

WaterAid in Bangladesh



Advancing Sustainable Environmental Health (ASEH)

# END OF PROJECT EVALUATION STUDY



Participatory Management Initiative for Development (PMID)  
and  
Bangladesh Centre for Advanced Studies (BCAS)

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# EXECUTIVE SUMMARY

## Introduction

Advancing Sustainable Environmental Health (ASEH) is a WaterAid project supported by the UK Department for International Development (DFID). ASEH is being implemented through 19 partner non-governmental organisations (NGOs). Started in July 2003, ASEH is planned to run until March 2009 with a budget of GBP 17.5 million. The goal of the project is to enhance health, quality of life, and livelihoods for poor rural and urban communities. This will be achieved by sustainable improvements in hygiene behaviour and reduction in exposure to water and environmental sanitation risks for poor rural and urban communities in challenging geographical, socio-economic and technical contexts in Bangladesh. The project is being implemented in 41 Upazilas under 19 districts in rural areas and in more than 700 urban slums in three City Corporations and one Pourashava.

This end-of-project evaluation study has been jointly carried out by Participatory Management Initiatives for Development (PMID) and Bangladesh Centre for Advanced Studies (BCAS) to assess the outcome and impacts of ASEH through comparison with the findings of the Baseline Survey (2004) and the Mid Term Impact Assessment Study (2007). The objectives of the study are to assess:

- i. The improvements in hygiene behaviour, access to and use of safe water and environmental sanitation for ASEH project areas
- ii. The implementation status of Government of Bangladesh (GoB) policies on water and sanitation (watsan) services for the rural poor and development of the policy framework for providing watsan service to urban poor
- iii. Participation and decision-making of women, girls and vulnerable groups in Community Based Organisations (CBOs) in ASEH areas
- iv. The effectiveness of CBOs both in rural and urban communities to ensure that each CBO establishes at least one or more permanent roles in the area of watsan service delivery, watsan facilities and Local Government Institution (LGI) and Public Service Delivery Institute (PSDI) engagement

### ASEH fact sheet

- **Number of Community-based Organisations (CBOs): 15,730**
- **Number of water facilities: 82,349**
- **Number of sanitation facilities: 1,037,902**
- **Number of hygiene facilities: 806,787**
- **Number of water beneficiaries: 1,793,448**
- **Number of sanitation beneficiaries: 5,601,485**
- **Number of hygiene beneficiaries: 6,832,163**

## Methodology



Photo: Juthika Nawlae

In order to achieve the study objectives, the methodology for the study comprises both qualitative and quantitative methods and tools such as surveys, focus group discussions (FGD), in-depth interviews, and case studies. Relevant literature including project related documents, reports and studies (including the baseline survey and impact assessment studies) have been reviewed.

A household survey was carried out during December 2008 using multi-stage random sampling methods in both rural and urban areas under the project. A representative sample of 403 rural households and 302 urban households was surveyed to gather quantitative information using a structured questionnaire. The sample rural households were selected from 18 communities under 18 project districts belonging to seven different geographical contexts. The urban sample households were selected from 10 slum communities in four cities and towns: Dhaka, Chittagong, Khulna and Narayanganj. In addition to household surveys FGDs were conducted with women and adolescent girls, CBO committees, school management committees, market watsan committees, management committee caretakers of watsan facilities, and union/ward watsan committees in both rural and urban study areas. Moreover, case studies have been prepared on community people.



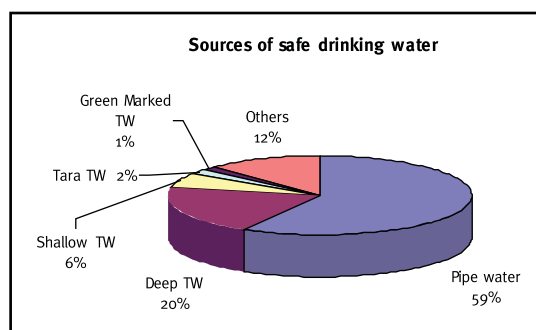
Photo: Brent Stirton

## Access to water supply

### Rural

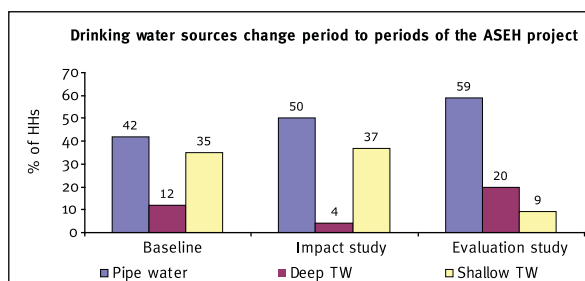
The use of safe water sources for drinking in the ASEH project areas has increased since the project was launched. Accordingly, the use of unsafe water sources (un-marked tubewells (TW), red marked TW, open dug well and river/canal/bee) for the same purpose has decreased from 49% at the baseline to 27%. Surprisingly, the poor score the highest in using safe drinking water sources (green mark TW and deep TW) in the project areas which ultimately reflects the success of ASEH project.

Overall, the distance between households and water points has substantially decreased from about 90 metres at the baseline to 50 metres at present. About 46% poor households in this rural community are now able to save time in collecting safe water. In addition, the ASEH project tested the water quality for about 38% of the total households surveyed.



### Urban

There have been major changes in access to sources of drinking water in urban areas. It has mainly happened in terms of access to pipe water, deep TW and shallow TW. The overall changes in access to safe water in different urban areas directly and indirectly reflect the objectives of the ASEH project. Access to pipe water has increased to 59% from 42% at the baseline whereas access to shallow TW has gone down from 35% at the baseline to only 9% at present state. On the other hand, access to deep TW has surprisingly changed from 4% at impact study to 20% at the end of the ASEH project. Furthermore, 61 (20%) out of 302 households now have access to deep TW, the most hygienic safe water source.



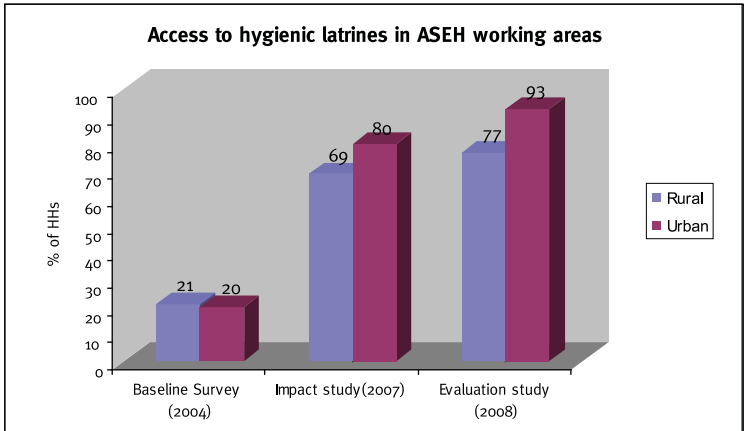
## Access to sanitation facilities

### Rural

The study shows that the use of hygienic latrines has substantially increased from 21% at the baseline to 77% at the end of the ASEH project. The use of hygienic latrines is highest in the areas of Monga (93%) and lowest in Haor (57%). In all rural contexts, the water sealed single pit latrine has been the highest mentioned type of latrine being used by rural people. The study shows that over 75% of poor and extreme core poor people use sanitary or hygienic latrines while only 62% of medium class households do the same.

Nowadays about 24% of the households face problems in using latrines, which has remarkably increased from the baseline (7%) but decreased from the impact study (32%). 9% of respondents perceived the fact that there are 'many users' as the main problem. In general, about 25% households clean their latrines everyday, with the highest proportion (44%) in coastal areas and lowest (9%) in the Barind area. However, some of the households (5%) do not clean their latrines, as mentioned during the evaluation study.

In all rural communities, 85% families dumped household solid waste in a fixed place or hole, 7% in ditches and 8% randomly. The baseline and impact study put dumping solid wastes in a fixed place at 48% and 58% respectively. On average, 52% families use solid waste as fertiliser. The evaluation study finds that 44% of respondents put waste water from a source/TW down the drain, 26% use it in their homestead garden and 30% let it drain off the TW apron. Compared to the baseline and impact study, there has been an overall improvement in the management of waste water.



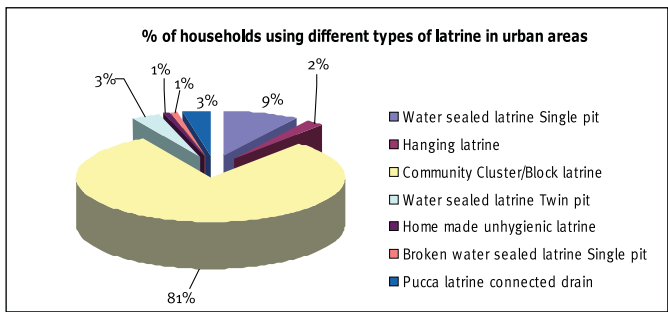
**Urban**

Baseline use of hygienic latrines was only 20% in 2004 which has increased to 80% in 2007 during the impact assessment. Access to hygienic latrines has further increased to 93% during the evaluation study in 2008. About 94% poor and hard core poor households are currently enjoying access to hygienic latrine while 92% households of the lower medium have the same.

It reveals that 33% households clean their latrine everyday whereas only 9% of households do not clean their latrines regularly. About 58% of households reported that they clean their household at regular intervals.

"Many users" was the most-cited problem by respondents in urban areas at the end of ASEH project (72%): mentioned by 40% households at the baseline. But the dirtiness of the latrine has decreased from 30% at the baseline to only 14% now. The bad smell of latrines has also decreased from 10% to 3% after five years of ASEH intervention.

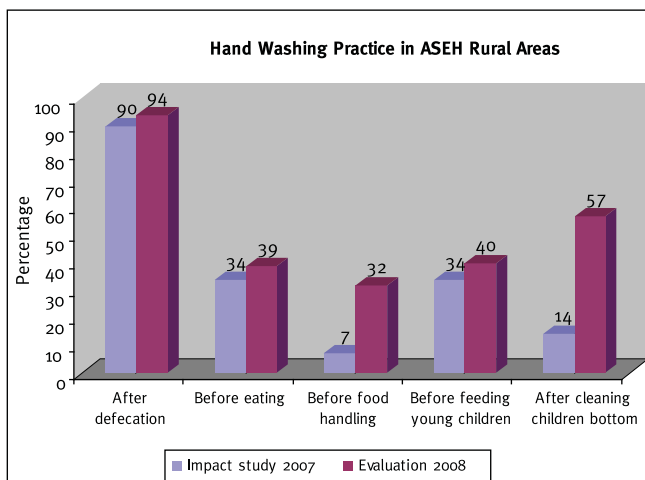
The management of solid waste in the slums of Dhaka, Chittagong and Khulna cities and of Narayanganj Pourashava is done in general by dumping in a fixed place/dustbins or holes by 64% families which has been promoted by the project as a hygienic method. At the baseline situation, the dumping of solid waste in a fixed place was very low (5-6% in Dhaka and 25% in Chittagong) and this has increased substantially due to project intervention. The random dumping of solid waste has been greatly reduced to 3% from around 60% at baseline situation and 13% at impact study 2007 situation. In urban areas, the use of solid waste as fertiliser was not mentioned. In the ASEH urban areas waste water from the source/TW is discharged down the drain as reported by 79% households, and compared to the baseline situation this has also improved significantly.



## Access to hygiene promotion

### Rural

From all rural contexts, about 95% of respondents had knowledge about safe water and 87% about sanitary latrines. At present proper handwashing practice during five critical times has increased significantly from the impact study in ASEH rural areas. At present about 94% people wash their hands after defecation and 39% wash their hands before eating. These findings were 90% and 34% respectively during impact study.



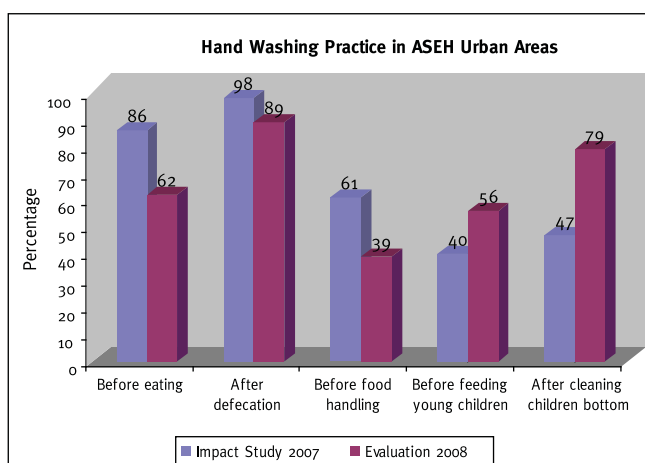
In coastal and hilly areas, the handwashing rate at all critical times was higher than in other areas. The rate of inadequate handwashing was higher among the poorer sections. There was a 92% response on the use of sandals while going to the latrine in ASEH rural areas; 3% did not use them and 5% used them occasionally.

In almost all cases women and adolescent girls were informed and involved in the project development planning, formation of CBOs, selection, installation and operation and maintenance of hardware facilities. They were especially focused on sanitation awareness, including general and menstrual hygiene.

### Urban

In ASEH urban slums about 92% of the respondents had knowledge about safe water, more among poor and hardcore poor than the non-poor. Compared to the baseline and impact study the knowledge level has declined slightly in slums due to the frequent migration of the residents. Again, 83% of respondents from ASEH urban areas had knowledge about sanitary latrines. The practice of handwashing with soap or ash was assessed. At present handwashing before eating and after defecation is 62% and 89% respectively. Of the relevant respondents 79% in all contexts confirm proper handwashing practice after cleaning their children's bottoms. Handwashing practices before feeding children and before preparing and serving meals were 56% and 39% respectively. There is no major variation between the handwashing practices among the poor and the non-poor sections. Overall in cities, there is a high response of 97% in using sandals while going to the latrine.

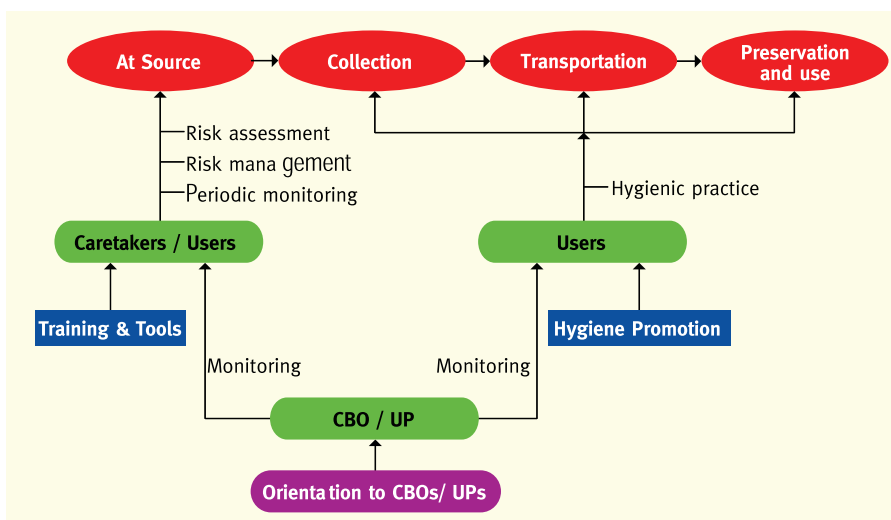
In the FGDs with women and adolescent girls, it was revealed that almost all participants attended training and monthly courtyard meetings organised for them. It was the partner organisation's staff who conducted training at their offices on safe water and sanitation, and menstrual hygiene issues.



## Water safety plan (WSP) in ASEH areas

For the WSP the ASEH project provided training to caretakers, users and CBO members on the use, operation and maintenance of the water facilities. The training also covered WSP messages. The implementation of WSP is a continuous process and water quality monitoring is one of the major components, with water quality surveillance being 'anchored' with Department of Public Health Engineering (DPHE) and Dhaka Water Supply & Sewerage Authority (DWASA).

### Water safety plan of the ASEH project



## ASEH advocacy initiatives and implementation status of GoB policies

WaterAid aimed to influence different actors to deliver water and sanitation services in an equitable and sustainable manner. WaterAid also monitored and lobbied significant organisations in the watsan sector, and built the capacity of partner organisations and communities to directly influence national water and sanitation policies.



WaterAid has also been influencing various stakeholders in the watsan sector to prioritise their water and sanitation interventions for the un-served. WaterAid also sought to increase the allocation of resources to watsan and ensure its focus on poor people.

WaterAid has tried to translate the National Policy for Water Supply and Sanitation into concrete actions. Consistent with the government promise of total sanitation, WaterAid has been working to turn this into reality by establishing a joint mechanism with local government institutions, NGOs and communities for delivery of watsan and is piloting the concept in the declared areas.

To ensure the benefits of GoB Annual Development Programme (ADP) allocation for sanitation reaches poor communities, WaterAid prepared lists of hard core poor and



submitted them to Union Parishads (UPs). Moreover, WaterAid contributed to leading and coordinating the nationwide sanitation campaign aiming to achieve 100% sanitation by 2010. WaterAid also contributed to the National Sanitation Strategy by making alliances with key sector actors and lobbying the Government. WaterAid also took the initiative to incorporate watsan in the full Poverty Reduction Strategy Paper (PRSP). WaterAid also contributed to the first ever South Asian Conference on Sanitation (SACOSAN) in October 2003 and helped draft the ensuing Dhaka Declaration.

WaterAid together with its urban partners worked with the Dhaka Water and Sewerage Authority (DWASA) to legally make title transfer of 54 water points directly to CBOs (see 'Effectiveness of CBOs: Urban' below).

WaterAid also contributed significantly towards formulating various national watsan policies including the pro-poor strategy for watsan services, Sector Development Framework and Sector Development Programme. WaterAid also contributed to the National Sanitation Task Force and National Forum for Water Supply and Sanitation and Union, Ward and Pourashava watsan task forces.



## Effectiveness of CBOs

### Rural

All of the CBO participants in FGDs reported that CBOs were formed democratically, ensuring representation of poor people and women on the CBO committees. The average number of members per CBO was 11. Out of these 11 people, on average 5.5 were female, and seven were average poor and hardcore poor. Each CBO is catering to the needs of an average of 128 households. The surveyed CBOs organise meetings on a monthly basis. Of 18 surveyed rural CBOs, all of them have a community situation analysis, 17 CBOs have a community action plan, all CBOs have a regulation book, 16 CBOs have a planning, monitoring and evaluation chart and 8 CBOs have a bank account. Moreover, all of the surveyed committees were training the community in latrine installation. Facility Management Committee CBOs are ensuring maintenance of water points.

Various FGDs show that the participation of the community in CBO activities is quite satisfactory. People consider community work as their own work and treat the facilities as their own. However, FGD participants also reported that during collection of contribution money for maintenance, they follow the principle of ability to pay.

Out of 18 CBOs, 14 CBOs have established linkages with their respective UPs. By doing so, about 18 households under each CBO were able to get a free latrine from the ADP allocation provided to the UPs. Some of the members of seven CBOs are also included in UP watsan taskforces, sharing knowledge between the two.

During the survey, 59% of respondents reported that they have received some benefits through participating in CBO activities such as: improved social environment, improved in financial management capacity, improved management of watsan facilities, improved communication and leadership skills, etc. Furthermore, the CBO committee members as representatives of the community are raising their voices with LGIs for pro-poor watsan services by participating in Ward Sanitation Task Force (WSTF) and Unions Sanitation Task Force (USTF) committee meetings. For example, before the formation of the ASEH committees, the communities received 33 latrines from LGIs while after the formation, they received 328 latrines.



## Urban

Like rural CBOs urban CBOs are also formed by a democratic process. The average CBO size is 11. Out of these 11 people, on average eight are female and/or eight are average poor and hardcore poor people. At present each CBO is catering to the needs of an average of 140 households. CBOs reported that they organise meetings on a monthly basis. All the nine CBOs surveyed have a community situation analysis, community action plan, CBO regulation book, participatory monitoring and evaluation chart and bank account. Community action plans have developed through extensive discussion with the households under the CBOs. All the community-based water facilities have Management Committees who are responsible for operation and maintenance.

The FGD findings showed active community participation in the CBO activities and the community people are also providing financial contribution for implementation and maintenance of water and sanitation facilities in their communities.

Out of nine CBOs, three CBOs have established linkages with their respective City Corporation/Pourashava. Some of the members of five CBOs are also included in ward water and sanitation taskforces, sharing knowledge between the two.

A legal water connection from DWASA to the slum CBOs is now established as right of poor people. As of December 2008, a total of 162 water points' entitlement of ownership has been handed over from partner organization to CBOs by DWASA. The fact of transferring ownership of 62 out of 162 water points straight to the CBOs has been one of the most significant successes of the ASEH project.

## DWASA extends water supply line for Begun Tila slum

Begun Tila slum is located at Mirpur-12, the eastern side of Mirpur ceramic in Dhaka city where ASEH started watsan interventions in February 2005. Soon after mobilisation, the community with assistance from ASEH implementing partners installed nine water points and households got access to water supply. The community people were happy with the facilities and had no problem sharing the facilities; rather, community coherence was strengthened. However, after several months, the Road Development Authority disconnected all these water points which created drinking water crises for the people living in the slum. Therefore, they started negotiations with the road developer but did not get any results. Then the community sent their CBO leaders to DWASA with a strong demand that water is a basic need and they should not be denied that right. After negotiation, DWASA finally extended their main line across the road and the community got connected. They are confident to tackle similar problems in the future!

### Rural

Women now make up 50% of CBO committees in rural areas, up from the 46% found in the impact study. In the household survey, 12% of households reported that women in their family are in CBO committees. Among the women in CBO committees: 8% are chairs, 8% are secretaries, 21% are treasurers, 63% are general members. On average, about four women are in the facility management committees, which on average consist of five members.

About 70% of women participate in water point selection process and 84% of them are involved in latrine site selection. During the household survey, 34% of households reported that they are now able to save significant time collecting water. The average time spent collecting drinking water is 23.65 minutes per day whereas in the baseline and impact study it was 60.9 min/day and 24.03 min/day respectively. The women participants in the FGDs also reported that they are now utilising the saved time either in other households work or in IGA activities.

Moreover, from the FGDs it was evident that all of the participants in the FGDs have received training on 'primary healthcare and cleanliness'. Male and female participation is equal. The household survey revealed that 66% of the female respondents participated in courtyard meetings. The percentage of male attendance is 62%. This can be taken as an indicator of equal access to information.

90% of the respondents mentioned that women have equal access to water points, On the other hand 95% of the respondents reported that their women family members have a gender-friendly latrine facility, up from 93.5% during the impact study. Most of the schools have been able to ensure separate toilet facilities for their girl students and sessions on menstrual hygiene were held. However, most of the market management committees reported that they have not been able to include women in their toilet management committees.

### Urban

Women now make up 76% of CBO committees in urban areas, up from 53% in the impact study. Therefore, ASEH has successfully met the project strategies of inclusion of women in CBO committees, both in urban and rural areas.

13% of households reported that women in their family are in CBO committees. 10% are secretaries, 21% are treasurers, and 69% are general members. On average about seven women are in the facility management committees. In ASEH urban areas 79% of women participated in both water point selection process and latrine site selection process.

During the household survey, 48% of households reported that they have been able to save time in collecting water. Currently, 91% of households collect water between one and 25 metres away. The average time spent collecting drinking water was 19 min/day which was reduced from 47.2 min/day at the baseline. The women participants in the FGDs also reported that they are now utilising the saved time either in other household work or in income generating activities. Around 48% of female respondents participated in the health and hygiene training. Unlike the rural situation, the percentage of female participation in training is higher than male, reflecting promotion of information to women.

The household survey revealed that 73% of female respondents participated in courtyard meetings. Male attendance was 50%. In ASEH urban areas about 95% of households mentioned that they enjoy equal access to water points, with the highest (98%) in Dhaka city and lowest (85%) in Narayanganj Pourashava. On the other hand, 92% of respondents reported that women family members have gender-friendly latrine facilities. All ASEH community-based sanitation options or school sanitation facilities have separate chambers for women and appropriate signage. Again, menstrual hygiene facilities were provided in female chambers of sanitation facilities.



## Recommendations

Based on the study findings, it is evident that the ASEH project has gained significant achievements through the increase of water supply and sanitation coverage, empowering women and enhancing their effective participation.

WaterAid, through their management of ASEH, have not only translated different existing government strategies into action, but have also contributed to formulating new government policies. However, some areas have been identified where there is still scope for further improvement.

- A number of project locations including Haor and the hilly areas still need more interventions to increase access to safe water sources and improve sanitation practices.
- Appropriate sustainable sanitation options (such as wind proof, flood proof, climate proof facilities etc) should be considered for flood and coastal areas. Research and development should be initiated soon.
- More attention is needed on the operation and maintenance of watsan facilities. The community should be capable of handling and managing the options all year round even in disaster period.
- The project needs to be extended further especially in slums and poor areas in Dhaka, Chittagong and Narayanganj to increase access to safe water sources and improve sanitation practices.
- Although the project has made huge strides in health and hygiene promotion, there is a gap between knowledge and practice. A follow-up programme is recommended for all areas.
- In more recent focus urban areas like Khulna and Narayanganj, solid waste management activities should be continued.
- In hilly areas, the problem of communities being provided with sanitation facilities without ensuring adequate water supply has to be solved.
- Implementation of the water safety plan is a new intervention to ensure water safety. Close follow-up and monitoring is essential to ensure benefits are maximised. Water quality surveillance needs to be anchored with the nearest DPHE zonal offices in the Pourashava and rural areas and to DWASA where there are lab facilities.

- Safe sources of drinking water should be screened and provided for those in project areas where people still use unmarked and red marked tube wells.
- In order to protect urban slum environments the beneficiaries of the sanitation facilities, including pits and cluster blocks, should be provided with desludging vacuum tanker services and arrangements with municipal authorities for proper dumping. In rural areas, sludge management and sustainability of sanitation facilities need to be more emphasized.
- The sustainability of the ASEH project's approach will depend on the sustainability of the CBOs. Currently, the CBOs are not legal entities. It is recommended that effort should be made to register them with appropriate government authorities. While framing a constitution care must be taken to ensure transparency and accountability of these organisations to help them earn legitimacy and acceptability among their constituency.
- WaterAid and partners should continue their efforts to strengthen the institutional capacity of CBOs and their associations. Many CBOs have not opened bank accounts, especially in rural areas. Immediate action should be taken to open up bank accounts.
- Networking and linkages between, on the one hand, CBOs and representatives in sanitation taskforces and, on the other, government and non government service providers in the watsan sector should be increased in order to provide space and opportunity to demand pro-poor watsan facilities.
- A comprehensive phase-out plan for CBOs should be in place. It is not wise to phase-out just before closure of the project; rather most of the activities should be phased-out at least one year before closure of project so that the project could observe performance from a distance.
- Projects should work on gender division of labour and gender role in its operational areas to reduce gender discrimination. Important positions in CBO committees like president, secretary, and treasurer should be balanced between female and male members.
- More emphasis on menstrual hygiene with increased number of educational sessions in school.
- Because of resource constraints on the part of the service providers (Local Government Institutions and Public Service Delivery Institutions) there is still a demand and supply gap. In the future to reduce this gap, WaterAid's advocacy programme needs to call for increasing the government budget allocation to the water and sanitation sector and increasing the large sectoral projects undertaken by bilateral and multi lateral agencies.

The full document can be obtained upon request to [info@wateraidbd.org](mailto:info@wateraidbd.org) Tel : 880 2 8815757, 8818521



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 **WaterAid**

WaterAid's mission is to overcome poverty by enabling the world's poorest people to gain access to safe water, sanitation and hygiene education.