



Chars Livelihoods Programme

A study to assess the outcomes of the CLP
on Water, Sanitation and Hygiene



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Executive Summary

The CLP recognises the importance of addressing Water, Sanitation and Hygiene (WASH) on the *chars*. The CLP provides essential infrastructure to *char* dwellers to ensure access to clean water and adequate sanitation, and raises awareness about health and hygiene. Improving access to WASH is essential as it has an overarching impact and contributes to a number of the programme's main outcomes, including food security, nutrition and improved livelihoods.

A recent study led by the Innovation, Monitoring and Learning (IML) division revealed that the CLP was having a mixed impact on WASH. Further research was conducted in October 2012 to further assess the CLP's WASH outcomes.

This report documents the findings of the research.

Water

- Not enough core participant households (CPHHs) are drinking clean water up to CLP standards.
- This can be explained by the fact that not all CPHHs have been prioritised to received an improved water source to-date.
- It can also be explained by the fact that not enough CPHHs are drinking water from a tube well that is protected by a platform.

Sanitation

- The CLP has contributed to a significant move away from open defecation among adults.
- However, not enough CPHHs are using sanitary latrines (up to CLP standards).
- Open defecation among children remains a pressing issue as stools are not being disposed of properly.

Hygiene

- The CLP has contributed to significant improvements in hand washing behaviour, as high proportions of women reported hand washing with soap at critical times.
- This is validated by the fact that high proportions of households have soap or ash next to their tube well or latrine.
- However, more women need to be hand washing with soap at all six critical times.

Abbreviations

CARE	Cooperative for Assistance and Relief Everywhere
CDOs	Community Development Officers
CLP	Chars Livelihoods Programme
CLTS	Community Led Total Sanitation
CPHHs	Core Participant Households
HH	Household
IMOs	Implementing Organisations
SD	Social Development
TOs	Technical Officers
UNICEF	United Nations Children's Fund
WASH	Water, Sanitation and Hygiene

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1. Background

The Chars Livelihoods Programme (CLP) works with extreme poor households living on island *chars* in North Western Bangladesh. It aims to improve the livelihoods, incomes and food security of at least one million poor and vulnerable women, children and men living on the *chars*. The CLP provides a comprehensive package of interventions to its core participant households (CPHHs). A number of interventions also benefit the wider community. The main objectives of the programme are to improve social and economic assets, reduce environmental and economic risk and increase access to markets and services.

People living on island *chars* typically have little access to clean water, a sanitary latrine and generally have poor hygiene practices. Households drink water from unprotected tube wells and in limited cases from nearby rivers and ponds. They also commonly use unsanitary latrines or practice open defecation. Moreover, households have poor hygiene practices. For example they have very little knowledge of the importance of hand washing and its link to improved health. They do not systematically wash their hands with soap after defecation and often use earth and water.

The CLP recognises the importance of addressing Water, Sanitation and Hygiene (WASH) on the *chars*. Indeed, improving access to WASH is important to the CLP in that it contributes to achieving programme outcomes, including Livelihoods, Food Security and Nutrition. It would also contribute to Bangladesh reaching its Millenium Development Goal targets by 2015.¹

Ensuring access to WASH:

- Indirectly increases household productivity and income.²
- Indirectly prevents undernutrition in mothers and children under five.³
- Improves food security as it ensures consumed food has a positive nutritional impact.⁴
- Reduces the incidence of diarrhoeal diseases.⁵
- Reduces the incidence of other diseases affecting char dwellers such as skin infections, scabies, hepatitis, etc.⁶

¹ Ensuring WASH will contribute to multiple MDGs.

MDG1: Reduce child mortality

MDG4: Reduce child mortality

MDG7: Ensure environmental sustainability

² Cameron, J et al (2011) Valuing water, valuing livelihoods. Guidance on social cost-benefit analysis of drinking-water interventions, with special reference to small community water supplies. WHO Publications.

³ Action Against Hunger (2007) Interactions of Malnutrition, Water Sanitation and Hygiene, Infections.

World Bank, WSP (2013) Clean Water and Sanitation Reduce Childhood Malnutrition and Diarrhoea.

UNICEF (2009) *Child and Maternal Nutrition in Bangladesh*.

⁴ World Health Organisation (2012), *Food Security*, <<http://www.who.int/trade/glossary/story028/en/>>

Cordier, L., Kenward, S., Islam, R. (2012) *The CLP's Impact on Food Security*.

⁵ Ejemot RI et al (2009) *Hand washing for preventing diarrhoea*. Cochrane Review, Issue 3.

Begum et al (2011) *Do Water and Sanitation Interventions Reduce Childhood Diarrhoea? New Evidence from Bangladesh*. Bangladesh Development Studies, Vol. XXXIV, September 2011, No. 3

The CLP's interventions are aligned with other WASH programmes and projects in Bangladesh. WaterAid, UNICEF, CARE and BRAC all follow an integrated approach to WASH. This approach combines the provision of water and sanitation with the promotion of improved hygiene behaviour with the aim of ensuring positive health and nutrition outcomes.⁷

WASH in the CLP

Below are short introductions to the CLP's WASH policy and interventions:

Access to Clean Water

The CLP provides essential infrastructure to *char* dwellers to ensure access to clean drinking water. It upgrades existing tube wells that meet certain criteria by installing a concrete platform (tube well upgrade model).⁸ It also offers a subsidy to households for the installation of a new tube well when five households do not have access to a tube well. That household has to pay Tk.1,000 and must allow all surrounding households to access that tube well (private ownership model). To increase access to clean water, the CLP shifted its water policy at the start of cohort 2.3 with a relaxation of the inclusion criteria for both models.⁹

Access to Adequate Sanitation

The CLP provides essential infrastructure to *char* dwellers to ensure access to adequate sanitation. A shift in policy was applied at the beginning of cohort 2.3 with the use of low-cost latrines and a commitment to ensure community wide sanitation. The CLP now improves latrine coverage by providing a subsidy to all households (core and non core) in CLP working villages to construct a low-cost sanitary latrine.⁸ It also attempts to reduce open defecation using the Community Led Total Sanitation (CLTS) approach which aims to trigger shame and disgust within the community to put an end to open defecation.

Improved Hygiene Behaviour

Through the Social Development (SD) project, the CLP raises awareness about health and hygiene issues. A number of behavioural change communication tools are used to promote hand washing with soap, proper latrine use, safe collection of water, etc. These include the use of simple and clear messages, flip charts

⁶ WHO (2001) *Water Related Diseases*.

<http://www.who.int/water_sanitation_health/diseases/diseasefact/en/index.html>

⁷ UNICEF (2008) *Water, Sanitation and Hygiene Strategy*, http://www.unicef.org/wash/index_43084.html

Cairncross et al (2010) *Water, Sanitation and Hygiene for the Prevention of Diarrhoea*. *International Journal of Epidemiology* 2010;39:i193–i205.

⁸ The CLP's criteria for a tube well providing clean water is a tube well raised on a plinth above the highest flood line, 40 feet deep, at least 10 metres from a latrine and has an intact concrete platform.

⁹ See Annex 1 for more information on the individual policies and the changes over time.

and meeting discussions. The CLP also raises awareness at the community level during local fairs, where messages are communicated through posters, folk songs and popular theatre.

The CLP is dedicated to improving the WASH situation on the *chars*. By 2016, the CLP aims to have provided 116,000 households (core and non core) with access to a sanitary latrine, benefiting a total of 464,000 people. It also aims to have provided 55,000 households (core and non core) with access to an improved water source, benefiting 220,000 people.¹⁰

Research Objectives

A recent study related to Food Security led by the Innovation, Monitoring and Learning (IML) division revealed that the CLP was having a limited impact on improving access to clean water and adequate sanitation.¹¹ Despite a move away from open defecation, the monitoring data indicated low percentages of core participant households were using sanitary latrines (up to CLP standards). Moreover, it showed that low percentages of core participant households were drinking clean water (up to CLP standards). On the other hand the study revealed that the CLP was having a positive impact on improving hand washing behaviours, however, despite an increase in reported hand washing practices, not enough women reported hand washing at all critical times.

Following the food security study, IML undertook additional research in October 2012 to further understand the CLP's WASH outcomes. The objectives were to:

- i. Assess the CLP's impact on access to clean drinking water
- ii. Assess the CLP's impact on access to sanitary latrines
- iii. Assess the CLP's impact on hygiene behaviour

This report documents the findings of the research.

¹⁰ Taken from the CLP LogFrame in operation at the time of this report. See the CLP logframe <<http://www.clp-bangladesh.org/publication.php?type=Programme%20Documents>>

¹¹ Cordier, L., Kenward, S., Islam, R. (2012) *The CLP's Impact on Food Security*.

2. Methodology

Data and information was gathered from a number of different channels to assess the CLP's WASH outcomes.

Background information

Background information was gathered on WASH policies and interventions through in depth interviews with stakeholders. A variety of individuals were interviewed, including the CLP's Infrastructure Unit Manager and Coordinator, as well as District Office staff, Technical Officers (TOs) and Community Development Officers (CDOs) from different Implementing Organisations (IMOs).

Quantitative research

From October to November 2012, IML commissioned an annual survey on a panel sample of CLP-1 households as well as cohort 2.1, 2.2 and 2.3 households. A baseline survey was administered to cohort 2.4 households. The usual monitoring questionnaire was used and specific questions relating to water, sanitation and hygiene were subsequently analysed.

To monitor outcomes of the programme, the CLP collected data using a rolling baseline or pipeline control approach. This is where the baseline status of new, annual entrants, provides the basis against which one can measure the progress of earlier cohorts.¹² In this case, data from the new cohort 2.4 will act as the control.

Qualitative research

Qualitative research was undertaken in November 2012 using participatory techniques including focus group discussions and in-depth interviews. Core participant households from cohorts 2.2 and 2.4 were interviewed to gather information on people's understanding of WASH habits both before and after the CLP.

Model assessment

A rapid assessment of the implementation of the private ownership model and tube well upgrade model was conducted in January 2013 with the aim of understanding the issue of 'access versus use' of clean drinking water. CLP-2.2

¹² This approach has strengths and weaknesses, which are discussed in more detail on the website. For more information on the CLP's new monitoring system, please visit the website. <http://www.clp-bangladesh.org/pdf/food%20security%20approach%20brief%20%282%29%283%29.pdf>

working villages with households who received a new tube well or a platform were identified in Kurigram District. Those households as well as all surrounding households (core and non core) were questioned about their main source of drinking water.

CLP-2.2 villages were selected as they fit the criteria of having recently received tube wells and had enough time to develop new water collection habits. CLP-2.3 villages were not selected, as at the time of the research the CLP's Infrastructure Unit was still installing tube wells in various districts. A handful of CLP-1 households were also interviewed to assess the differences in water collection habit with time.

Repair and maintenance assessment

An assessment of low-cost latrine status in the recent flood affected areas of Jamalpur and Kurigram was undertaken in December 2012. Households who reported having their latrines 'completely destroyed' during the July 2012 flood were identified using IML's post flood assessment study.¹³ A total of 24 households were interviewed to assess whether households invested in repairing their latrine.

Secondary research

Data from a 'drinking water quality monitoring and water safety assessment' led in April 2010 by the Infrastructure Unit was used to gather general statistics on water storage and point of use water contamination.¹⁴

¹³ Kenward S., Cordier, L., Islam, R. (2012) *A Study to Assess the Performance of CLP Raised Plinths, Low-Cost Latrines and Access to Clean Water During the July 2012 Flood.*

¹⁴ Hoque, B., Khanam, S. (2010) *Drinking water quality monitoring and water safety assessment in flood prone Northern Bangladesh under Chars Livelihoods Programme.*

3. Findings

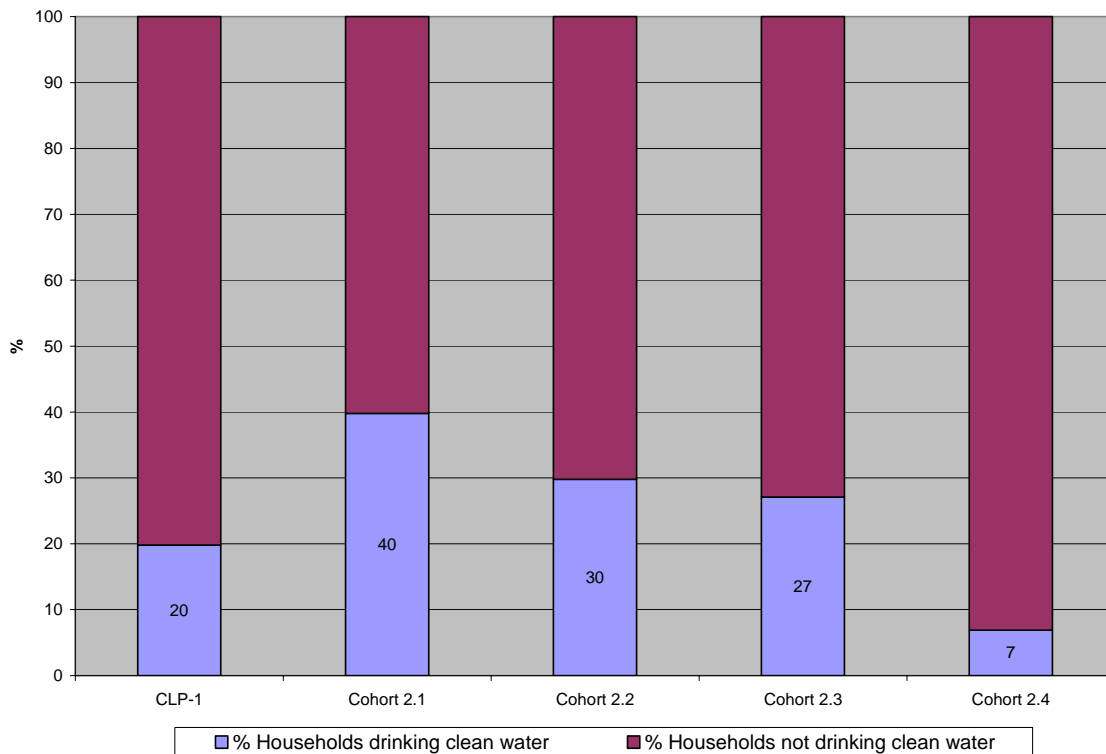
The findings of this study are presented according to the themes of Water, Sanitation and Hygiene.

WATER

Access to clean water

People living on the *chars* have access to tube wells – their own or their neighbours (Annex 2.1). However, these do not automatically ensure access to clean water as they rarely meet the criteria of depth, having a platform and being above the flood level. In response the CLP provides essential infrastructure to *char* dwellers to ensure access to clean drinking water. To increase access to clean water on the *chars* the CLP relaxed its water policy at the start of cohort 2.3 (Annex 1).

Figure 1: Percentage of households drinking clean water, by cohort



The findings show a limited impact on improving access to clean water. Despite a small increase, not enough core participant households are drinking clean water up to CLP standards (Annex 2.2).¹⁵ As shown in Figure 1, on average only 30% of CLP-1, cohorts 2.1 and 2.2 households have access to clean water. The impact of the water policy change cannot be observed on cohort 2.3 CPHHs, as the installation of tube wells and platforms was not completed by the time of the survey.

Such low access rates to clean water can be explained by the fact that not all CPHHs are being targeted by the CLP's Water interventions. Even though the Infrastructure Unit systematically reaches its targets, not enough CPHHs are drinking clean water from a protected tube well. This might be partially explained by the fact that not all CPHHs are being targeted by the CLP's water intervention. It is important to consider that the CLP's water policy targets both core and non core participants and that CPHHs are not prioritised to receive access to an improved water source. As a result, CPHHs can easily be excluded from the selection process if they do not meet all of the inclusion criteria for both the private ownership and tube well upgrade models. For instance, a CPHH will be excluded if it is not surrounded by enough households in need of a platform or new tube well.

These low access rates can also be attributed to the fact that not all tube wells are meeting the CLP criteria.¹⁴ The absence of an intact concrete platform was identified as the main problem, as only 19.8% of CLP-1 households drink water from a protected tube well (Annex 2.3). The presence of such a platform is essential as it prevents further contamination of groundwater through the well head.¹⁶

Moreover, an assessment looking at the implementation of the private ownership model and tube well upgrade model revealed that even though households may have access to an improved water source, they do not automatically use that tube well for their drinking water. Both core and non core participant households highlighted a number of reasons for not collecting their drinking water from a protected tube well with a platform:

- Households do not know the importance of a platform.
- Households are not told by IMOs to use a neighbouring tube well fitted with a platform for their drinking water.
- Households decide to install their own tube well, as owning a tube well is linked to increased social status. However the tube well is rarely built up to

¹⁵ Clean Water (up to CLP standards) is collected from a tube well raised above the flood line, 40 feet deep, 10 metres from a latrine, less than 10 minutes away from the households and with an intact concrete platform.

¹⁶ CLP Infrastructure Unit, *Water Quality Test of Chars Livelihoods Programme- Results of Bacteria Test of Shallow Tube Wells*

the CLP standards. This is mostly due to a lack of resources.¹⁷ This confirmed that non health benefits are considered as of more importance than health benefits.

- The owner of a protected tube well migrated, leaving its surrounding neighbours without access to clean water.
- The owner of a protected tube well migrated and could only afford to transfer the tube well. The households rarely have enough funds to install a new platform.
- The owner of a protected tube well migrated and attempted to transfer the tube well and the platform to a new location, but the platform broke during transportation.
- Households decided to continue using an unprotected tube well out of habit or because it was closer and therefore less time consuming.
- Some people felt uncomfortable using their neighbour's protected tube well due to tensions or because it involved entering another compound to collect water.

These observations highlight the importance of addressing behavioural change to achieve access to clean water targets. The qualitative research revealed a positive shift in knowledge and understanding about clean water and its link to improved health. However, some misconceptions remain about what defines clean water. The SD project plays a central role in raising awareness, but it is essential to acknowledge that behavioural change is a long term process. Core participants might experience a shift in knowledge but this does not automatically lead to a change in habit. CPHHs must be given enough time to assimilate and process all of the information they are presented with during the training sessions.

Perceptions of clean water – The confusion around iron

Qualitative research revealed a certain amount of confusion related to the presence of iron in water. The majority of core participant households associated the presence of iron as a sign of unclean water. This is mostly due to the fact that they can taste and see the direct effects of iron through the reddening of their teeth, nails and clothes. It is important to note that the presence of iron in water is not hazardous to health.¹⁸

Water quality at the household level

The CLP focuses on ensuring access to improved water sources. However, the possession of a tube well with an intact concrete platform does not automatically ensure the consumption of clean water. A number of pathways exist to

¹⁷ Installing a tube well up to CLP standards can cost up to Tk.9000, whereas installing a tube well without a platform can be as cheap as Tk.500.

¹⁸ World Health Organisation, 2003. *Iron in drinking water – Background document for development WHO guidelines for drinking water quality*

contaminate water at the household level, including use of dirty containers, improper storage and improper handling of water.

In April 2010, the CLP undertook a study which assessed the microbiological quality of drinking water at point of consumption.¹⁹ The data revealed a high percentage of households did not cover their water storage containers. It also indicated a high proportion of cases where water was improperly handled as unclean fingers came into contact with drinking water. Overall, the analysis revealed that the microbiological quality of water deteriorated significantly between the water source and consumption.

This highlights the need to raise awareness about safe water collection to reduce point of use contamination at the household level. The SD training briefly talks about water collection; however there are no visual tools such as flip charts. Such a visual explanation would be important to trigger behavioural change.

SANITATION

Reducing open defecation

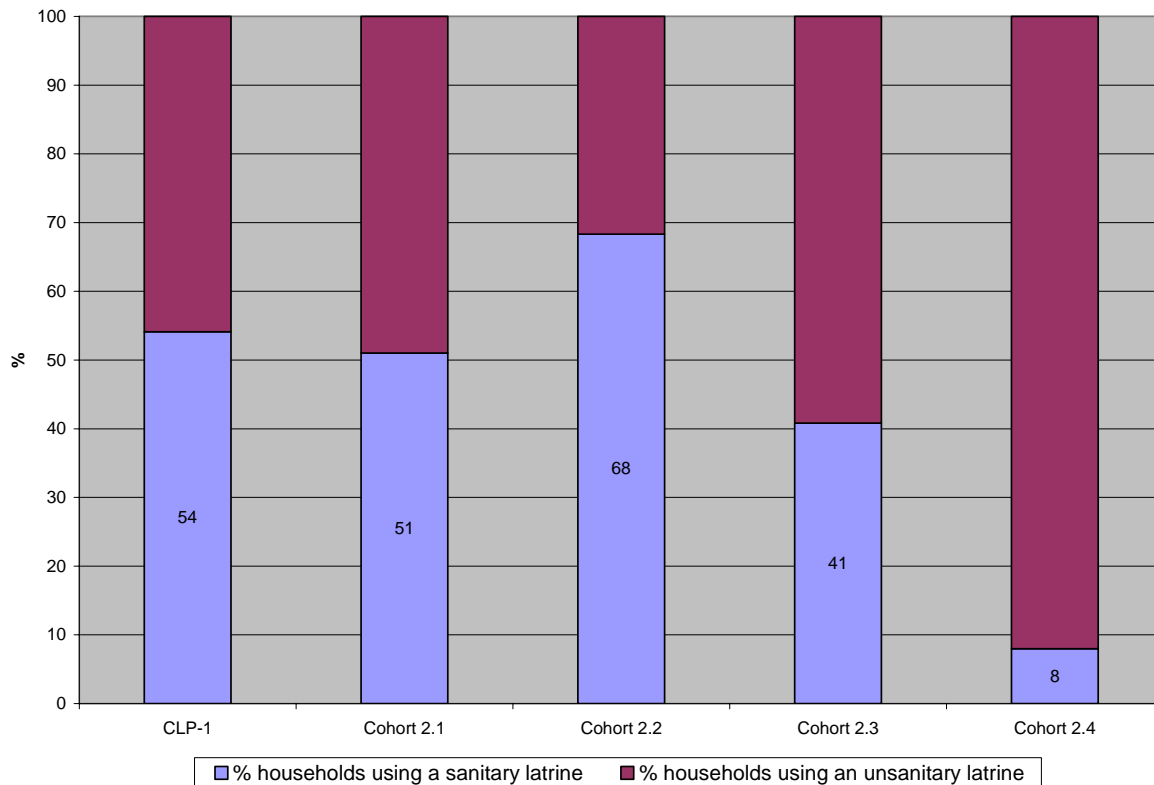
People living on the *chars* commonly practice open defecation or use unsanitary latrines made of bamboo placed over a pit. In response the CLP provides essential infrastructure to ensure access to adequate sanitation. Under CLP-1 and the start of CLP-2, the programme provided high cost five ring latrines and piloted the use of low-cost latrines under cohort 2.2 to increase latrine coverage on the *chars*. The low-cost latrine model was then implemented under cohort 2.3, targeting both core and non core participants to ensure community wide sanitation.

The data show a significant move away from open defecation among adults, with only 7.7% (CLP-1), 7.8% (cohort 2.1), 3.7% (cohort 2.2) of women reporting practicing open defecation (Annex 3.1) compared to 33.6% in the control. An increasing amount of adults are reporting using latrines – their own or their neighbours – however, these are not all sanitary (Annex 3.2).

As shown in Figure 2, there is an increase in percentage of households using a sanitary latrine compared to the control. The shift in policy piloted under cohort 2.2 might explain the increase in proportion of households using sanitary latrines. However the full impact of the shift cannot be assessed as the installation of latrines for cohort 2.3 was not completed by the time of the survey.

¹⁹ Hoque, B., Khanam, S. (2010) *Drinking water quality monitoring and water safety assessment in flood prone Northern Bangladesh under Chars Livelihoods Programme*.

Figure 2: Percentage of households using a sanitary latrine, by cohort



Despite an increase in use of latrine use, there are still improvements to be made, as large proportions of households are still using unsanitary latrines (Annex 3.2). This can be explained by the fact that not all latrines are meeting CLP standards.²⁰ The data show that not all latrines were built above the flood level, or with an adequate superstructure providing privacy. Most importantly the findings revealed that water seals are still being broken by participants (Annex 3.4).

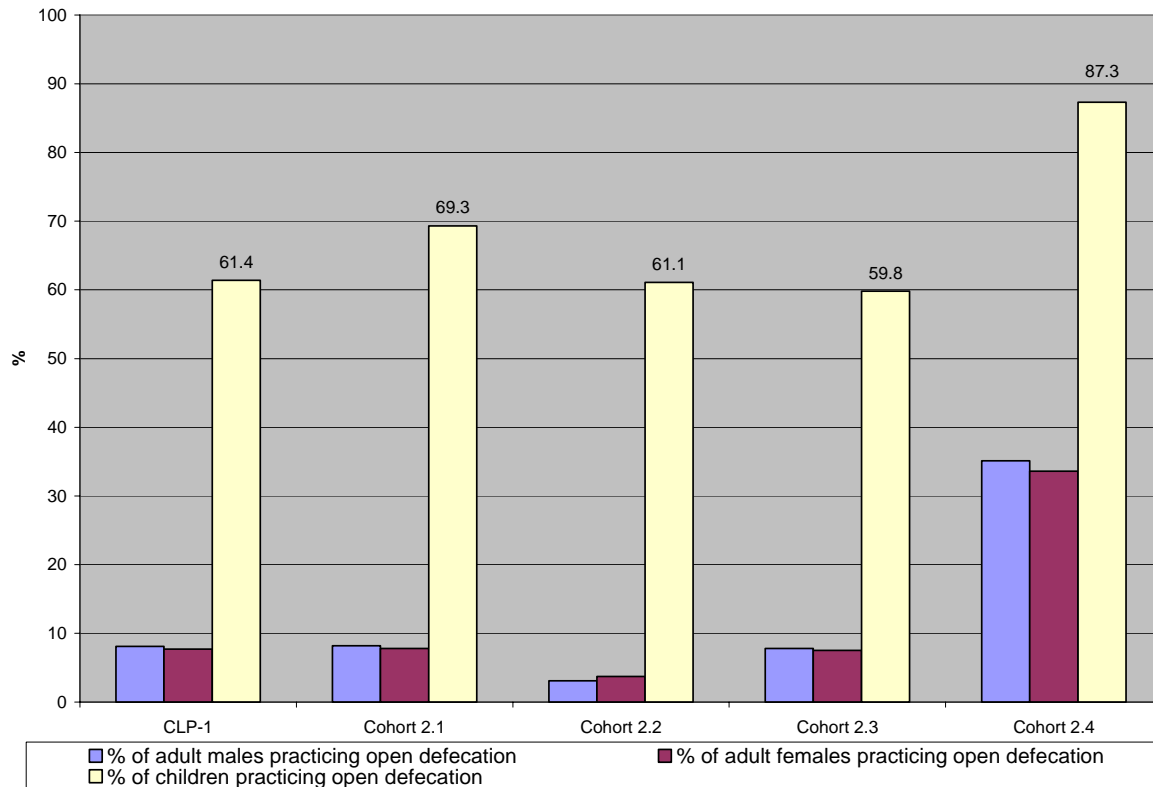
Breaking water seals

Qualitative research revealed that most women understand the importance of water seals to reduce environmental contamination. However, water seals are often broken as it requires more water for flushing. Water seals can be quite easily repaired, but households are often isolated and far from bazaars. A handful of women explained repairing their latrine was a priority, as they would save money by not going to the doctor.

²⁰ A sanitary latrine (up to CLP standards) is a latrine raised on a plinth above the flood line, with a pit supported internally, covered with a concrete slab fitted with a pan and water seal, with a superstructure providing privacy.

The findings also revealed that a high proportion of children are practicing open defecation (see Figure 3) (Annex 3.1). A child practicing open defecation is understood as defecation outside the family compound or mothers disposing of the stool in an unsanitary manner by throwing the stool over the fence of their homestead.

Figure 3: Percentage of reported open defecation, by cohort



Such results might be explained by the fact that children are not directly targeted by the CLP's sanitation intervention. Women learn about safe stool disposal during Social Development training; however there are no visual aids such as flip charts to accompany this topic. Qualitative research highlighted that it is a common belief in the *chars* that children's stools are not harmful. Cohort 2.4 women (who have not yet received the SD training) explained that a breastfeeding child could not produce contaminated stools, as the milk it consumes is pure. Further discussion with CPHHs revealed a shift in understanding in stool management as women try to safely dispose of stools by placing them in a sanitary latrine. However, they admitted to not systematically doing so. They also explained the challenges of training their children to use sanitary latrines when they preferred open defecation.

HYGIENE

Hand washing behaviour

People living on the *chars* usually have poor hygiene practices. They do not systematically wash their hands with soap after defecation and often use earth and water. In response, the CLP raises awareness about health and hygiene. The social development curriculum for water, sanitation and hygiene has not been changed since the beginning of CLP-1.

The data show a marked improvement in hand washing practices. A higher proportion of women are reporting hand washing with soap at critical times after undergoing the social development module (Annex 4.1 to 4.6). Figure 4 illustrates an increasing proportion of women reporting using soap and a decreasing proportion solely using water before preparing food. However, there are still improvements to be made, as not enough women are reporting hand washing with soap at all six critical times (Annex 4.7).²¹

These results present a more positive situation in terms of hand washing practices compared to the previous food security study.²² Such a difference might be due to sampling differences between the two studies or to information bias.

This issue of information bias highlights the need to question the validity of self reported hygiene behaviour. It is indeed essential to consider other proxy indicators for hygiene behaviour such as the presence of soap or ash near water points and latrines. Looking at such proxy indicators confirms this improvement in hand washing behaviour as the majority of households have soap or ash next to their tube well or latrine (Annex 4.8 to 4.9).

Qualitative research confirmed a shift in understanding on the importance of hand washing practices and its link to improved health. When explaining their previous hand washing behaviour, women described only washing their hands with water after defecation and before preparing food, or would simply wash their hands on their clothes. They explained not knowing the decontamination properties of soap and that they simply could not afford it. The SD training helped increase their knowledge and allowed them to make a causal link between hand washing practices and the reduction of diarrhoeal diseases.

²¹ The six hand washing behaviours are hand washing with soap before preparing food, before eating, before feeding a child, before serving food, after cleaning a child's anus and after defecating.

²² Cordier, L., Kenward, S., Islam, R. (2012) *The CLP's Impact on Food Security*.

OBSERVATIONS ON THE CLP'S WATER POLICY AND STRATEGY

To further understand the reasons behind low access to clean water, extensive meetings and discussions were held with IMO, district and headquarter CLP infrastructure staff, to identify problems at the operational level.

The table below outlines the process from project design to the implementation of the CLP's water intervention and highlights the problems associated with various phases. Addressing these problems will be essential to improve the CLP's outcomes on WASH.

Pre CLP implementation

Process		Problems
CLP project design	→	- No WASH specialist present
Infrastructure policy and strategy development	→	- Not all relevant staff knows the most up to date water policy
Social Development module developed and reviewed	→	- No WASH specialist present
Training of staff (TOs, CDOs, IMOs)		

CLP implementation

CPHs receive social development training	→	- SD training takes place before infrastructure work - WASH module is too short
WASH needs assessment	→	- Long and complex process - No visual mapping - Does not include the community - Subjective process
Demand for exceptions (CDOs put in recommendation to IMO PM)	→	- Subjective process
TW and TW+platform installation		
IMOs talk to surrounding HHs (about using protected TW)	→	- Not systematic - Not every HH understands
CDOs remind HHs to use protected TWs	→	- Not systematic - Not every HH understands

4. Conclusion

SUMMARY OF FINDINGS

Improving access to WASH is important to the CLP in that it contributes to achieving programme outcomes, including Livelihoods, Food Security and Nutrition.

The findings of this WASH research confirmed the CLP is currently having a limited impact on improving access to clean water, as not enough households are drinking clean water (up to CLP standards). Such results were attributed to the fact that not all CPHHs have to-date been prioritised. Moreover not enough CPHHs are collecting water from a protected tube well with a platform, and CPHHs are also building their own unprotected tube wells. This may be attributed to misconceptions by CPHHs about the definition of clean water.

This WASH research revealed a more complex situation in terms of improving access to adequate sanitation. As previously found, there has been a significant move away from open defecation in adults, however not enough are using sanitary latrines (up to CLP standards). Interestingly, the data indicated high levels of open defecation in children as stools are not being disposed of safely and sanitarily.

Finally, the findings confirmed the CLP's positive impact on improving hygiene behaviour. An increasing proportion of women reported hand washing with soap at critical times and high proportions of households have soap and ash near water points and/or latrines. However, there are still improvements to be made to ensure women wash their hands systematically at all six critical times.

RECOMMENDATIONS

Based on the findings, a number of recommendations can be made to improve the CLP's outcomes on WASH.

Water

- Review the water policy and strategy. This should be followed by the training of all relevant staff (District and IMO).
- CPHHs need to be prioritised to receive improved water sources in order to achieve outcomes.
- Increase platform coverage to reach all CPHHs and ensure positive outcomes in Food Security and Nutrition. This might involve reconsidering the budget for Water interventions.
- Introduce the role for partnerships in attracting WASH services to the *chars*. Relevant organisations could include WaterAid or NGO Forum.

- The Human Development Unit should review the SD module on Water, especially about the importance of platforms (health and non health benefits) and household water contamination.
- Review the timing of the SD training to ensure it coincides with the installation of tube wells.

Sanitation

- Focus on reducing children's open defecation.
- The Human Development Unit should review the SD content on Sanitation, especially about the safe disposal of children's faeces.

ANNEX 1 – The CLP’s Water and Sanitation Policies

Access to clean water

Cohort	Tube well upgrade model	Private ownership model
CLP-1 Cohort 2.1 Cohort 2.2	When a minimum of four households (core and non core) are all drinking water from the same tube well, that is up to CLP standards and it raised on a plinth (above the flood line) that has passed one rainy season, then the CLP will meet the costs of upgrading the tube well and installing a platform.	When six households (core or non core), living on a raised plinth (above the flood line) that has passed one rainy season, do not have a tube well, the CLP will install a new tube well. The owner has to agree to maintain the tube well over time and ensure that the other households can access it.
Cohort 2.3 Cohort 2.4	When a minimum of three households (core and non core) are all drinking water from the same tube well, that is up to CLP standards and it raised on a plinth (above the flood line) that has passed one rainy season, then the CLP will meet the costs of upgrading the tube well and installing a platform.	When five households (core or non core), living on a raised plinth (above the flood line) that has passed one rainy season, do not have a tube well, the CLP the CLP will offer a subsidy to install a tube well to one household who can invest Tk.1000 .The owner has to agree to maintain the tube well over time and ensure that the other households can access it.
All cohorts	The CLP provides a full subsidy for the installation of new tube wells in schools and for disabled headed households.	

Access to adequate sanitation

Cohort	Sanitation policy
CLP-1 Cohort 2.1	To improve latrine coverage, the CLP will provide a subsidy to CPHHs for the construction of a five ring latrine.
Cohort 2.2	To improve latrine coverage, the CLP will provide a subsidy to CPHHs for the construction of a five ring latrine. It also piloted the installation of low cost latrines.
Cohort 2.3 Cohort 2.4	To improve latrine coverage, the CLP will provide a subsidy to all households (CPHHs and non CPHHs) in CLP working villages to construct a low cost latrine.

ANNEX 2 – Access to Clean Water

Table 1: Percentage of households with access to a tube well, by cohort

	CLP -1	Cohort 2.1	Cohort 2.2	Cohort 2.3	Cohort 2.4
Percentage of households with access to a tube well	100	100	100	100	100

Table 2: Percentage of households drinking clean water (up to CLP standards), by cohort

	CLP -1	Cohort 2.1	Cohort 2.2	Cohort 2.3	Cohort 2.4
Percentage of households drinking clean water	20	40	30	27	7
Percentage of households not drinking clean water	80	60	70	73	93

Table 3: Percentage of households drinking from a tube well with an intact concrete platform, by cohort

	CLP -1	Cohort 2.1	Cohort 2.2	Cohort 2.3	Cohort 2.4
Percentage of households drinking from a tube well with an intact concrete platform	19.8	43	32.3	31.1	12.3

Table 4: Percentage of households drinking from a tube well above the flood line, by cohort

	CLP -1	Cohort 2.1	Cohort 2.2	Cohort 2.3	Cohort 2.4
Percentage of households drinking from a tube well above the flood line	76.9	65.7	77	75.9	31.9

Table 5: Average time between the tube well and the household, by cohort

	CLP -1	Cohort 2.1	Cohort 2.2	Cohort 2.3	Cohort 2.4
Average time between the tube well and the household	2.37	2.46	2.31	2.43	3.17

ANNEX 3 – Access to Adequate Sanitation

Table 1: Percentage of adults and children practicing open defecation, by cohort

	CLP -1	Cohort 2.1	Cohort 2.2	Cohort 2.3	Cohort 2.4
Percentage of adult males practicing open defecation	8.1	8.2	3.1	7.8	35.1
Percentage of adult females practicing open defecation	7.7	7.8	3.7	7.5	33.6
Percentage of children practicing open defecation	61.4	69.3	61.1	59.8	87.3

Table 2: Percentage of households using a sanitary latrine (up to CLP standards), by cohort

	CLP -1	Cohort 2.1	Cohort 2.2	Cohort 2.3	Cohort 2.4
Percentage of households using a sanitary latrine	54	51	68	41	8
Percentage of households using an unsanitary latrine	46	49	32	59	92

Table 3: Percentage of households using a latrine fitted with a concrete slab and pan, by cohort

	CLP -1	Cohort 2.1	Cohort 2.2	Cohort 2.3	Cohort 2.4
Percentage of households using a latrine fitted with a concrete slab and pan	90	89.6	95.6	91.5	66.1

Table 4: Percentage of households using a latrine with an intact water seal, by cohort

	CLP -1	Cohort 2.1	Cohort 2.2	Cohort 2.3	Cohort 2.4
Percentage of households using a latrine with an intact water seal	73	74.5	86.8	68.7	44

Table 5: Percentage of households using a latrine above the highest known flood level, by cohort

	CLP -1	Cohort 2.1	Cohort 2.2	Cohort 2.3	Cohort 2.4
Percentage of households using a latrine above the highest known flood level	85.2	70.9	85.1	73.7	32.6

Table 5: Percentage of households using a latrine which provides privacy, by cohort

	CLP -1	Cohort 2.1	Cohort 2.2	Cohort 2.3	Cohort 2.4
Percentage of households using a latrine which provides privacy	84.7	84.4	88	75.1	52.3

ANNEX 4 – Hygiene Behaviour

Table 1: Percentage of women reporting hand washing with soap or water before preparing food, by cohort

	CLP -1	Cohort 2.1	Cohort 2.2	Cohort 2.3	Cohort 2.4
Percentage of women reporting hand washing with soap before preparing food	90.1	92.5	82.3	56.5	0.7
Percentage of women reporting hand washing with water before preparing food	9.9	7.5	17.7	43.5	45.6

Table 2: Percentage of women reporting hand washing with soap or water before eating, by cohort

	CLP -1	Cohort 2.1	Cohort 2.2	Cohort 2.3	Cohort 2.4
Percentage of women reporting hand washing with soap before eating	88.5	88.6	79.5	67.5	2.4
Percentage of women reporting hand washing with water before eating	11.5	11.4	20.5	32.4	88.5

Table 3: Percentage of women reporting washing hands with soap or water before feeding a child, by cohort

	CLP -1	Cohort 2.1	Cohort 2.2	Cohort 2.3	Cohort 2.4
Percentage of women reporting hand washing with soap before feeding a child	83.3	81.3	71.1	58.5	0
Percentage of women reporting hand washing with water before feeding a child	7.5	6.4	9.6	24.1	0

Table 4: Percentage of women reporting hand washing with soap or water before serving food, by cohort

	CLP -1	Cohort 2.1	Cohort 2.2	Cohort 2.3	Cohort 2.4
Percentage of women reporting hand washing with soap before serving food	89.2	90	80.1	52.5	0.7
Percentage of women reporting hand washing with water before serving food	10.8	10	19.9	47.5	28.3

Table 5: Percentage of women reporting hand washing with soap or water after clean child's anus, by cohort

	CLP -1	Cohort 2.1	Cohort 2.2	Cohort 2.3	Cohort 2.4
Percentage of women reporting hand washing with soap after cleaning child's anus	87.33	85.5	76.7	67.2	0
Percentage of women reporting hand washing with water after cleaning child's anus	3.4	2.5	3.9	15.5	0

Table 6: Percentage of women reporting hand washing with soap or water after defecation, by cohort

	CLP -1	Cohort 2.1	Cohort 2.2	Cohort 2.3	Cohort 2.4
Percentage of women reporting hand washing with soap after defecation	92.3	95.3	82.9	74.9	4.2
Percentage of women reporting hand washing with water after defecation	7.7	4.7	16.9	23.4	23

Table 7: Percentage of women reporting hand washing with soap at all critical times , by cohort

	CLP -1	Cohort 2.1	Cohort 2.2	Cohort 2.3	Cohort 2.4
Percentage of women reporting hand washing with soap at all critical times	70.3	69.4	60.1	30.1	0

Table 8: Percentage of households with soap or ash next to the tube well, by cohort

	CLP -1	Cohort 2.1	Cohort 2.2	Cohort 2.3	Cohort 2.4
Percentage of households with soap next to the tube well	90.1	92.2	83.4	75.1	1.5
Percentage of households with ash next to the tube well	7.3	5.8	14.3	20.9	17.5
Percentage of households with soap or ash next to the tube well	97	98.1	97.8	96	19

Table 9: Percentage of households with soap or ash next to the latrine, by cohort

	CLP -1	Cohort 2.1	Cohort 2.2	Cohort 2.3	Cohort 2.4
Percentage of households with soap next to the latrine	90.4	89.4	83.1	69.2	0.7
Percentage of households with ash next to the latrine	8.3	8.6	14.6	27.4	18.4
Percentage of households with soap or ash next to the latrine	98.8	98.1	97.8	96.5	19