expenditure on water point last year:** The estimated expenditure on water point during past 12 months were gathered through the survey and are presented in detail WP tables in the Annex. In summary, highest 12 month expenditure of BDT 3,083 per unit was reported for IFG followed by

Protected dug well (BDT 1,750), Supply line without reservoir (BDT 1,627), PSF (BDT987), RWH at institutional level (BDT 842), DTW (BDT 565) and STW (BDT 242).

As the number of users per WP varies a lot, average expenses per household for each of the WP technologies during last 12 months is calculated and presented in the graph below. It shows that on an average each HH had to spend Tk.128 in the preceding year (12 months). The highest expenses is for RWH at institutional level (TK.203) and lowest for RWH at HH level (TK.11). DTW and STW expenses per HH are among the highest.




### 3.4.2 Quality of water:

Information on water quality was gathered from both WP caretaker survey and household survey through a series of questions.

The WP caretakers survey shows that large majority of them perceived the quality of water to be good (86%) to reasonable (11%). The perceived quality of water did not differ for rural and urban. Of those few who described the water quality as poor, identified 'Iron' as the single major problem (73%) followed by Turbidity (20%), Bad smell (16%) and Bad taste (12%). The estimates are similar for shallow and deep tubewell as their numbers dominate to the total. Other findings related to water quality collected from the WP caretakers and presented in the detail tables include: Color of the TW sprout, Proportion of WPs tested for quality in last 12 months, Test results indicating potable status of water, Seasonality of water quality, Distance of the water source from the nearest latrine etc.

According to the Household survey 94% of the respondents described the water quality to be good for drinking.

## 3.5 Management committees for Water Points ( Ref. Objective-4 )

Overall 17% of the WPs reportedly had any management committee (MC) and thisvaried widely by type of WP. For example**,** the entire sample CAIRP and RWH at institution level, more than 85% of the supply pipeline**,** 50% of IFG, 40% of PSF and 15% of the TWshad a management committee. Significantly more urban (57%) than rural (15%) and more new (24%) than rehabilitation/upgraded (14%) WPs had an MC.

Average number of MC members has declined from 10 at the timeof initiation to 4.1 presently. The number is much higher in urban (7.2) than rural (3.4), and for new (7.1) than rehabilitation (3.8).Gender of the MC leader at present shows an opposite scenariofor urban and rural. While 91% at the MC members in rural area are male, the same is only 10% in urban area.

This is also important to register that the majority (58%) of the existing MCs (17% of all) are not active at all, and another 9% is somewhat active leaving only one-third of the MCs active. Thus, only less than 6% of this MCs of the sample WPs were reported to be active. Active MCs were reported proportionately higher in urban areas and for new WPs.

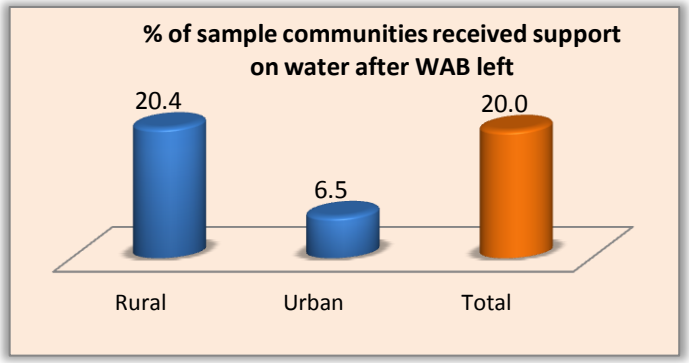
## 3.6 Availability of external financial and technical support ( Ref. Objective-5)

### 3.6.1 From Community survey

**Outside WASH support in the community after WAB left:** It has been reported by the CBO representatives that after WAB left the area, 20% of the communities received outside support on water, 37% on sanitation and 25% on hygiene promotion. The sources of these supports were 'Other NGOs' and the supports were received especially for sanitation and hygiene. Government, WAB Partner NGO and unidentified sources were also reported in significant proportion in all three segments. However, most of the respondents cleared that WAB installed/rehabilitated facilities were mostly excluded from these supports.

### 3.6.2 From WP survey

**Need for major repair at the moment:** About one-fourth (24%) of the WPs reportedly needed major repair with higher proportion for rural than urban. Need for major repair was reported more for WAB-new WPs (30%) than rehabilitated (22%). Incidentally the WPs provided in 2014 demanded higher repair (42%). This was also high for the WPs installed/rehabilitated/upgraded during 2006-2008 periods. Among the technologies DTW, IFG, CAIRP filters, RWH etc. needed higher repair (all more than 52%) than others.




The type of problems faced were gathered from the respondents and verified through observation. Platform damage (59%), poor drainage (25%), pipe leaking (17%), Filtration unit not working (7%) were the main problems reported. Damage/crack of structure or storage tank was also reported by many.

**Access to financial support:** The respondents in large majority (84%) said that they had no access to financial support in case of need to repair the WPs. The remaining few respondents reported to have total or partial support or they didn't know.

**Knowledge about technical advice/services and source of spare parts and viability:** Overall 74% of the respondents said that they knew about where to go in case they faced any problem on WPand cannot solve that. In urban areas this knowledge was almost universal (97%). Moreover, almost all (96%) the respondents said that they knew about the source of spare parts and they could get it.

# Chapter-4
# PRESENTATION OF FINDINGS ON INSTITUTIONAL LATRINES AND COMMUNITY SURVEY

## 4.1Findings from Institutional latrines survey

### 4.1.1 Coverage:

Institutional latrines were one of the four major components of the survey. Visiting a community the FIs inquired about the existence of such a facility in the community or around that was established under WAB support. In total 48 Institutional latrines were visited (Community latrine- 21, Public toilet- 7 and School toilet- 20), talked to the caretaker or any relevant person and observed the units. The results were recorded in a semi-structured questionnaire. The following are the key findings from the processed data.

### 4.1.2InterventionandFacilities:

The large majority (85%) of the Institutional latrines were newly built by WAB and in majority of them (63%) water facility was associated. The latrine type was mostly septic tank or sewage line connected (79%) and others were ring slab/ pit latrine. Added urinal facility was found in 31% and bathroom or other facilities in 13% of the installations.

### 4.1.3Functional status

Except only three (two public toilet and one school toilet), all the sample Institutional latrines were functional. It was also reported that hardly any step was taken to make the non-functional units functional.

### 4.1.4 User profile

Table below shows the average number of users(household, female, male and disabled) per facility during installation and at present as reported by the respondents. There were hardly any disabled users reported. The male and female users are seen to remain unchanged over the years.

Table-4.1: User profile of Institutional latrine per unit

| Facility | HH | | Female users | | Male users | | Disable users | |
|---|---|---|---|---|---|---|---|---|
| | Reported | Present | Reported | Present | Reported | Present | Reported | Present |
| Community latrine | 38 | 18 | 41 | 42 | 44 | 47 | 0 | 0 |
| Public toilet | NA | NA | 18 | 25 | 250 | 253 | 0 | 0 |
| School toilet | NA | NA | 146 | 157 | 97 | 106 | 1 | 2 |

* *NA= Not asked*

### 4.1.5 Operation and Maintenance of Institutional latrine and bearing expenses

Caretakers in majority of the situation (54%) were responsible for operation and maintenance of the installations followed by users (35%). For schools, teachers were mostly responsible (70%) for the O&M.

As regards bearing of expenses, 'users' in case of community latrine and 'committee' in case of public toilet bore the major expenses (both 86%).For schools the expenses were shared by the school management committee and the CBO committee. It may be mentioned that community latrines were mostly found in urban areas (slum) and public toilets in rural areas (bazaar).

In less than a quarter (23% or 11 unit) of the situation the users directly paid for use of the latrines and the mode of payment differed by type of latrine. There was no payment by the users for schools, payment per use in case of public toilet (75%) and periodic or 'for repair' payment in case of community latrine (86%).

### 4.1.6Cleaning and Major repairing

In 19% of the facilities pit emptying was done since the project intervention and they apply to all types of latrines.

Only 23% of the respondents reported that major repair was needed for their units and the needs were for multiple purposes including septic tank/pit, roof/wall/inside and others.

### 4.1.7Observation of the Facilities

Several aspects of the institutional latrines were observed as listed in the column-1 of the table below. Overall 29% of the facilities were found locked, 86% of them were with good or reasonable structure, 77% were clean (at least reasonably), 86% had working hand washing facility in or near toilet, 50% had running or stored water inside the latrine and 88% had water source within 10 meters of the latrine.

Table-4.2: Observation of the facilities

| Major observation | Community latrine | Public toilet | School latrine | Total |
|---|---|---|---|---|
| Latrine locked | 19.0 | 28.6 | 40.0 | 29.2 |
| Good &Reasonable condition of the structure of the latrine | 100.0 | 57.2 | 80.0 | 85.5 |
| Good &Reasonable state of cleanliness of latrines | 95.2 | 42.9 | 70.0 | 77.1 |
| Presence of working hand washing facility in or near toilet | 100.0 | 57.1 | 85.0 | 87.5 |
| Water (running or stored) inside the latrine | 47.6 | 42.9 | 55.0 | 50.0 |
| water source within 30 feet (10m) of the latrine | 90.5 | 71.4 | 90.0 | 87.5 |
| Latrine usually remains locked (reported) | 9.5 | 42.9 | 25.0 | 20.8 |
| **N** | **21** | **7** | **20** | **48** |

## 4.2 Community survey findings

### 4.2.1 Coverage:

Total 1,237 communities (union/ ward/ slum) came under the survey. They were selected automatically in the process of randomly selected 1,975 WPs. Each community was represented by one CBO formed by the PNGOs under support of WAB. 451sample communities/CBOs were formed during ASEH project (2004-2008) and the remaining 786 during Post-ASEH (2009-2014) projects. The Post-ASEH projects consist of Rural WASH, Urban WASH, Inclusion, Climate Change, Small Town and EECHO. The community samples spread out to 16 districts, 10 from ASEH and 11 from Post-ASEH. Thus, there are 5 districts common to both. Number of sample communities per district varied a lot (between 1 and 276). Large number of sample communities came from Rangpur, Rajshahi, Kurigram, and Nilphamari districts. Medium number of them came from Chapainababgonj, Cox's Bazar and Bhola districts. Small number of samples came from Tangail, Rangamati, Bandarban, Sylhet, Panchagarh, Khulna and Dhaka districts.

### 4.2.2 Number of WPs and Latrines per community:

As mentioned above, there was one CBO formed by WAB NGOs and supported to work in each community. The Community survey estimates show that on an average there are 4 newly constructed and13 rehabilitated/upgraded WPs supported by WAB in each community/CBO. This number varied widely among sub-segments. Rural WASH and EECHO had higher number of WPs per community. Moreover, newly constructed WPs were more in urban areas, and rehabilitated/upgraded WPs were more in Rural.

Average number of improved latrines received per community during WAB intervention was 56 and average number of community latrine seats per community was 7. Like WPs this number also varied widely among sub-segments. This number was higher in urban than rural and more in ASEH than Post ASEH segments.

It appears that the average number of improved latrine supplied by WAB per community (56) is quite significant as compared to the average number of household per community (146). This might have direct bearing upon claiming by one half of the sample communities that they are open defecation free (ODF). The large majority (88%) of the ODF communities had declared this status during the time of their intervention.

### 4.2.3 Follow-up status of the CBOs

Only 31% of the rural CBOs interviewed reported that they were followed up by the PNGOs/WAB after formal closure of the project. The nature of follow up was reported to be monitoring (55%). awareness raising (45%) and taking follow-up project (11%). In urban areas with small sample size (31) the follow-up was reported better (52%).

### 4.2.4Hazard endangering the WAB supported facilities

Only 5% of the communities reported any hazard endangering the WAB facilities. This did not vary much for ASEH or Post-ASEH interventions or between urban or rural. The hazards reported by the few communities caused mainly due to flood (64%), cyclone (19%), draught (17%), heavy rainfall (11%) and landslide (9%).

### 4.2.4 Perceived benefits of WAB supported services

Asked to mention any benefit that the community people have been enjoying due to WAB supported services, the respondents mentioned many but they are not too different in content. In order of importance, multiplicity and specificity, they are summarised as under:

1) The community people are getting safe water
2) They are getting water at low or no price
3) Before the tubewell platform would remain dirty, now it is clean
4) Waterborne diseases have declined among children and people
5) Open defecation has stopped in the area
6) Overall environment of the area has improved
7) Training on sanitation and hygiene has benefited the community
8) People's awareness on safe water, sanitation and hygiene has increased
9) People's mentality has changed

### 4.2.5 Further expectation from WAB

1) Providing more improved latrine would benefit the people
2) New water points are required in some locations
3) Repair and rehabilitation of tubewell platforms are necessary in some areas.

# Chapter-5
# QUALITATIVE FINDINGS AND VALIDATION

## 5.1 Introduction

The study was designed in a way that after the quantitative estimates are calculated through the large scale survey, the results would be shared with WAB officials and the partner NGOs formally to get their opinion and input about the results, views of the key informants at the local level will be discussed about the WASH situation at their level vis-à-vis the WAB activities and also discuss in groups with the beneficiaries at different levels to clarify issues in qualitative terns to enrich the report. However, due to the political unrest of the country starting from early January 2015, all plans had to be revised and before the dissemination seminar of the report on 5 March 2015, some quick qualitative data were collected in line with the plan. This chapter presents a few things from there and also from the dissemination seminar.

## 5.2 Activity coverage

- Feedback of the reviewers of the draft report and other formal and informal input from WAB officials
- In-depth discussion with 3 PNGOs of WAB – one urban and 2 rural
- Focus group discussion with caretakers of water points in rural areas, 2 in Khulna and 2 in Rangpur.
- Key informant interviews with 3 UP chairmen in places where FGDs were conducted
- Discussion in the dissemination seminar

## 5.3 Selected findings

### Validation of survey findings

This was tried while talking individually with the PNGOs and also through the dissemination seminar. Overall, the findings were accepted by the PNGOs specially the functionality of WPs and the number of users using each WP. However, many of them said that their situation was different and so the estimates. For example, UST said that they had very few non-functioning WPs as they supported limited number of demonstrative units and they were continuing in the location. The CBOs were therefore active. DSK also had difficulty in accepting non-functional WPs and also non-piped water source as they had no units like that. The researchers had no disagreement on that and it was like this because the short report could show results as per broad urban and rural classification. Any apparent unrealistic information may be investigated to see how it came. WAB officials may like to do that. From the survey point of view, this is important to mention that each of the households and institutional facilities surveyed has GPS location, photographs and telephone number of the caretakers are included in the database, and therefore any doubtful records can be verified easily, if attempted. Needless to mention that the quantitative survey estimates cannot be adjusted based on anybody's acceptance or rejection, which can only be done if there is any mistake identified.

### CBO status

It was a good finding of the survey that functionality of WPs was not correlated with the existence and operational status of the CBOs. Broadly this is true. But there are technologies and water

scarce areas (e.g., Koira upazila) where many people depend on single WP, they were newly installed and are expensive for installation and repair. If these could be isolated from low cost shallow tubewells and simple repaired, rehabilitated and platform supported tubewells and seen the performance, the estimates would be different. A secondary analysis is likely to take care of these analyses. However, IDI with Dhaka Ahsania Mission (PNGO) and a few others revealed that any WAB supported project discontinued by a PNGO in an area has no scope of follow-up and also WAB has no initiative to keep them alive other than the PIMS done on few time to time. None of the UP Chairmen could say that they had any role to play on the WPs or other facilities provided by WAB in their union when they left. However, all of them were appreciative of the WAB services and expected that they return and provide more support in WASH services.

## Latrine use and ODF Status

There is variety of latrine types used by the WAB beneficiary households and many of them are not hygienic by construction. Also 8.5% of the WAB water beneficiaries had no latrine and 1.3% used hanging latrine. The four FGDs conducted with the WP caretakers and the discussion with the UP Chairmen confirmed that the open defecation is still in practice in all the rural communities especially in “Koira 5 no. Union” where open defecation was estimated to be very high (50% estimated by the UP Chairman). According to him, supply of latrine among the poor was inadequate as compared to the need. He also admitted that he has no special program to address those.

# Chapter-6
# CONCLUSION AND RECOMMENDATIONS

## 6.1 Discussion and Conclusion

Needless to mention that WAB would like to see that the WPs they have establish or rehabilitated remain functional, the water quality is good and more of their target beneficiaries get uninterrupted supply of the water from the sources. Overall the survey shows positive results specially in respect of functionality (81% good and 6% partial) of the water points and the average number of households using water per WP (5.3).The perceived quality of water for drinking is also quite high (85% of WP caretakers and 94% of the HH respondents saying this). It is also very encouraging to notice that most of the WP caretakers felt confident about repairing their units by themselves and knew the availability source of the accessories. Another remarkable finding is that about 98% of the rural and 57% urban households got the water without any payment.

However, question may be raised whether there was any possibility to see the situation better than it was found in the survey. This is because the survey results show some pocket areas where there are room for improvement. For example, larger proportion of DTWs (27%) were non-functional, WPs installed/rehabilitated during 2005-2008 are showing high non-functionality (33-44%), simple/small problems are keeping more than 5% of the WPs partially functional, lack of any initiative to repair was reported by 71% of the non-functional WPs for long time, etc. WAB supported PNGOs also reported to have hardly any mandate or mechanism to follow-up the CBOs and the WPs after the WAB projects end in a particular area. This might have caused large majority of the CBOs to become non-existent or non-functional. This fact is supported by the rural community survey showing only 31% of the CBOs were followed-up after the project ended and the follow-up was limited mostly in sample based monitoring. Incomplete address of the WPs and the CBOs was also noticed during the preparation of the sampling frame and the field enumerators faced this hard in some areas. Lack of updating of the database of WPs for various uses including PIMS was also noticed.

As regards latrine use there are some important findings in the survey that might be useful in preparing action plans for the communities where WAB had worked or are working. The household and institutional latrine use status has been presented in section 3.3.2 and 4.1.4 respectively and also in the Annex tables for the households and the community. It may be recalled that 8.5% of the WAB water beneficiaries had no latrine and 1.3% used hanging latrine. Others were using some kind of larine, some of which are hygienic by construction but a large number of them are not properly maintained. Moreover, 12.7% of the HHs admitted that there are (>5 years) persons in their households who usually defecate in the open. Also the community survey estimates show that 60% of the communities surveyed were ever declared open defecation free (ODF) and the same status was claimed 50% during the survey.

The few FGDs conducted with the WP caretakers and the discussion with the UP Chairmen confirmed that the open defecation is still in practice in all the rural communities specially in Koira upazila (5 no. Union) where open defecation was estimated to be 50%. Supply of latrine among the poor was inadequate as compared to the need. The UP Chairmen also had no special program to address those.

## 6.2 Recommendations

Ensuring a minimum quantity of water is a must for every household. Shortage of water points around for the WAB target households in both rural and urban areas is a reality specially in places where low cost options (like STW) do not give quality water. It is therefore natural that they remain ready to do whatever is necessary to keep their WP functional. This might be the main reason behind higher functionality of the WPs. However, institutional support is sometimes required where major problems occur in high value WPs and there is lack of unity and initiative among the poor. Thus, there is a need to establish a proper monitoring system that ensures high level of functionality of the WPs helping to take appropriate measures so that the repairable non-functional and partially functional WPs are returned to use. It is therefore recommended that –

1) WAB takes initiative to prepare an organized and corrected database of the WPs (including GPS) installed/rehabilitated by the WAB (by union or ward) with contact address and mobile number of the WP caretakers.
2) The WPs showing no chance of repair are identified and removed from the list for future sampling or follow-up.
3) Institutional latrines are specially attended to keep them functional and well maintained.
4) Once the database is ready, immediate measures are taken to repair and rehabilitate the repairable non-functional and partially functional WPs.
5) The role of CBOs are reassessed and alternatives developed to bring the WAB supported WPs at least under a monitoring network. A stable ward based model may be tried.
6) Capacitate the local government bodies specially the union parishad of the WAB working areas to be able and willing to keep updated records of the WPs in their region and initiate action in case of any problem.

As for the promotion of latrine use, environment sanitation and hygiene, WAB should concentrate its activities in a few water scarce areas (unions) and bring qualitative change in WaSH indicators involving the local government. Maintaining/ achieving ODF status should be emphasized in all WAB supported areas. The successful models may be replicated with close monitoring and research.

Finally from our experience of implementing this externally designed and software supported multi-country survey, we recommend that before initiating WAB confirms about the completeness and applicability of the design and support services, allows more preparatory time to the agency to verify those, quickly attends the problem faced by the agency and remain flexible for adjusting data collection instruments considering local conditions.