Chars Livelihoods Programme

A study to assess the performance of CLP raised plinths, low cost latrines and access to clean water during the July 2012 flood

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Executive Summary

During the first week of July 2012, two of the districts in which the Chars Livelihoods Programme (CLP) currently works, Jamalpur and Kurigram on the northern Jamuna, were subjected to a rapid rise in water level and flooding. Indeed the water level was considered to have been the highest since the 2007 flood.

Anecdotal evidence, in the form of ad hoc reports from CLP implementing organisations (IMOs), suggested that the CLP's plinths were maintaining their integrity and protecting core participants and their neighbours, as well as their assets. Anecdotal evidence also suggested households were accessing clean water and that the low cost latrines were performing well in their first real flood test. To determine the veracity of the anecdotal evidence, the CLP undertook a detailed survey during July 2012, just as the floods were receding, to investigate in particular the performance of plinths, low cost latrines and access to clean water.

The survey showed that the CLP-raised plinths faired well during the July 2012 flood. A large proportion of recipients were safe and had shelter above the flood line, as 65% of plinths remained intact. 29% were partially eroded and only 8% were submerged. The plinths had a wide reaching impact as food and fodder reserves were protected and tube wells and latrines largely remained above the flood water level. CLP-raised plinths also provided shelter for neighbours (non-recipients) and their assets and thus provided a social and communal good.

A key concern during the adoption of the low cost latrine model was how it would perform during flood conditions. A proportion of recipients did report that their latrine had been eroded (15%) or submerged (17%). However as the flood receded, most low-cost latrines remained intact and some were weakened but still useable. The low-cost latrine model proved successful as only 4% were destroyed and recipients continued to have access to sanitation during this time of flood.

During the flood, 84% of the tube wells remained intact. Even though a small percentage of core participants saw their tube well submerged, all had access to a tube well i.e. their own tube well, a shared tube well, or their neighbours' tube well. However, only 33% actually had access to clean water according to CLP's definition. This small percentage has been attributed to the large amount of tube wells without an intact concrete platform.

Abbreviations

CDOs	Community Development Organisers
CLP	Chars Livelihoods Programme
CPHH	Core Participant Household
GoB	Government of Bangladesh
IML	Innovation, Monitoring and Learning
IMO	Implementing Organisation

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1. Background

The CLP seeks to alleviate the effects of flooding by raising households on earthen plinths 60 cm above the highest known flood level. In addition, the Programme aims to ensure access to clean water and sanitation by also raising water points and installing latrines on plinths.

During the first week of July 2012 some of the districts in which the CLP currently operates experienced a rapid rise in water levels and some flooding. The most flood-affected were Jamalpur and Kurigram on the northern section of the Jamuna River. The water level was considered to have been the highest since 2007. A rapid assessment was undertaken as flood waters receded to understand the severity of the situation. It revealed that around 40% of villages reported facing a slight problem with food security and 25% faced a slight problem with water-borne diseases. Moreover, a CLP flood committee was convened and the flood situation was not declared an emergency.

Anecdotal evidence and feedback from the field also suggested that plinths were protecting households and their assets (as well as those of their neighbours). It also indicated that most core participant households (CPHHs) were accessing clean water and the low cost latrines were proving useful and not collapsing during their first real test[1] i.e. during a severe flood.

The CLP commissioned a survey in July 2012, just as the floods were receding to supplement and validate this anecdotal information. The survey largely sought to understand how plinths and latrines were performing and whether households supported by the Programme continued to have access to clean water during the flood.

2. Methodology

Data were collected during July 2012, just as the floods were starting to recede. The CLP's operations staff from IMOs were tasked with data collection. They were given training by the Innovation, Monitoring and Learning Division (IML) in the use of the data collection tool which was a closed questionnaire. It was not the ideal solution to use CLP staff to collect data but time was a factor and outsourcing data collection would have prolonged the process. In an attempt to reduce bias, staff did not collect data from their own working areas.

Respondents were the recipients of plinths and /or low cost latrines and included both core and non core households. A two stage random sampling method was used to draw the final sample of 1,184 respondents from Jamalpur and Kurigram. Lists of recipients of plinths and low cost latrines were drawn up by Union. All flood-affected Unions were selected and based on the size of the Union, 1 to 3

[1] The Programme recently introduced low-cost latrines in an effort to reduce the practice of open defecation. Prior to July 2012, these latrines had not been tested in flood conditions.

villages were subsequently randomly selected. From each village a sample of 5 to 10 core participant households and non core participant households were randomly selected and interviewed.

The analysis of this post flooding assessment considers respondents from both core and non core CLP participants, except when assessing access to clean water. There, the analysis only considers core participants up to and including cohort 2.2. Non core participants and respondents from cohort 2.3 were excluded on the basis that they had not received access to a tube well by the time of the flood assessment survey.

There are some limitations with the study. The main focus of the study was on the performance of the plinths, low cost latrines and access to clean water. The study also explored other issues including food security, the status of assets and water borne diseases. Data were not collected from comparison groups i.e. households not supported by the CLP in this instance (control group).

3. Findings

This section focuses primarily on the performance of raised plinths, the low cost latrines, and whether CPHHs were able to access clean water during the July flood. The section also provides some information on aspects of food security, the status of assets and the prevalence of water borne diseases.

3.1. The performance of raised plinths during the flood

Earthen plinth raised above flood levels

The CLP seeks to provide environmental protection and alleviate the effects of flooding in the *chars*. As part of the CLP's package of interventions, the Programme raises households on earthen plinths 60 cm above the highest known flood level.

CLP-2 aims to lift 85,000[2] households onto raised plinths by 2016. By June 2012 (the end of the Government of Bangladesh [GoB] financial year) 26,000 households had already been raised on plinths.

The CLP's plinths proved their worth during the July 2012 floods. The vast majority of plinth recipients (including core and non core participants) were able to remain in their villages (95%), protect their assets and also offer shelter to their

[2] Agreed target as at August 2012

neighbours. Only 5% had to seek shelter with neighbouring households or a close embankment. Indeed, the vast majority of recipients of a raised plinth (92%) found the plinth to be very helpful.

A large proportion of recipients were safe and had shelter above the flood line, as 65% of plinths remained intact. As one might expect in a time of flood, some recipients had their plinth partially eroded (29%) and a few submerged (8%). A small proportion of recipients (3%) reported that their plinth had been totally eroded.

Further analysis revealed that Razibpur Upazila and Chilmari Upazila in Kurigram District were the most affected as 64% of all the submerged plinths were from those two areas. No clear evidence exists to explain these results. One possible hypothesis could be that there were implementation problems at the IMO level. However, this is rather unlikely, for any problem would have been picked through the CLP verification process. A more probable hypothesis would be that these two Upazilas were particularly affected by a particularly rapid rise in water level.

Table 1: Key indicators demonstrating the performance of raised plinths

% of plinth recipients reporting their plinth had been submerged at some time during the flood	8%
% of plinth recipients reporting their plinth had been partially eroded	29%
% of plinth recipients reporting their plinth had been totally eroded	3%
% of plinth recipients providing shelter for neighbours	18%
% of plinth recipients providing shelter for neighbours' assets	16%
% of plinth recipients who had to seek shelter elsewhere	5%
% of plinth recipients indicating the plinth had been 'very helpful'	92%

*denominator is recipients of raised plinth

Maintaining status and health of assets

The survey confirmed the wide reaching impact of plinths, as recipients were able to protect their own assets (95%), as well as provided shelter for their neighbours (18%) and their assets (16%).

Data collected on the status of assets revealed that less than 5% of CPHH respondents with cattle reported having lost livestock (any type) and only 12% reported their livestock had suffered from disease during the flood (unspecified diseases).

38% of CPHH respondents with cattle found it 'very difficult' to manage feed for their livestock during the flood. The majority of CPHH respondents with cattle (81%) used reserve fodder, protected by the plinth.

Shahera: Protecting Assets during floods

Shahera joined the CLP in 2012. Her homestead was raised on a plinth. Not only does this keep her safe, it also protects her and her neighbours' assets.

Before the CLP, Shahera was often affected by floods. Three years ago, her house was washed away and she lost everything; her chickens, her clothes and kitchen utensils. She only managed to save two tin sheets from her roof. After the floods she was left homeless and without assets.

During the current floods Shahera is keeping her cattle, goats and chickens safely above flood level. She recognises the suffering her neighbours are going through - their homes have been submerged. She says it is her duty to help them. Three families and their assets are now living on her plinth and a total of 40 cows are being sheltered on the plinth.

Due to the floods more people are absent from the village. Shahera is aware there may be robberies. Men are keeping guard at night and only sleeping after morning prayers. The women then keep watch during the day. Shahera is happy she has a plinth to protect all these valuable assets.

Food security during the July 2012 flood

As already documented by the CLP there is a heavy reliance on wage labour[3], particularly for extreme poor households living on the *chars*. During floods, labour opportunities significantly reduce, impacting on a household's ability to access food. 82% of all respondents reported labour opportunities were not available locally at the time of the survey. Households were therefore obliged to use coping strategies, such as drawing on food reserves (49% of all respondents) and/or purchasing food (41%) drawing on their savings or assets. 6% of respondents indicated using severe coping strategies by resorting to distress sales.

[3] Huda, E., Kenward, S., Blackie, R. & Islam, R. (October 2011): Seasonal demand for labour on island chars and its effect on migration and remittances

3.2. The performance of low cost latrines during the flood

Open defecation is widely practiced on the *chars,* and is a major source of disease and infections which can lead to poor nutrition, lost income or school absence.

Low cost latrines raised above flood levels

During CLP-1 and the initial years of CLP-2 (cohort 2.1) CPHHs received a 5-ring slab latrine with superstructure. Whilst this benefited CPHHs it did not address the problem of open defecation i.e. non core households did not receive a latrine from the CLP.

To improve latrine coverage, and eradicate open defecation, the CLP provides a subsidy to all households in working villages, which is used to construct a low-cost sanitary latrine. The CLP provides a concrete slab (with plastic pan & water seal) and a cash subsidy, while the household is responsible for digging the pit, providing a suitable support structure and installing a suitable structure for privacy. For households on a raised plinth, the cash component is Tk 450 (about £4), while for all other households this increases to Tk 650, to cover the cost of raising the latrine on its own plinth. CLP-2 aims to install 50,000[4] low cost sanitary latrines. By June 2012 15,500 had been installed.

The July 2012 flood was the first time the low cost latrines had been tested in flood conditions and so to some extent this sets the benchmark for future performance. During the flood, a certain proportion of recipients reported that their latrine had been eroded (15%) or submerged (17%). However, by the time of data collection – when the flood had receded – 54% were intact whilst 32% had a weakened structure[5] but were still useable. 10% were weakened and unusable due to a weakened structure and 4% had been fully destroyed. These results were similar for latrines situated on raised homesteads and stand alone latrines raised outside the homestead.

Specific questions relating to latrine use revealed that 77% of recipients reported using their own latrine during the flood, and 20% using another household's latrine. The low-cost latrine model proved successful as the majority of recipients continued to have access to sanitation during this time of flood.

Further analysis revealed that the Rowmari Upazila and Bhurungamari Upazila in Kurigram were the most affected as 55% of all the eroded latrines were from

[4] Agreed target as at August 2012
[5] The underground structure

those two areas. Rowmari Upazila saw further damage as a high number of latrines were also submerged, especially in the Datvanga Union.

Table 2: Key indicators demonstrating the performance of low cost latrines

% of low cost latrine recipients reporting their latrine was 'submerged'	17%
% of low cost latrine recipients indicating the latrine had been used by other households during the flood	16%
% of low cost latrine recipients reporting adult members were defecating in their own latrine during the recent flood	77%
% of low cost latrine recipients reporting latrine was intact at time of survey	54%
% of low cost latrine recipients reporting latrine had weakened structure but was still useable at time of survey	32%
% of low cost latrine recipients reporting latrine had weakened structure and was unusable at time of survey	10%
% of low cost latrine recipients reporting latrine had been destroyed	4%

*denominator is recipients of low cost latrine

3.3. Access to clean water during the flood

Tube wells are available locally, and many households on the *chars* have access to a tube well. However, many available wells are at risk of contamination. This is most often due to their insufficient depth and the absence of concrete platforms. The cost of platforms is often too high for the poorest households to bear, making wells at risk of contamination.

The CLP implements its tube well project using a private ownership model that improves value for money and sustainability of the water sources. Where new tube wells are required, the CLP offers a tube well subsidy to households that contribute Tk 1,000 (about £10) of their own capital to install a well to CLP standards[6]. While this household remains the owner of the well, the subsidy is subject to the agreement that access for other households will be permitted. Where tube wells already exist, the CLP will meet the cost of installing a concrete platform at wells that meet the rest of the CLP standards.

[6] Situated above the flood line; At least 40 feet deep; No less than 10m from a latrine; Has an arsenic level of lower than 50 ppb (parts/ billion); Has a bacterial load of lower than 100 cfu (colony forming units); Is accessible to at least four CPHHs within a 10 minute round trip; Has an intact concrete platform; and supports no more than eight households in total

CLP-2 aims to provide 55,000 households with access to an improved water source. By June 2012, 16,700 households had already gained access.

Hazra: Safe WASH during floods

Hazra joined the CLP in November 2010. As part of the Programme's support, her homestead, tube well and latrine were raised on a plinth above the highest known flood level. This plinth now keeps her family safe from the floods and allows her to access safe water and sanitation throughout the year.

Last year, and before the CLP, Hazra and her family were severely affected by the floods. The flood water reached the top of their doorway. To survive, they placed their bed onto bamboo bars above the flood level. It was particularly difficult for her children who often cried of hunger. Hazra did not have access to a toilet. The family bathed in their home, cooked in their home, but also defecated in their home, during which Hazra would hide from her children using her sari. Hazra also had difficulties accessing safe water. Her family would drink the river water which was very dirty. Both of her children suffered from waterborne diseases.

Hazra is making a particular effort to keep the toilet clean as her neighbours are also using it. Hazra says her tube well and latrine are as important as the raised plinth as they keep her children free from illness.

During the July 2012 flood, 84% of core participant's tube wells were reported to have remained above the flood line. Even though a small percentage of core participant households (16%) saw their tube well submerged, all had access to a tube well i.e. their own tube well (47%), a shared tube well (7%), or their neighbours' tube well (46%).

However, the survey revealed that only 33% of core participants had access to clean water during the flood. A respondent was considered to have access to clean water when the tube well they got water from was raised on a plinth, had an intact concrete platform and was a 10 minute return journey from their homestead (i.e. they did not have to meet all criteria). The small percentage of core participants with access to clean water can be attributed to the fact that only 37% of tube wells had an intact concrete platform.

Table 3: Key indicators demonstrating the performance of tube wells

% of CPHH reporting their tube well had been submerged during the flood	16%
% of CPHH sourcing water from their own tube well	47%
% of CPHH with a tube well on a raised plinth	79%
% of CPHH with an intact concrete platform	37%
% of CPHH with access to clean water up to (partial) CLP standards	33%

*denominator is CPHH up to and including cohort 2.2

Prevalence of water-borne diseases

Around 15% of all respondents' children and 15% of adults had suffered from diarrhoea since the start of the flood. There is no comparison group to assess whether these figures are high or low. The primary source of treatment was oral rehydration salts (64% of respondents) and other medication (27%). Encouragingly, 63% of respondents indicated CLP's village health workers (*Char Shasthya Karmis*) were available.

Use of water purification measures

During the flood, 6% of all respondents reported using a water purification measure. The majority boiled water (87%), whilst 11% used purification tablets and 3% used Potash Alum[7] or other measures.

[7] Potash Alum, is a chemical commonly used for water purification.

Conclusions and recommendations

3.4. Summary of findings

This survey was undertaken to assess the performance of raised plinths, low-cost latrines and tube wells in light of the July 2012 flood in the districts of Jamalpur and Kurigram. The water level was considered to have been the highest since the 2007 flood.

The survey revealed that the raised plinths were a great success and were able to withstand the floods. Both core and non core participants were sheltered and remained dry above the flood line. The plinths were also used to protect neighbouring families as well as their assets.

This was the first time the low-cost latrine model was put to test. A small number of latrines were submerged or eroded during the flood. However as the flood receded the majority of the latrines remained intact, whilst a few had a weakened structure but remained usable. Nevertheless, the low-cost latrine model proved broadly successful as the majority of recipients continued to have access to sanitation in this time of flood.

Results were not as positive for tube wells. Even though all core participants had access to water, only a small percentage had access to clean water according to CLP standards. This was mostly attributed to the fact that many tube wells did not have intact concrete platforms.

3.5. Recommendations

Based on the findings from this study, a number of recommendations can be made to ensure the positive performance of plinths, low cost latrines and tube wells during floods.

- Continue with the raising of plinths 60 cm above the highest known flood level and deter households from reducing the height of their plinths. The plinths provide environmental protection by providing a safe place to live for both core and non core participants, as well as their assets.
- Within the next three to six months undertake a wider survey/ more detailed research of the low cost latrine to evaluate their performance and sustainability.
- There is a need to increase the proportion of core participants with access to clean water. The findings indicate that a large proportion of CPHH did not have a proper concrete platform.

Annex 1: Output Tables

A. RAISED PLINTH

Only applicable to HHs who received raised plinth:

What is the plinth status?	CPHH		Non CPHH		Total	
	N	%	n	%	n	%
Intact	340	62.39	176	71.26	516	65.15
Partially eroded	169	31.01	62	25.10	231	29.17
Fully eroded	16	2.94	5	2.02	21	2.65
Others	20	3.67	4	1.62	24	3.03

Was the plinth submerged during the most recent flood?	CPHH		Non CPHH		Total	
	N	%	n	%	n	%
Yes	38	7.47	20	8.40	58	7.76
No	471	92.53	218	91.60	689	92.24

Has the top of the plinth been removed by the residents to extend the surface area?	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
Yes	22	4.32	11	4.62	33	4.42
No	487	95.68	227	95.38	714	95.58

Did you have to seek shelter during the recent flood?	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
Yes	24	4.72	14	5.88	38	5.09
No	485	95.28	224	94.12	709	94.91

If yes, where?	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
Others CPHHs plinth	11	45.83	2	14.29	13	34.21
Embank	3	12.50	2	14.29	5	13.16
Flood Salter	0	0.00	1	7.14	1	2.63
Other Place	10	41.67	9	64.29	19	50.00

Did you seek shelter for your livestock	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
Yes	29	5.70	12	5.04	41	5.49
No	480	94.30	226	94.96	706	94.51

Have you been sheltering other households?	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
Yes	82	16.11	51	21.43	133	17.80
No	427	83.89	187	78.57	614	82.20

If yes, how many?

CPHH		Non CPHH		Total	
sum	mean	sum	mean	sum	mean
451	5.5	344	6.75	795	5.98

Have you been sheltering your neighbours' assets?	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
Yes	72	14.15	45	18.91	117	15.66
No	437	85.85	193	81.09	630	84.34

Have you been sheltering other HHs' livestock?	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
Yes	74	14.54	48	20.17	122	16.33
No	435	85.46	190	79.83	625	83.67

If yes, how many?

CPHH		Non CPHH		Total	
sum	mean	sum	mean	sum	mean
652	8.81	361	7.52	1013	8.30

How helpful was your plinth during the recent flood?	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
Not Helpfull	8	1.57	0	0.00	8	1.07
Medium Helpfull	32	6.29	22	9.24	54	7.23
Very Helpfull	469	92.14	216	90.76	685	91.70

B. LATRINE

Only applicable to HHs who have received a subsidy for a raised latrine (low cost):

Where is the location of your latrine?	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
On the homestead	204	74.73	218	70.78	422	72.63
Outside the homestead	69	25.27	90	29.22	159	27.37

What was the latrine status during the recent flood?	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
Intact	192	70.33	204	66.23	396	68.16
Eroded	41	15.02	45	14.61	86	14.80
Submerged	40	14.65	59	19.16	99	17.04

What was the latrine status during the recent flood?	on the homestead		outside the homestead		Total	
	n	%	n	%	n	%
Intact	311	73.70	85	53.46	396	68.16
Eroded	54	12.80	32	20.13	86	14.80
Submerged	57	13.51	42	26.42	99	17.04

What is the current status of the latrine?	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
Intact	152	55.68	164	53.25	316	54.39
Weakened structure but still useable	85	31.14	98	31.82	183	31.50
Weakened structure and unusable	26	9.52	31	10.06	57	9.81
Destroyed	10	3.66	15	4.87	25	4.30

What is the current status of the latrine?	on the homestead		outside the homestead		Total	
	n	%	n	%	n	%
Intact	242	57.35	74	46.54	316	54.39
Weakened structure but still useable	125	29.62	58	36.48	183	31.50
Weakened structure and unusable	42	9.95	15	9.43	57	9.81
Destroyed	13	3.08	12	7.55	25	4.30

During the recent flood where were the adult household members defecating?	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
Own latrine	215	78.75	230	74.68	445	76.59
Other HHs latrine	51	18.68	63	20.45	114	19.62
Homestead, River/Pond, Open space	5	1.83	9	2.92	14	2.41
Other (specify)	2	0.73	6	1.95	8	1.38

During the recent flood, was you latrine being used by other households (core or non core)	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
Yes	54	19.78	40	12.99	94	16.18
No	219	80.22	268	87.01	487	83.82

If yes, how many? (*Please specify the exact number of additional people using the latrine, excluding the family members owning the latrine)*

CPHH		Non CPHH		Total	
sum	mean	sum	mean	sum	mean
220	4.07	220	5.50	440	4.68

How satisfied are you with your latrine?	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
not satisfied	17	6.23	12	3.90	29	4.99
moderately satisfied	74	27.11	116	37.66	190	32.70
very satisfied	182	66.67	180	58.44	362	62.31

C. TUBE WELL
Only applicable upto CLP2.2

During the recent floods, what was your source of drinking water?	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
HH own TW	137	46.76	256	50.79	393	49.31
TW – shared ownership	21	7.17	26	5.16	47	5.90
TW – Owned by others	135	46.08	220	43.65	355	44.54
Pond/River	0	0.00	2	0.40	2	0.25

Is the tube well on a raised plinth?	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
Yes	231	78.84	368	73.31	599	75.35
No	62	21.16	134	26.69	196	24.65

Does the tube well have an intact concrete platform?	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
Yes	107	36.52	105	20.92	212	26.67
No	186	63.48	397	79.08	583	73.33

	CPHH		Non CPHH		Total	
	sum	mean	sum	mean	sum	Mean
How far is the tube well from your homestead?		2.86		3.34		3.16

Was the tube well submerged during the last flood?	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
Yes	47	16.04	70	13.94	117	14.72
No	246	83.96	432	86.06	678	85.28

During the last flood, did you use any water purification measure?	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
Yes	33	11.26	27	5.38	60	7.55
No	260	88.74	475	94.62	735	92.45

If yes, what was the measure?	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
Boiling	30	90.91	20	74.07	50	83.33
Purification tablets	2	6.06	6	22.22	8	13.33
Potash Alum	1	3.03	0	0.00	1	1.67
Other (specify)	0	0.00	1	3.70	1	1.67

Access to clean water-CLP standard	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
No	196	66.89	410	81.67	606	76.23
Yes	97	33.11	92	18.33	189	23.77

D. ASSETS

During the recent flood did you have to sell any livestock? (distress sell only)	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
Yes	40	5.88	34	6.75	74	6.25
No	640	94.12	470	93.25	1110	93.75

During the recent flood, did you lose any livestock?	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
Yes	30	4.41	22	4.37	52	4.39
No	650	95.59	482	95.63	1132	95.61

During the recent flood, what did you feed your livestock?	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
Reserve fodder	503	81.26	248	80.52	751	81.01
Fodder from neighbours	54	8.72	42	13.64	96	10.36
Purchased fodder	62	10.02	18	5.84	80	8.63

How difficult was it to manage livestock feed	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
Not difficult	137	22.28	88	28.95	225	24.48
Moderately difficult	242	39.35	112	36.84	354	38.52
Very difficult	236	38.37	104	34.21	340	37.00

Did your livestock suffer from any disease?	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
Yes	72	11.61	57	18.51	129	13.90
No	548	88.39	251	81.49	799	86.10

E. WATER-BORNE DISEASES

Have any of the adult household members been suffering from diarrhoea since the beginning of the recent flood?	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
Yes	99	14.56	75	14.88	174	14.70
No	581	85.44	429	85.12	1010	85.30

Have any of the household children been suffering from diarrhoea since the beginning of the recent flood?	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
Yes	99	14.56	78	15.48	177	14.95
No	477	70.15	354	70.24	831	70.19
N/A	104	15.29	72	14.29	176	14.86

What type of treatment did you use?	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
ORS	68	68.69	45	57.69	113	63.84
Anti-diarrhoeal medicine	22	22.22	26	33.33	48	27.12
Other (specify)	5	5.05	6	7.69	11	6.21
No treatment	4	4.04	1	1.28	5	2.82

During the last flood were CSKs available?	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
Yes	502	73.82	244	48.41	746	63.01
No	178	26.18	260	51.59	438	36.99

F. RELIEF

During the recent flood, what was your main source of food?	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
Yes	174	25.59	133	26.39	307	25.93
No	506	74.41	371	73.61	877	74.07

Relief Items	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
ORS	21	12.07	17	12.78	38	12.38
Medicine	5	2.87	2	1.50	7	2.28
Water purification tablets	6	3.45	6	4.51	12	3.91
Rice	161	92.53	126	94.74	287	93.49
Other food	15	8.62	13	9.77	28	9.12
Cash	7	4.02	4	3.01	11	3.58
Other:	11	6.32	7	5.26	18	5.86

G. FOOD SECURITY

During the recent flood, what was your main source of food?	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
Food reserve	280	41.18	300	59.52	580	48.99
Purchased food	324	47.65	165	32.74	489	41.30
Borrowed food	43	6.32	24	4.76	67	5.66
Begging	8	1.18	1	0.20	9	0.76
Relief	25	3.68	14	2.78	39	3.29

During the recent flood, how difficult was it to feed your family members?	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
Not difficult	114	16.76	148	29.37	262	22.13
Moderately difficult	288	42.35	218	43.25	506	42.74
Very difficult	278	40.88	138	27.38	416	35.14

During the recent flood, did you lose any field crop?	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
Yes	155	22.79	229	45.44	384	32.43
No	82	12.06	73	14.48	155	13.09
N/A	443	65.15	202	40.08	645	54.48

During the recent flood, did you lose your homestead garden?	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
Yes	278	40.88	109	21.63	387	32.69
No	402	59.12	395	78.37	797	67.31

Is there any wage labour currently available?	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
Yes	127	18.68	92	18.25	219	18.50
No	553	81.32	412	81.75	965	81.50

Do you still have food reserves to feed all your household members?	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
Yes	518	76.18	426	84.52	944	79.73
No	162	23.82	78	15.48	240	20.27

H. VDC

During the flood period, has there been any VDC meetings to discuss flood related issues?	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
Yes	75	11.03	36	7.14	111	9.38
No	605	88.97	468	92.86	1073	90.63

Did the VDC take an initiative to help the flood affected households?	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
Yes	42	6.18	34	6.75	76	6.42
No	638	93.82	470	93.25	1108	93.58

How helpful was the VDC initiative?	CPHH		Non CPHH		Total	
	n	%	n	%	n	%
Not helpful	1	2.38	2	5.88	3	3.95
Moderately helpful	9	21.43	8	23.53	17	22.37
Very helpful	32	76.19	24	70.59	56	73.68