

Bangladesh

HCTT Joint Needs Assessment (JNA)



Flash Floods in Cox's Bazar, Bandarban and Chittagong Districts

June-July 2015

Report date: 20 July 2015



Figure 1: credit Agrajatra

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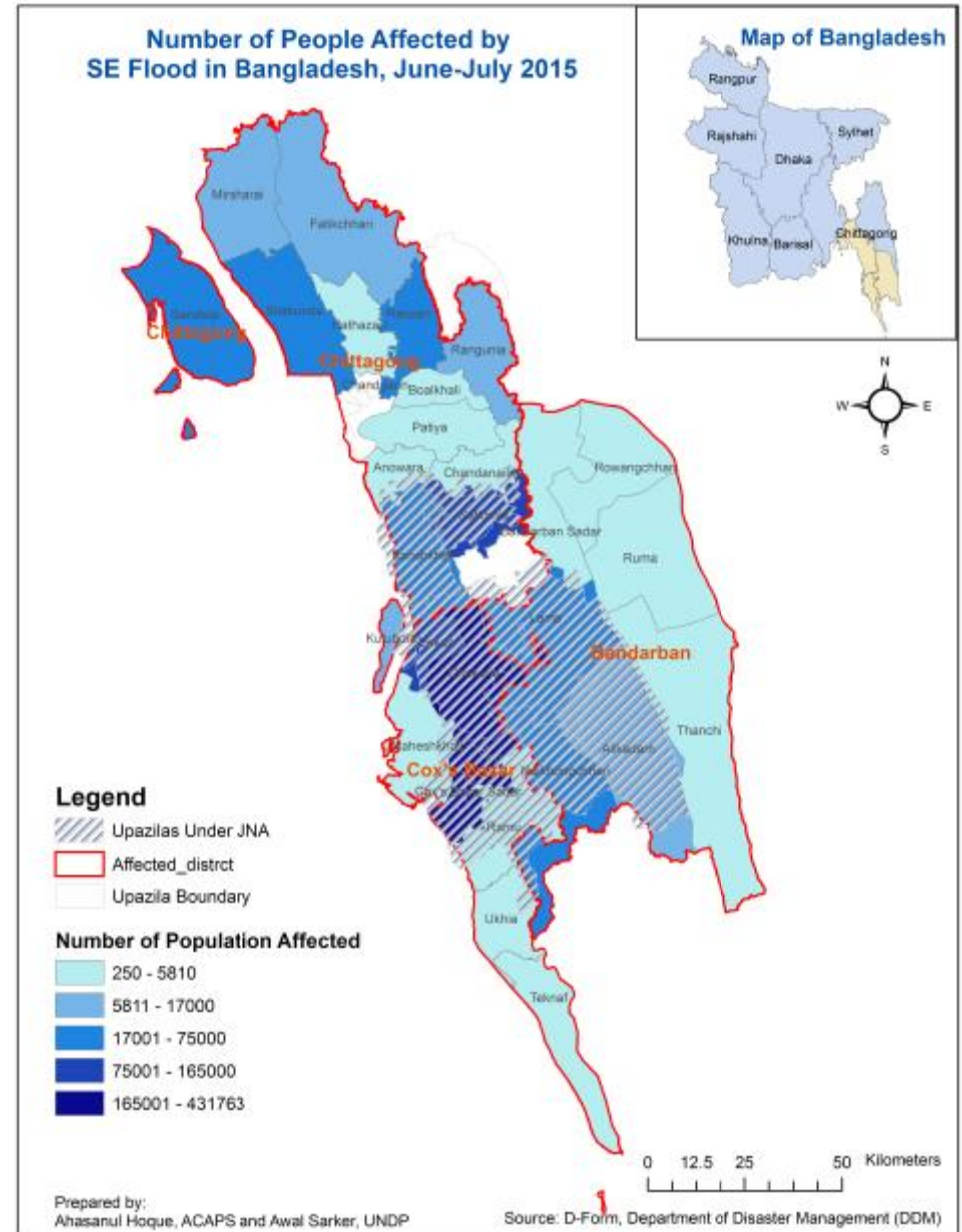
Data processing, analysis, visualization and report writing for this Joint Needs Assessment were produced by ACAPS (Assessment Capacities Project). For more information on ACAPS, go to www.acaps.org.

Situation Overview

Heavy rainfall hit Bangladesh on 23 June 2015, causing landslides and flooding. The south-eastern districts of Cox Bazar, Bandarban and Chittagong are worst affected. Government information identifies 29 upazilas as most affected.

- In the 29 upazilas classified as affected by the Department of Disaster Management (DDM), a total of over 1.8 million people are impacted.¹
- Since 23 June, 22 people have died due to landslides, electrocution, drowning and capsizing boats, and over 20,651 have been injured.
- In Cox's Bazar district an estimated 60% to 90% residents have been affected, with Ramu, Cox's Bazar Sadar and Chakaria the worst-affected upazilas. At least 20 of the deaths occurred in Cox's Bazar, with seven in Ramu (Reuters, 28/06/2015; INGO Emergency Sub-Committee, 28/06/2015; Disaster Management Information Centre, 03/07/2015; Care, 28/06/2015; Agrajatra, 28/06/2015).
- The number of people who remain displaced is unclear. Some reports indicate that most families have gone to stay with relatives rather than to a designated evacuation site (Disaster Forum, 27/06/2015). As of 28 June, some people are believed to have begun returning home. The Government estimates that 120,000 remain stranded on shoals around the Padma and Meghna rivers and have been there since 24 June (INGO Emergency Sub-Committee, 28/06/2015).
- On 27 June, there was a break in the rains and the water began receding, improving access to affected areas (Agrajatra, 28/06/2015). As of 9 July, all rivers in the three districts affected by the flooding have returned to normal levels, with the exception of Narayan Hat river in northern Chittagong district, at danger level (Flood Forecasting & Warning Centre, 09/07/2015).
- Current weather forecasts do not predict further flooding in the coming days. The monsoon normally runs until October, however, indicating that further rains in affected areas are possible (Bangladesh Meteorological Department, 09/07/2015). Heavy rainfall warnings have been issued for other parts of the country including Rajshahi, Khulna, Barisal and Dhaka Divisions (local organisation, 10/07/2015).

Figure 2: Percentage of total population severely affected



¹ Based on DDM information received on 14 July 2015.

Figure 3: Key Government of Bangladesh information on impact based on D-Forms received 14/07/2015

Name of Affected Districts	Number of Upazilas Affected	Number of Unions Affected	Number of Affected People	Number of Death	Number of Household Affected	No. of fully damaged House	No. of partially damaged House
Bandarban	7	29	120448	2	33425	1472	4525
Cox's Bazar	8	63	1222637	20	214926	25797	65955
Chittagong	14	94	464250	0	68030	0	6610
Total	29	186	1807335	22	316381	27269	77090

Response to date by government and other stakeholders:

- The Government of Bangladesh has responded in many affected areas with distributions of rice and cash. The GoB's provided assistance per district as follows:

	MT-rice	Lack BDT
Chittagong	350	24.95
Cox's Bazaar	510	23.5
Bandarban	395	23.2

- WFP provided High Energy Biscuits to more than 150,000 people most affected by the floods in Cox's Bazar district, in coordination with Government of Bangladesh and in partnership with BDRCS. (WFP, 09/07/2015).
- CARE, in partnership with national NGO SARPV, has supplied more than 5,400 households in Cox's Bazar district with wheat, yellow peas, edible oil and water purification tablets (4W matrix, 08/07/2015).
- Manusher Jonno Foundation, in partnership with SARPV, has supplied 160 households in Cox's Bazar district with rice, potato, lentils, oral saline, candles and matches. (4W matrix, 08/07/2015)
- In late June local NGO MUKTI supplied 1550 families who were living in cyclone shelters in affected areas of Cox's Bazar district with pressed rice and molasses. (4W matrix, 08/07/2015)
- IFRC/BDRCS supported 15,000 people with food packages
- IFRC/BDRCS provided cash grant to 1000 households
- Save the Children has made NFI kits available from its standing stock in-country if required, as well as speed boats (Save the Children, 28/06/2015).

- The Directorate General of Health Services (DGHS) deployed 88 medical teams in the flood affected Upazilas. To complement services, medical teams of Army Medical Core and IOM also provided services with free medicines in the areas.
- WHO distributed a bulk amount of emergency drugs (ORS, WPT, IV saline, antibiotics and other necessary drugs) for managing flood related health problems and more emergency drugs along with IEHK Kits are on pipe line.
- Water purification tablets, water treatment plants, and hygiene kits are being supplied by DPHE and UNICEF, while BDRCS provided around 10,000 people with search and rescue services and first aid (HCTT, 29/06/2015; IFRC, 03/07/2015).
- UNICEF, through DPHE distributed 45,000 water purification tablets and 1263 WASH Kits (20 lit bucket, 10 lit jerrican, 1.5 lit Mug, 6 tooth brush, one big towel, 130gm soap one for hand washing) in Cox's Bazar affected areas of Pekua, Chakaria, Ramu and in the city. 32 mechanics mobilized in the area to repair TWs and water points
- Limited information available presently on response.

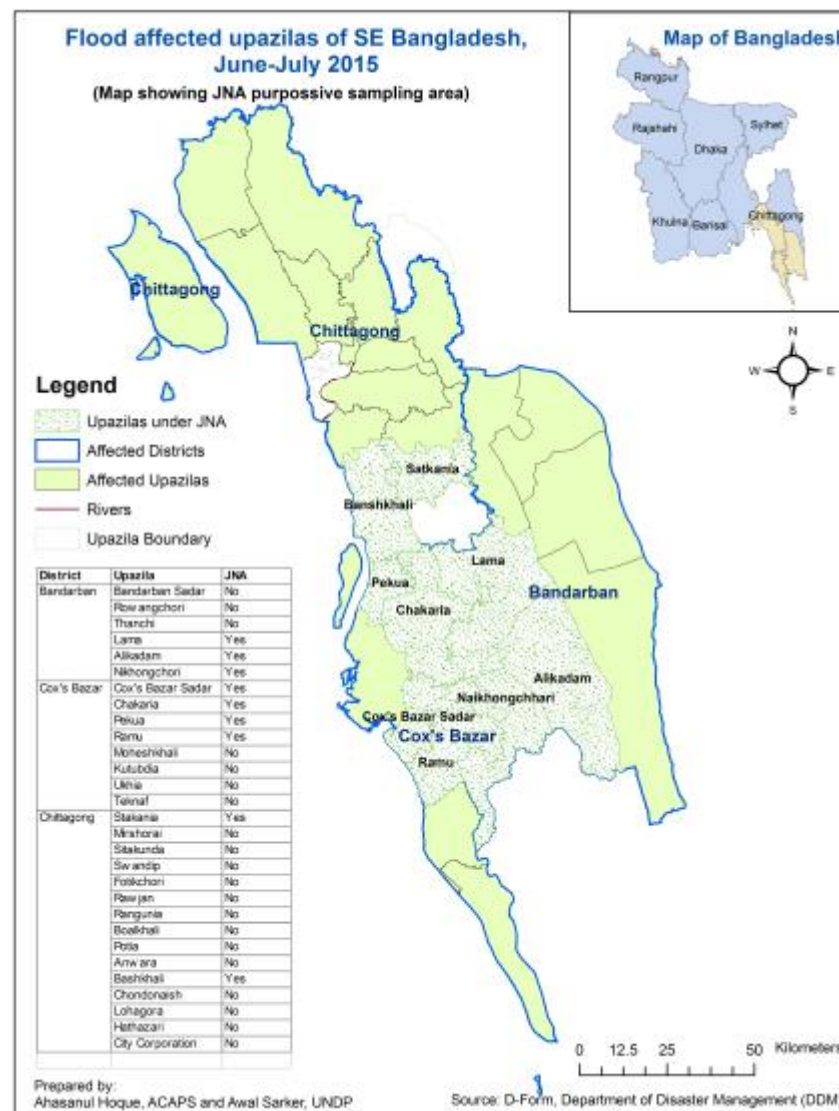
Planned response

- Muslim Aid is planning to distribute cash grant to 830 Households in Cox's Bazaar district

Coordination

- Coordination of the response will be through the HCTT.

Figure 4: Flood affected upazilas



Key Findings: Summary

The JNA used a purposive sampling to select 27 communities in the affected areas. In each community, 2 community group discussions were conducted at each site, with male and female participants (for a more detailed explanation see the methodology section below). Key findings include:

- Of the 54 community groups assessed, 33 of them represented people who were residing at home with 20 groups reporting that the single reason they were not living in their usual place of residence being that their houses were uninhabitable.
- Community group discussions reveal that the three highest priorities for affected people are, in priority order, food, restoration of livelihoods and repair of damaged shelter (homes).

Figure 5: Key priorities expressed by Community Groups (by district)

	Bandarban	Chittagong	Cox's Bazar	Total
Food (for people)	2.28	1.58	1.08	1.59
Restoration of livelihood activities	1.06	1.33	1.21	1.19
Repairing damaged house	0.89	0.42	1.58	1.09
Sanitation bathing space/water	0.17	0.5	0.88	0.56
Safe water to drink	0.22	0.67	0.29	0.35
Sanitation/toilet facilities	0.61	0.08	0.25	0.33
Temporary shelter	0.17	0.5	-	0.17
Communication/information systems	-	0.33	0.08	0.11
Access to markets to buy goods	0.06	0.08	-	0.04
Health care	-	-	0.08	0.04
Cultural and religious activities	-	0.17	-	0.04

These priorities are relatively consistent across the 3 districts, across type of site and for both male and female groups. Restoration of livelihood activities is more of a concern for men and for households where the house has not been damaged. Food has been reported more frequently as a priority issue in Bandarban district. Specific reported issues include water in Chittagong, hygiene and bathing facilities in Cox's Bazar and sanitation/toilets in Bandarban.

Key Findings:

Food Security

- Food and commodity shortages occurred because markets were closed during the height of the flooding.
- Majority of communities report problems in relation to food; the most reported problem is having insufficient food.
- Households cannot afford food and basic commodities and they face challenges accessing markets.
- Negative coping strategies are being reported including eating fewer meals per day, borrowing money at high interest and purchasing food on credit. New loans are also being taken out.

Livelihoods

- Loss of livelihoods reported across all community groups.

Health

- Communities are concerned about health; diarrhoea and other health problems such as ARI, skin-eye-ear infections and snake-bite are reported as the main concerns.
- Few of the community clinics are damaged due to flood water and not functional at optimum level. Time taken to access health care has increased as a result of the floods.

Nutrition

- Concerns in feeding children under 2 years are widely reported.

Shelter

- Many community groups report shelter as a problem for them. Displaced people cannot return home because houses are uninhabitable.

WASH

- Increase in unprotected water sources for drinking and cooking.

- Women report having no toilet at all almost twice as many times as men. Women also expressed concern over privacy, gender segregation, lighting, security/safety, distance to go to the toilet.
- An increase in open defecation is reported from all types of sites.

Education

- Significant damage to education materials is preventing children from attending school.

Aggravating Factors

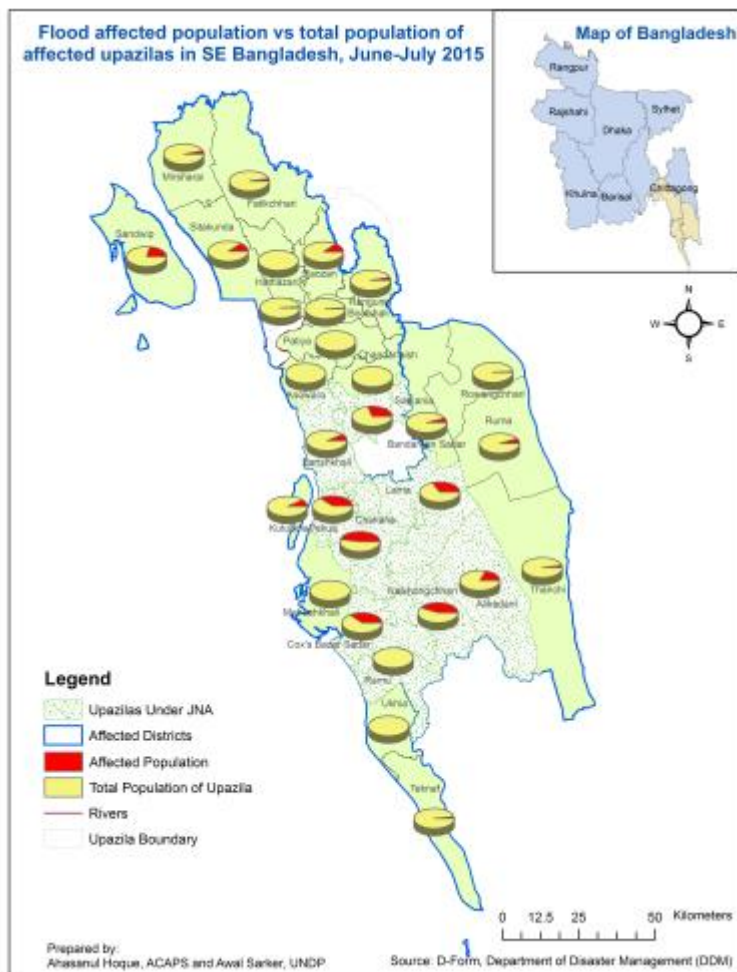


Figure 6: Flood affected population vs total population of affected upazilas

the most recent flooding. They were therefore less effective and are now more severely damaged (Concern 28/06/2015).

Poverty:

At least 45 million people in Bangladesh, almost one third of the population, live below the poverty line. Of these, 26 million people (18% of the population) live in extreme poverty (i.e. below the lower poverty line) (Poverty Maps of Bangladesh, WB, WFP, BBS, 2010)

- 21.61% live in extreme poverty in Bandarban
- 16.24% live in extreme poverty in Cox's
- 4% live in extreme poverty in Chittagong

These proportions are even higher in some upazilas and overall district averages can mask pockets of intense poverty (see poverty map page 9).

Geography and planning:

The area affected by the current flooding and landslides is known to be a particularly vulnerable part of the country. Main hazards in Cox's Bazar district are cyclones, riverbank erosion, water logging, salinity and flash floods (Government, 2014). In Chittagong district, the main hazards are cyclones, floods, riverbank erosion, landslides and salinity. Bandarban is particularly affected by landslides, which cause serious damage to roads and infrastructure, posing access issues, especially for Bandarban town. The majority of affected populations in Bandarban districts live below the national poverty line, and reside in vulnerable hilly locations (Clusters/Government, 08/2012; local media, 04/2015).

- The geographical setting of the country's southeast hilly areas and upstream rivers makes these areas naturally prone to flash floods and landslides. The magnitude of the disaster impacts in the area is compounded by unplanned settlement near the mountains and hill cutting for house construction and agriculture which increases the instability of the land (Clusters/Government, 08/2012).

- Flood defence embankments which were previously damaged or broken, for example between the Subrang and Sahpuridwep along the river Naf, had not been repaired before

Figure 7: Hard to reach unions in flood affected upazilas

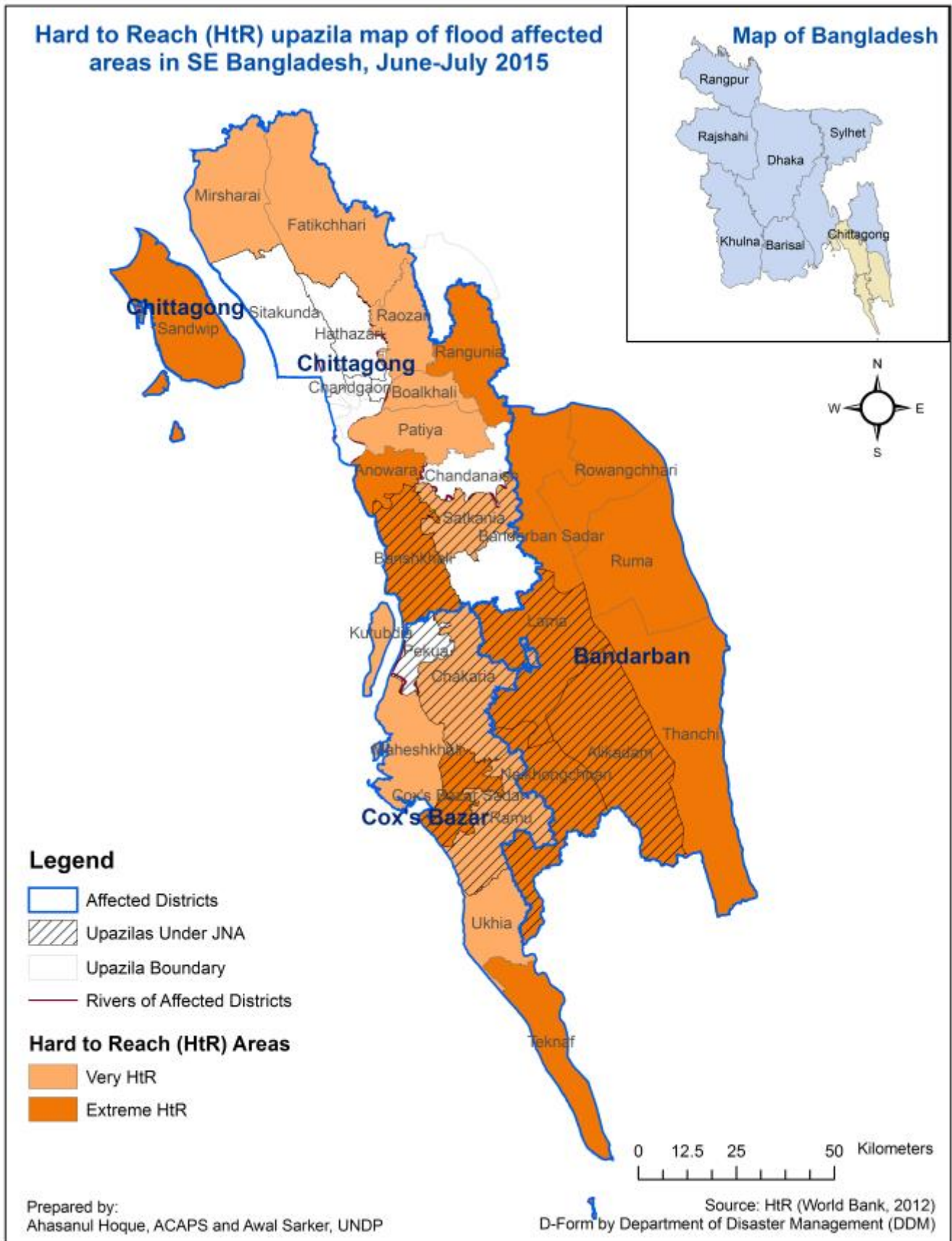
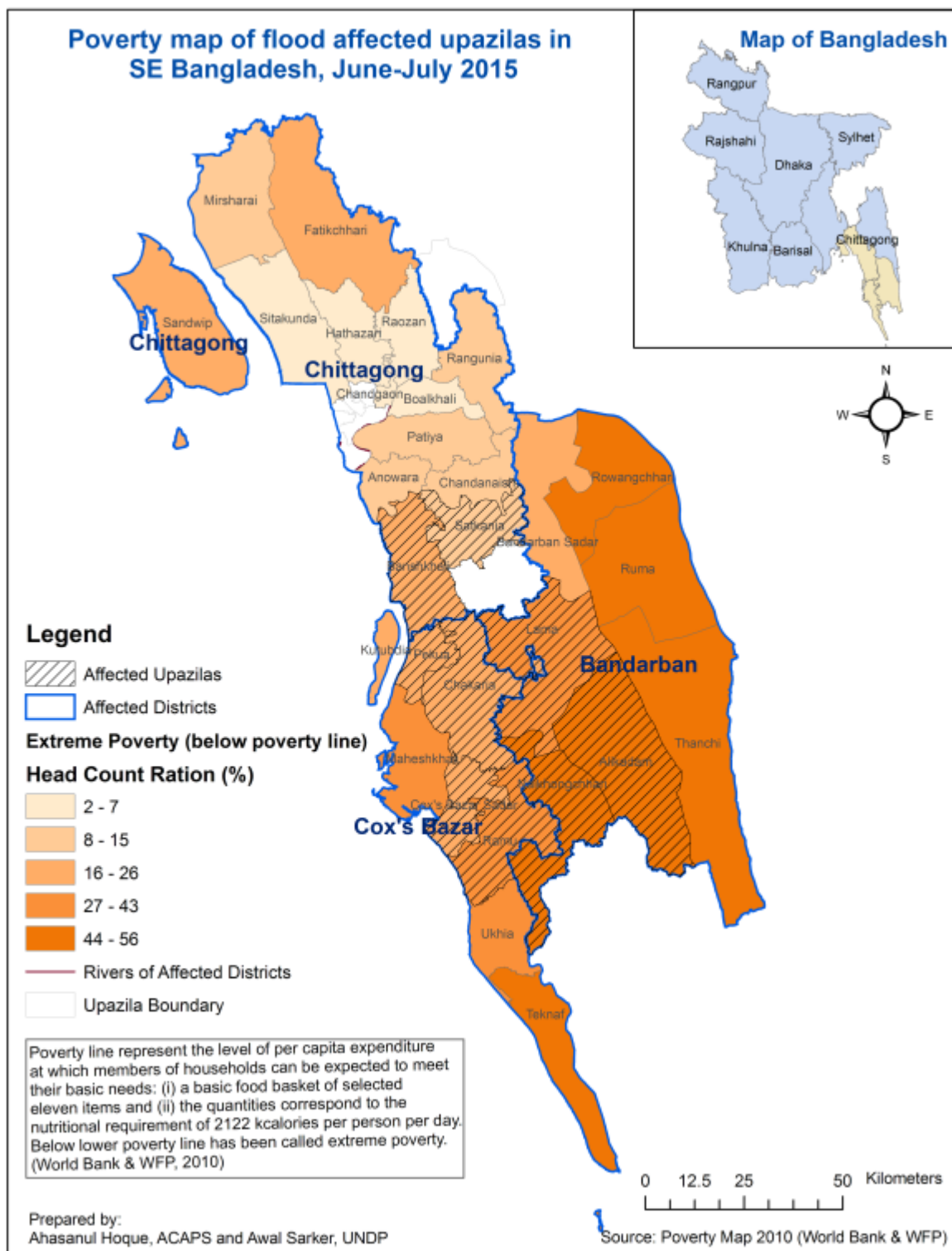


Figure 8: Poverty of flood affected upazilas



Timing of the floods:

- The flooding occurred during Ramadan. This has resulted in Muslims having reduced access to food and potable water during the evenings where they would normally eat and drink after fasting during the day.

Information gaps and limitations:

- Numbers of people displaced: Official information on the overall geographic scope of the impact of the floods and landslides does not include numbers of displaced people.
- Total affected area: Official information from DDM by 15th July 2015 includes 29 affected upazilas..
- Based on information presented at the HCTT on 29th June the JNA field work purposive sample was prepared on 9 upazilas only.

- Definitions: Definitions of some of the terms used in the government D-Form to describe the degree to which people are affected could be clarified to ensure consistent understanding.
- Minority groups: Although the upazilas of Ukhia and Teknaf are listed as affected they were not included in the JNA purposive sample. These areas include the location of the official Rohingya refugee camps as well as large numbers of Undocumented Myanmar Nationals (UMNs). UMNs are also present Kutubdia and Moheshkhali Upazilas (which are also listed as affected areas) IOM, MSF and ACF work in the unofficial settlements, and UNHCR and WFP in the Kutupalong and Nayapara refugee camps. All parties have reported that the affects as a result of the flooding have been very minimal in these areas. Information on the impact of other minority groups in the southeast is unknown.
- The limited information about response to date may indicate that this is presenting an incomplete picture.
- Due to accessibility issues to JNA sites, and upazila teams' inability to pre-advise on the location of the sites, there were very few people with disabilities included in JNA CG discussions.

Lessons learned from previous disasters:

- Cox's Bazar, Bandarban, and Chittagong districts were all affected by flash floods in June 2012, killing 122 and affecting nearly more than 1.3 million people. Populations in hilly sub districts of Bandarban district were most severely affected (JNA, 2012).
- Household incomes were significantly reduced, and water and sanitation facilities and houses damaged and destroyed. Food, shelter, WASH, Health and livelihood support were reported as the priority needs. Lack of preparedness was reported as a concern, as communities were not prepared to cope with the floods (Clusters/Government, 08/2012).
- In the previous major floods (in 1988, 1998, 2004, 2007) approximately 70% death occurred due to drowning, 25% from Snake bite and 5% others (National Health Crisis Management Centre & Control Room, Directorate General of Health Services, Bangladesh).

Recommendations and Priority interventions

Food Security

- Short term response
 - Food assistance: food aid or cash
- Recovery / mid-term response:
 - CFW: rehab infrastructure (embankment, school, infrastructure)
 - livelihood support (cash or in kind),
 - agricultural support (seeds, inputs or cash for seeds),
 - Agriculture training, CFW for shelter & school repair, embankment repair
 - UCG for the most vulnerable (PLW, elderly, disable, chronically sick, around 7-8%)
 - Access to finance services
- Long term
 - Salinity issue
 - Water logging
 - Modern cultivation process
- Other area to consider:
 - Link with nutrition cluster – nutrition activities
 - Advocacy for rehabilitation of the damaged embankments
- Targeting
 - Select the Unions with the highest number of severely affected HH: 10 Uz are the most affected for FS (SR data, can select the most affected unions);
- Package
 - The package as defined by the FSC contingency plan-floods should serve as guidance
 - To link with CWG (Cash working group)
- Further assessment?
 - Rapid market survey: only in Cox's Bazaar district

Livelihood and Income

- Immediate cash transfer through cash for work and cash for training should be launched to inject cash to the affected families to enable them to meet their daily necessities. The markets in the affected areas are functioning normally and will enable affected community to use the cash for family recovery immediately.
- Cash grants to buy agriculture inputs, livestock, fishing nets and other necessary products to resume livelihoods. Emphasis should be given to promoting disaster/climate resilient livelihood practices.
- Undertake essential repair/rehabilitation of essential community infrastructure – roads and bridges/culverts. Cash for work scheme considering the local labor, masons, carpenters and other relevant people should be used to repair/rehabilitate essential community infrastructure.
- Launch awareness raising and capacity building parallel to the recovery and reconstruction interventions, directly connected to the related activities – environmental protection through reforestation and resilient house building techniques, sustainable livelihoods through long-term planning and use of disaster/climate resilient crops and farming practices.

Nutrition

- Integrate nutrition screening for acute malnutrition as well as promotion of infant and young child feeding practices into proposed immediate interventions of food security and WASH.
- A detailed nutrition survey to be undertaken in one or all the districts affected by the flooding to ascertain the actual nutrition situation.

Shelter and NFI

- Support HHs to repair partially damaged shelter (67,090) through supply of materials and tools, or through cash grants (availability of materials at markets to be assessed prior).
- Support HHs to reconstruct shelters (20,269) for the families whose houses are fully damaged and currently living with host families and neighbours.
- The shelter design should incorporate disaster resilient features based on the vulnerability, indigenous knowledge as practiced by the indigenous hill people whose houses proved to be resilient to the recent heavy rain and flash flood. Support to reconstruction or new construction of shelters, may include training to HHs and labor on disaster resilient building techniques, design and materials.
- Put in place measures to increase privacy at communal shelters.

- Rebuilding or repairing of houses or cash grant should include shelter for the livestock and additional cost for the labor.
- Inclusion of vulnerable groups including female headed households, disabled, older persons and the landless need to be consider during delivery of shelter or cash for shelter.
- Emphasis should be given to the use of local resources, including labor and materials, during any shelter related intervention.
- In case of rebuilding of houses in new locations, sites should be assessed so that, as far as possible, building takes place on areas that are free of the risk from further flooding and erosion.

Health

- Replenish emergency buffer stock at all flood affected health facilities.
- Renovate community clinics for delivering health care service at optimum level.

WASH

Chittagong, Bandarban and Cox's Bazar is situated at south-east part of Bangladesh. These three districts are unique for WASH intervention because of geographical nature. Due to unique geographical condition, these three districts are identified as a Hard to Reach WASH intervention area in the World Bank published document, "Supporting pro-inclusive Water Supply and Sanitation Sector Forums". Chittagong, Cox's Bazar and Bandarban WASH intervention and service delivery is much more complex and technically challenging in any type of natural or manmade disaster. Considering this hydrogeological challenges and JNA finding; following interventions are suggested to address recent flush flood situation.

Short term response

Safe Water access: Drinking and Cooking 10L/person

- Rehabilitation of damaged water points including platforms.
- Coordinate with education cluster to provide water in temporary schools.

Sanitation: 50 people/latrine

- Building Temporary Latrines
- Mosquito net distribution [Coordinate with ER Cluster]
- Collection and disposal of solid waste in coordination with local government
- Rehabilitation of damaged latrines
- Drainage and Dewatering of stagnant water pools.
- Provide temporary latrine in schools in camps.

Hygiene: 1 kit/HH/Month

- Continued distribution of hygiene kits and hygiene awareness messages.
- Coordination with health cluster to monitor situation.
- Menstrual Hygiene Management

Medium term response

10L/person

- Rehabilitation of damaged water points [continued] including schools.
- Coordination with health and nutrition clusters for safe water in health centres.
- Rehabilitation of ponds

20 People/ Latrine [Community]

- Repair of existing household and community/shared HH latrine including schools
- Construction of improved & DRR latrines
- Collection and Disposal of solid wastes in collaboration with local government.
- Repairing and constructions of public latrine [separate male and female] including health facilities.
- Repairing of drainage channel with the local government.

Hygiene / National Capacity building

- Training of community mobilizers in hygiene practices.
- Coordination with health cluster for hygiene in health centres.

Education:

Loss of learning opportunity cannot be easily repaired/restored, however the children and their learning in the middle of the academic year should be brought to normalcy as quickly as possible. Following short and long term recommendations are made to help children recover the conducive learning environment in schools and at home.

- a) Short term recommendations
 - i) Undertaking the damaged schools for repairing/rehabilitation scheme including repairing of the approach roads under PEDP3 from EiE fund and activate LGED to take up these schools urgently;
 - ii) DPHE should be mobilized to quickly fix the TWs and water points in the affected area under PEDP3.
 - iii) Children who lost their educational materials should be replenished with “Learning Kits” with new set of NCTB books and exercise material such as khata, pencils etc.
 - iv) Schools affected seriously could be provided with additional fund under SLIP for 2015.
 - v) Remedial measures/extra classes should be organized by the schools to minimise the learning gaps due to absence in schools and non-conduction of classes during the disaster period
 - vi) Children in selected schools could be provided with mid day meal for converting these into a single shift for rest of the calendar year to help meeting the learning deficiency
- b) Long term recommendations:
 - i) Schools under the threat of repeated hit by floods and other natural calamities should be oriented and trained on preparing Contingency Plan.
 - ii) Based on the experience of consecutive floods in the concerned areas, there need to be design change of the school house, water and sanitation options
 - iii) Essential educational materials could be pre-positioned in the affected areas to replenish immediately after floods

Assessment Methodology

On the 29th June the HCTT triggered a JNA for upazilas in southeast Bangladesh using the Phase 2 approach. The key reason for undertaking the JNA were because information available on the recent flash flood was inadequate for decision making.

Data collection was undertaken from the 6th-9th July (including orientation) with data collected at 27 sites. Each data collection team consisted of 5 staff (1 team leader, 2 male and 2 female) from various agencies to have mixed expertise (Annex 1-team composition). Teams carried out separate male and female community group discussions at each site along with direct observations and severity ranking. Information was collected using pre-agreed formats on electronic tablets. The upazilla validation was done manually by using a hard copy.

The assessment capacities project (ACAPS – www.acaps.org) was requested to support with data processing, analysis, visualization and report writing which took place from the 10th-13th July.

The findings in this report represent a combination of the analysis of the primary data from the field level JNA, incorporation of available secondary data (both pre- and in- disaster sources) and official figures from the Government of Bangladesh Department of Disaster Management (DDM) that were available at the time of writing.

The field level JNA is designed to provide a picture of how people are impacted by the disaster and to give voice to their priorities while the government information provides the quantitative picture of the scope of the disaster including how many people are affected.

Districts and upazilas included in the assessment

The three most affected districts - Chittagong, Cox's Bazar and Bandarban - were included in the assessment. Within these districts, 27 purposively selected sites in 9 upazillas, based on the below criteria, were identified as the sample for this assessment.

District	Upazila	Sites	Lost house, living in relatives/ other's houses	Living in damaged/ waterlogged houses	Not marooned/ damaged/displaced, living in own house
Cox's Bazar	Chakaria	3	1	1	1
	Ramu	3	1	1	1
	Cox's Bazar Sadar	3	1	1	1
	Pekua	3	1	1	1
Bandarban	Naikhongchhari	3	1	1	1
	Lama	3	1	1	1
	Ali Kadam	3	1	1	1
Chittagong	Satkania	3	1	1	1
	Bashkhali	3	1	1	1
3 Districts	9 Upazilas	27 Sites	9 Sites	9 Sites	9 Sites

Data Sources

- 27 purposively selected sites in 9 upazillas in 3 districts
- Male and female community group discussions (CGDs) at each site (54 CGDs in total)
- Direct observation and severity ranking at each site by the assessment team
- Upazilla validation information at each upazilla conducted with government officials
- 29 D forms provided by the Department of Disaster Management
- Secondary data from pre-disaster and in-disaster sources

Assessment chronology

Dates	Major Activity
29 June – 1 July	Triggering JNA Phase 2
2 July	Planning meeting
2 July	Area wise responsibility distribution
2 July	Decide on sample (list of site + type)
2-4 July	Form the Core Group
3 – 4 July	Confirmation of the field team composition
3 – 5 July	Digitization of the JNA tools & database
6 July	Field orientation sessions
7 – 9 July	Field assessment/primary data collection
7 – 9 July	Data entry (using Tab/Android phone)
3 – 9 July	Review of the secondary data
9 – 11 July	Data processing
11 – 12 July	First draft of the findings
14 July	Joint analysis meeting
14 July	Finalization of the finding presentation to core group
14 – 15 July	Incorporating feedback from core group and clusters
16 July	Dissemination of the findings and report sharing widely (HCTT+) through email

Key characteristics of the affected districts

Figure 9: Key Characteristics of the affected districts

Key indicators	Cox's Bazar	Bandarban	Chittagong	National
Total population (BBS, 2011)	22,89990	3,88335	76,04722	14,39,25006
Population in rural areas (BBS, 2011)	17,90,979	2,87,912	44,63,723	11,04,80,514
Pop density (Gov. Data, 2011)	920/km ²	87/km ²	1,400/km ²	1203/km ²
Gender Ratio (male/female in %) BBS, 2011	107.57 %	112.48 %	98.65 %	101.24 %
Main city/town	Cox's Bazar	Bandarban	Chittagong	Dhaka
% of population with electricity (BBS, 2011)	40.4%	39.3%	74.6%	57%
HH using solid fuel for cooking (MICS, 2013)	97.1	99.5	80.4	88.2
Use Improved drinking water sources (MICS, 2013)	99.8	45.8	98.3	97.9
% with access to improved sanitation (MICS, 2013)	51.1%	17.7%	50.3%	55.9%
Life expectancy (The World Bank, 2013)	NA	NA	NA	70.7 yrs
Under 5 mortality (MICS, 2013)	41-50	41-50	41-50	42
Severely Child Stunted (BBS, 2012)	28	29	23	23.39
Maternal mortality per 1000 (WHO, 2001, UNICEF 2010)	114	216	21	220
Malaria prevalence (ICDDR,B 2011)	Endemic % not found	12%	Endemic % not found	3.97% Southeast: 6%
IPC Food security Classification	3 (crisis) 30-35% of pop	NA	2 (stressed) 30-40% of pop	-
% Below the upper poverty line (WB, 2010)	32.7%	40.1%	11.5%	32.3%
% Below the lower poverty line (WB, 2010)	16.2%	21.6%	4%	18.4%
% Stunted children under 5 years (BBS, 2012)	47%	48%	41%	41.2%
% Underweight children under 5 years (BBS, 2012)	9%	11%	8%	8.12%
Literacy rates	43.15 %	40.12 %	56.96 %	53.34 %

Detailed Assessment Findings

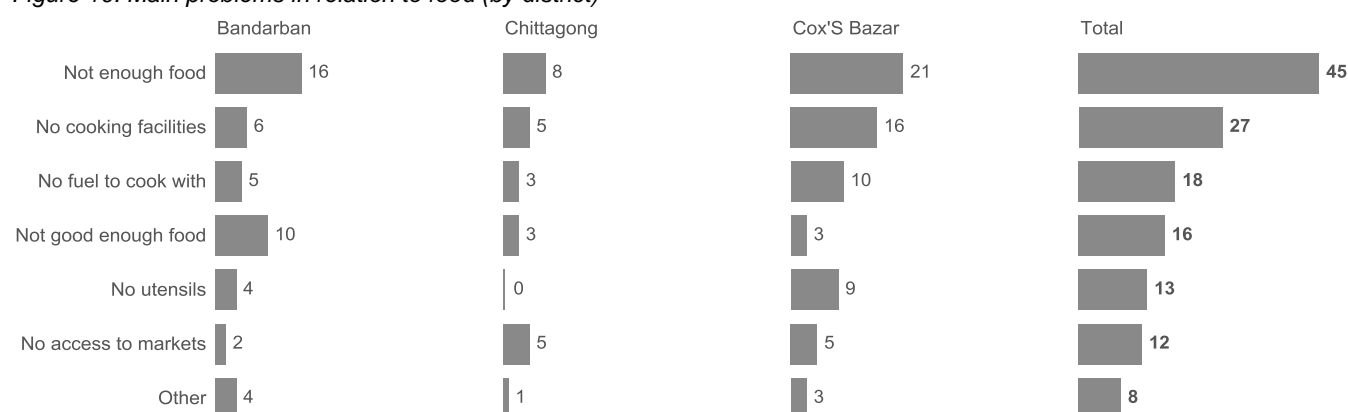
Food Security

Local organizations report that all markets and shops were closed during the height of the flooding, creating shortages of food and daily commodities (EKATA, 25/06/2015). It is unclear how many of these have re-opened.

A significant majority of communities reported that they currently face a problem in relation to food. Out of the 27 sites where community group discussions took place 25 female groups and 24 male groups reported food concerns. In only one site in Chittagong and one in Cox's Bazar, both male and female CGDs reported not facing problems in relation to food.

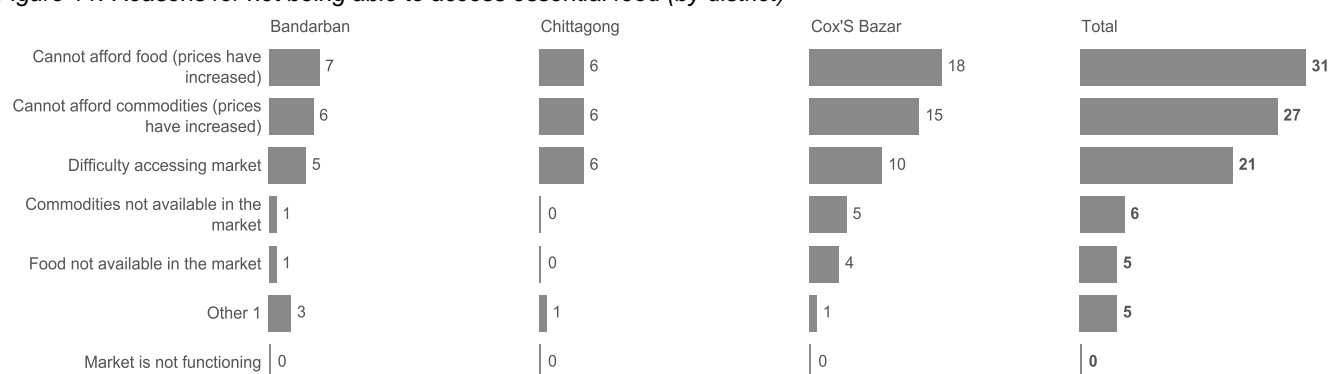
By far the most reported problem in relation to food was that households did not have enough food available. This was reported by 45 out of 49 CGDs.

Figure 10: Main problems in relation to food (by district)



The main reasons reported were that households cannot afford food, (31 out of 40 CGDs), households cannot afford commodities (27 out of 40 CGDs) and difficulty accessing markets due to road conditions or transportation costs (21 out of 40 CGDs).

Figure 11: Reasons for not being able to access essential food (by district)



Since the flooding, negative coping strategies are already being reported as households attempt to address their food needs. Eating fewer meals per day, borrowing money at high interest and purchasing food on credit were reported in all districts by both male and female CGDs. The floods took place during Ramadan and it is unclear if "eating fewer meals per day" refers to the meals that have already been reduced because of the month of fasting or if the implication is that less food is being eaten than would normally be consumed during Ramadan.

Figure 12: Main coping strategies reported by CGDs (by district)

	Bandarban	Chittagong	Cox's Bazar	Total
Eating fewer meals per day	2.56	1.17	2.04	2.02
Borrowing money at high interest	0.56	2.17	0.88	1.06
Purchasing food on credit	0.89	2.00	0.63	1.02
Eating non-cultivated food (i.e. roadside)	0.67	0.25	0.29	0.41
Eating smaller meals (reduced meal size)	0.22	0.17	0.5	0.33
Selling livestock and poultry	0.39	-	0.25	0.24

Baseline:

Food security is an underlying concern in all 3 affected districts. After the 2012 flash floods and landslides in the same 3 districts, household incomes were significantly reduced and people resorted to coping strategies such as reducing the size of meals or lowering the quality of food intake (Clusters/Government, 08/2012). Markets remained functional in 2012 but food prices quickly rose in most locations. Higher prices aggravated food security, prolonged households' dependency on external support, and deepened levels of debt (Clusters/Government, 08/2012).

Cox's Bazar: As of 2013, 30-35% of the population experience *crisis* (IPC Phase 3) food security outcomes. Income generating opportunities have already been reduced due to recurrent disasters and the monsoon season. 20% of households have poor and borderline food consumption patterns, 73% of women in Cox's Bazar consume an inadequately diversified diet, and 38% of children are underweight (IPC 2013).

Chittagong: As of 2013, 30-40% of the population experience *stressed* (IPC Phase 2) food security outcomes. 15% of households have poor and borderline food consumption (higher than the national average). In addition, 53% of women consumed inadequately diversified diets and 40% of children are underweight (IPC 2013).

Bandarban: Bandarban district is one of the most vulnerable regions in the country in terms of food security and access to basic services (FAO, 2014). Food security is affected by continuous rodent and pig attacks on crops, shifting crop cultivation, discontinuation of bamboo collection, on-going communal conflict in the area, and crop damage due to excessive rainfall. No IPC analysis has been carried out for Bandarban district.

Livelihoods and Income

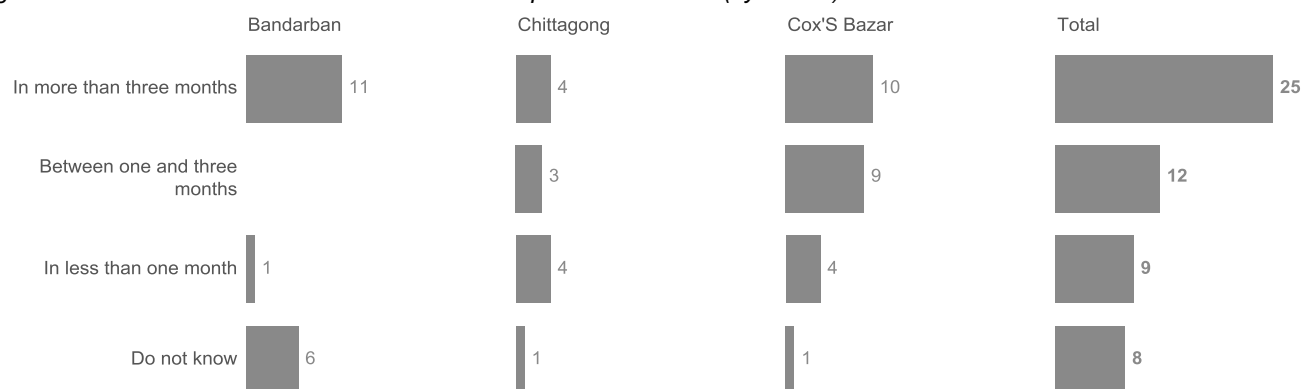
All community groups reported loss of livelihoods. Large numbers of people who reside in the worst affected upazilas have incomes based on daily wages, or are fishermen or farmers. With the flooding's effect on access to agricultural land, flooded fisheries, closed markets, and other areas of work affected, whole families are reported to have been without income for around a week (EKATA, 25/06/2015). Given the high proportion of income that is spent on food (90% in Bandarban as compared to 62% nationally (JNA SE 2012), this is likely to have a significant impact on food consumption. It is unclear the degree to which economic activities have resumed as the rains have decreased.

44 community groups reported having received some form of assistance since the disaster and 37 of them reported it was the government providing assistance. In addition to the government, 9 CGs reported that local community groups or neighbouring villages had provided assistance and there were 8 reports of assistance coming from NGOs/UN/BDRCS.

38 community groups reported that households were taking out new debts in order to cope with the impact of the floods.

Across all districts, community groups expressed concern over how long it would take to resume livelihood activities. In almost half it was estimated that it could take more than 3 months for livelihoods to return to normal.

Figure 13: Time until main livelihood activities are expected to resume (by district)

**Baseline:**

As a result of the 2012 landslides and floods, the agricultural sector was severely impacted in all three districts, most severely in Bandarban district. Household incomes (which were already below the national average) were significantly reduced (up to 57% reduction, reported with Lama upazila in Bandarban particularly affected). In Cox's Bazar and Chittagong districts, around 60-80% of fishermen lost fishing nets and boats, severely affecting their income from deep fishing activities in the winter and rainy season. People in affected areas resorted to coping strategies such as reducing the size of meals or lowering the quality of food intake (Clusters/Government, 08/2012).

Cox's Bazar: Agriculture and fishing are the main occupations in the district. Most people depend on agricultural output, including salt and betel leaf cultivation, and fishing, especially in Kutubdia, Moheshkhali, Pukua, Chakaria, Cox's Bazar Sadar and Teknaf upazilas. The land and soil of Cox's Bazar district is diverse. There are high hills, flat land, low-lying areas, sea beaches, and uneven mountains. To meet household food needs, most people cultivate double and triple crops per year. Prawn farming and salt production are the most important economic activities and dry fish is an important source of income to the fishermen especially in the islands. (Government, 2014).

Chittagong: Unlike the other 2 districts, the economy of Chittagong includes more non-agricultural activities including manufacturing, wholesale and retail, hotels, restaurants, transportation and communication related employment. However agriculture is still the main source of income in parts of the district including crops, fisheries, and livestock rearing. These have suffered massive damage during previous floods in the district (Government, 2014).

Bandarban: Two thirds of those employed in the district are self-employed. Agriculture and livelihoods is affected by continuous rodent and pig attacks on crops; shifting crop cultivation; discontinuation in bamboo collection; on-going communal conflict in the area, and crop damage due to excessive rainfall.

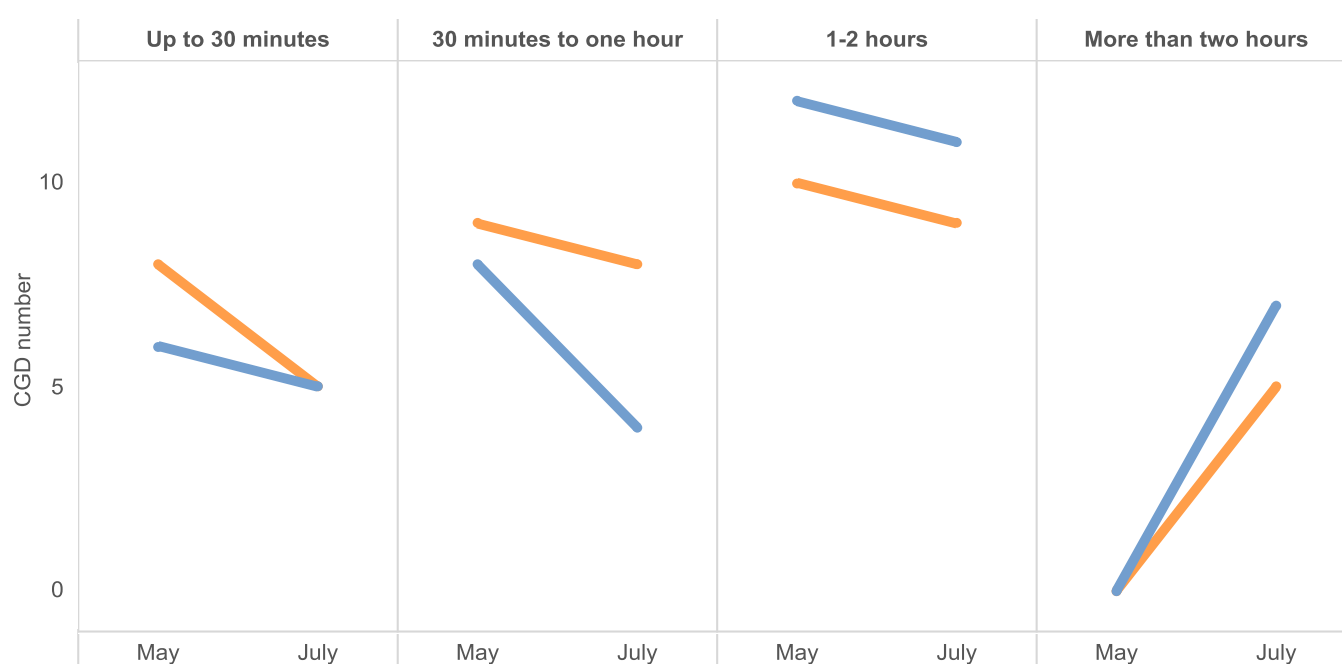
Health

49 out of 54 community groups reported a serious problem in relation to health as a result of the floods. The most frequently reported concern was diarrhoea. This supports concerns raised by local organizations that indicated water systems have been polluted by industrial waste and household waste as a result of the flash flooding with and that, as a result of this, the likelihood of outbreaks of waterborne diseases including diarrhoea, cholera, and dysentery may have been increased (Agrajattra, 28/06/2015).

Time taken to access health care has increased as a result of the floods. No community group reported taking more than 2 hours to reach a health facility before the flood but post flood, 12 community groups reported that it would take them more than 2 hours. In addition to health implications, the necessity of travel long distances from communities also raises protection concerns.

Communicable diseases as well as water/food borne disease might trigger up at any moment due to acute shortage of drinking water and disrupted sanitary system in flash flood affected areas. There might have chance of increase in diarrhoea cases along with other communicable diseases when the flood water will be receding.

Figure 14: Time to access health care before and after floods, reported by female and male community groups



Baseline: Bangladesh faces many challenges in improving the health of the population, particularly for the poorest and most vulnerable populations (Health Sector Profile 2010). Post flood disease outbreaks such as diarrhoea, ARI, skin-eye-ear Infections triggers up due to water pollution and damaged sanitation systems. Drowning and snake-bite are the main causes of death during flood. Health risks are also associated with the inundation of health facilities by flood waters (Health Cluster Lead 2015). Generally, the main immediate health impacts of flooding in Bangladesh are considered to be drowning, injuries, hypothermia, and animal bites (NIH 2010). After the 2012 floods, cases of malaria and communicable diseases were reported and in Chittagong, 3 out of 24 health facilities were reported as not functioning as a result of infrastructure damage, staff shortages, and a lack of supplies. Obtaining information regarding accessibility to health facilities was reported as a challenge for the assessment after the 2012 floods (JNA SE 2012).

Basic indicators: The crude birth and death rates in Bangladesh are 19.2 and 5.5 per 1,000 populations (Health Bulletin 2013). Non-communicable diseases account for 52% of all deaths (WHO 2011). 9.07% of the population has a disability (8.1% male and 10% female) (HIES, 2010).

Child health: The infant mortality rate is 36 per 1,000 live births (World Bank, 2014). Drowning is the leading cause of death for children in Bangladesh aged 2-10 years (WHO, 2011; UNICEF, 2012). About 37% of sick children receive care from a trained provider, with girls and the poor having lower rates of accessing health services (Government, 2011).

Diseases: Diarrhoea is highly prevalent throughout the year, but typically spikes in April and October, during the monsoon season (Icddr, B I/V 2013). Other main public health diseases are tuberculosis, malaria, dengue and soil-transmitted helminthiasis (WHO 2010). Malaria is highly endemic in 13 of the 64 districts (over 95% of reported cases), with 10.9 million people at risk in these areas. The three Chittagong Hill Tract districts (Bandarban, Khagrachari and Rangamati) and Cox's Bazar district report more than 80% of the malaria cases and deaths every year (WB/GoB/WHO 2010).

Nutrition

In terms of nutrition, children under five and pregnant and lactating women are the most vulnerable in Bangladesh.

Existing surveillance and survey data has indicated that under-nutrition rates (i.e. wasting) usually fluctuate over seasons with peaks during the monsoon period (May – August). In addition, infant and young child feeding practices are known to be sub optimal in the affected areas with dietary diversity and meal frequency persistently

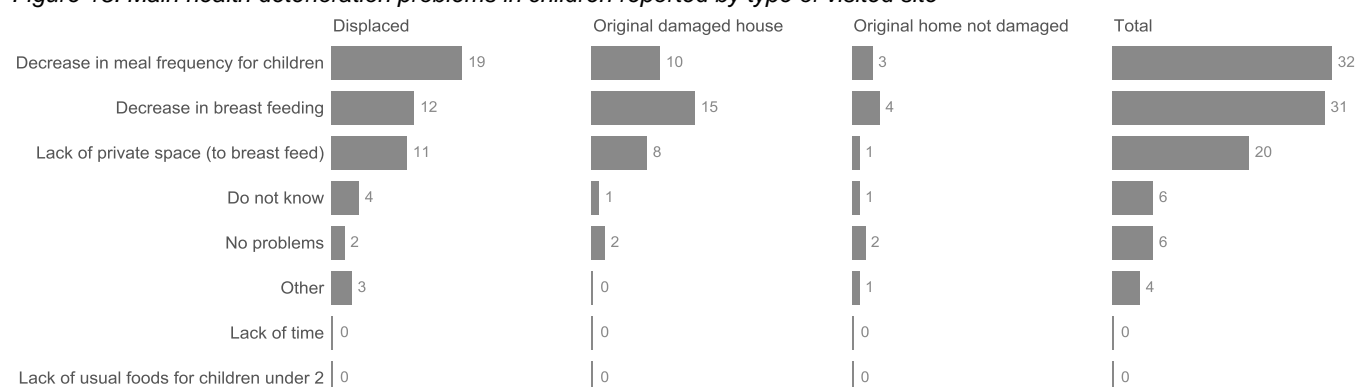
shown to be low. Although an assessment such as the JNA cannot accurately monitor changes in nutrition, the background suggests any changes in the living arrangements of families as a result of a disaster can impact the already precarious nutrition status. The JNA community group discussions cover key information that could be considered proxy indicators for a worsening situation in relation to childhood nutrition in the affected areas.

In 50 out of 54 community groups people reported that their general perception was that the health of their children had worsened since the disaster.

48 out of 54 community groups reported problems with feeding children under the age of 2 years:

- 32 CGs reported a decrease in meal frequency for children under the age of 2 years
- 31 CGs reported a decrease in breastfeeding
- 20 CGs reported a lack of private space to breast feed

Figure 15: Main health deterioration problems in children reported by type of visited site



The main causes of undernutrition are inappropriate infant and young child feeding practices and this is exacerbated by maternal undernutrition. The determinants of nutrition are broad and usually cut across multiple sectors including Water, food security and health among others. Consequently, findings of this JNA that indicate poor WASH indicators as well as poor food security and livelihoods has the potential to cause a deterioration of nutrition status of vulnerable children unless addressed quickly.

Baseline: Chronic stunting and wasting are serious and persistent challenges in Bangladesh. As of 2011, 16% of under-five children are suffering from wasting, including 3% severely, while 36% are underweight, including 10% severely (BDHS 2011). The coastal belt, including Chittagong division, has the greatest prevalence of underweight children, including wasting and acute malnutrition (FSNSP 2013). Moderate/severe underweight, stunting and wasting prevalence rates in Chittagong division reach 32.2%, 43%, and 9.2% respectively (UNICEF/Government, 2014). Cox's Bazar and Bandarban districts are the worst affected districts within the division, and have among the highest prevalence rates in the country (WFP/IFAD, 2012).

The following key concerns in relation to nutrition and disasters have been noted by the Nutrition cluster in Bangladesh:

- Breastfeeding practices remain a serious concern for households in the challenging environment after disasters.
- Application of appropriate infant and young child feeding practices is a serious challenge after disasters.
- Decreased and inconsistent access to diversified and adequate foods linked to damaged crops and in accessibility can worsen complementary feeding among young children.
- Any impact that the floods have on livelihoods and agriculture will present a risk to the nutritional status of women and children in the immediate and longer term.
- Limited availability of cooking facilities and materials due to inundation affects household diets.
- Poor hygiene and child care practices and insufficient availability of clean water is a real concern that could exacerbate the situation.
- High morbidity rates e.g. diarrhoea, after disaster instances like flooding has a negative impact on child nutrition.

Shelter & NFIs

Government D-Form information reports that 27,269 houses have been completely destroyed, with 77,090² houses damaged to some degree. Information is not available on the number of people displaced however this could feasibly be in the hundreds of thousands based on average household size. The current status of families whose houses have been destroyed or damaged is also not known but usual solutions in Bangladesh of setting up makeshift shelters on high ground near to places of origin, moving to collective centres such as cyclone shelters, flood shelters and schools and staying with host families are all being reported. Some people have no access to adequate shelter, and have to resort to sleeping in the open air (EKATA, 25/06/2015).

In 24 out of 27 sites visited, the assessment teams reported that shelter did not appear to provide adequate protection from the elements. Teams also found the shelter arrangements inadequate in terms of the privacy they provided and without bathing spaces that could be used by women and girls.

The rains have affected the Leda (13,000 inhabitants) and Kutupalong (50,000 inhabitants) unofficial Rohingya refugee camps in the Teknaf region. A number of families have been affected and shelters damaged, although specific details are not yet confirmed (Kaladan Press Network, 02/07/2015).

The monsoon rains usually continue up until October implying that conditions will be difficult to rebuild homes and that those whose house have been damaged during these rains have several months of wet weather to live through until the weather improves.

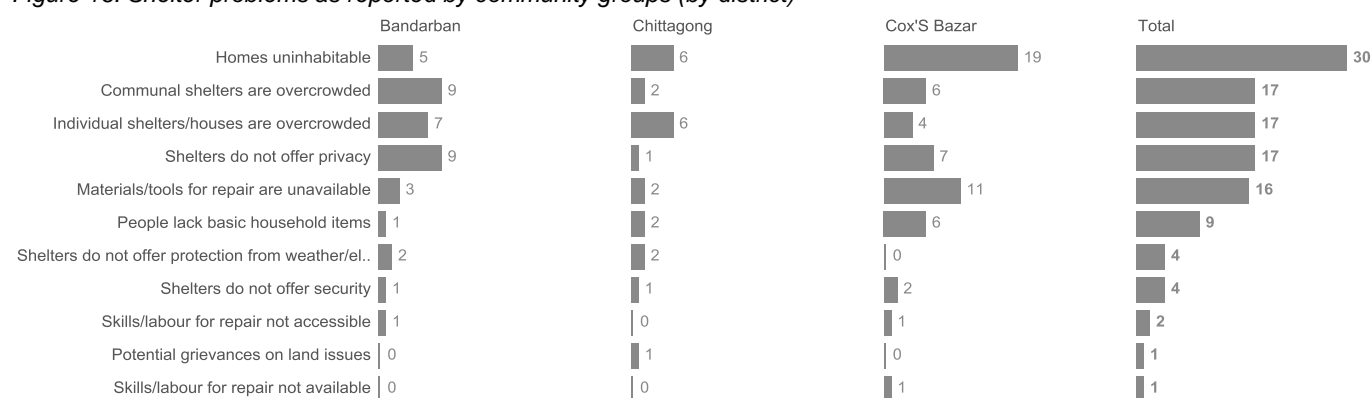
During the assessment 42 out of 54 community groups reported that shelter was a problem for them. Of the 54 community groups assessed, 33 of them represented people residing at their place of origin home with 20 groups reporting that the single reason they were not living in their usual place of residence being that their houses were uninhabitable.

For women the main shelter problems were homes uninhabitable, individual shelters/houses overcrowded and shelters not offering enough privacy.

For men the main shelter problems were homes uninhabitable, individual shelters/houses overcrowded and they don't have enough money to purchase materials to repair their houses.

Importantly, the key differences between the male and female perspectives on shelter problems relate to issues concerning privacy and overcrowding. Women mentioned these problems more than men did which is in-line with gender dynamics in Bangladesh. For other concerns there was little differences in the reporting between men and women.

Figure 16: Shelter problems as reported by community groups (by district)



In terms of the overall priorities articulated by community groups in relation to shelter, there was little difference between living arrangements with materials and tools to repair homes followed by basic household items (NFIs) being the main priorities.

² Information from the D-Forms of 29 upazilas as received on 14th July 2015.

Figure 17: Top three priorities for CGD in relation to shelter

	Bandarban	Chittagong	Cox's Bazar	Total
Materials and tools for repair of house	1.07	2.11	2.21	1.81
Basic household items (NFIs)	1.64	1.33	1.26	1.4
Shelter to give protection from weather/elements	0.29	0.33	1.26	0.74
Return home	0.86	0.56	0.58	0.67
Shelter to give more privacy	1.36	0.22	0.26	0.62
Shelter to give more security	0.21	1.33	0.26	0.48
To move out of communal shelters	0.5	-	-	0.17
Skills/labour for repair	0.07	0.11	0.16	0.12
Total CGD	14	9	19	42

Baseline: Around 100,000 people were unable to return to their homes after the 2012 floods due to damaged houses (JNA SE 2012). In Chittagong, shelter was identified as the priority need (Sylhet JNA 2012). It has been reported that, HHs who do not own property, who own less than 5 decimals of land, or who occupy land in flood plains or outside embankments do not qualify for government assistance, and therefore remain at risk of on-going challenges in restoring adequate shelter (REACH, 2013).

Most of the houses in the coastal areas are particularly vulnerable to flooding due to their construction (Government, 2014). In Cox's Bazar district, 50% of houses are low-cost (made of straw and bamboo), 36% are tin shed, 10% are semi-pucca and only 5% are classified as pucca houses. Chakaria, Ramu, and Pekua upazilas have among the highest rates of traditional low-cost houses (between 55-57%). These traditional low-cost houses are vulnerable to collapse during floods and cyclones and they offer limited protection to inhabitants though they are fast to rebuild.

70% houses of **Chittagong** District are kutchha. Kutchha houses are made of mud with a thatched or tin (CGI) roof, they are particularly vulnerable to flash floods as the walls can collapse easily. The remaining 30% of houses are pucca, which uses brick, sand and cement, normally with a tin roof (Government, 2014).

WASH

Government D-Form information reports that 6,809 tubewells damaged; and 12,963 lakes and ponds damaged caused restriction in access to water for drinking and other uses.

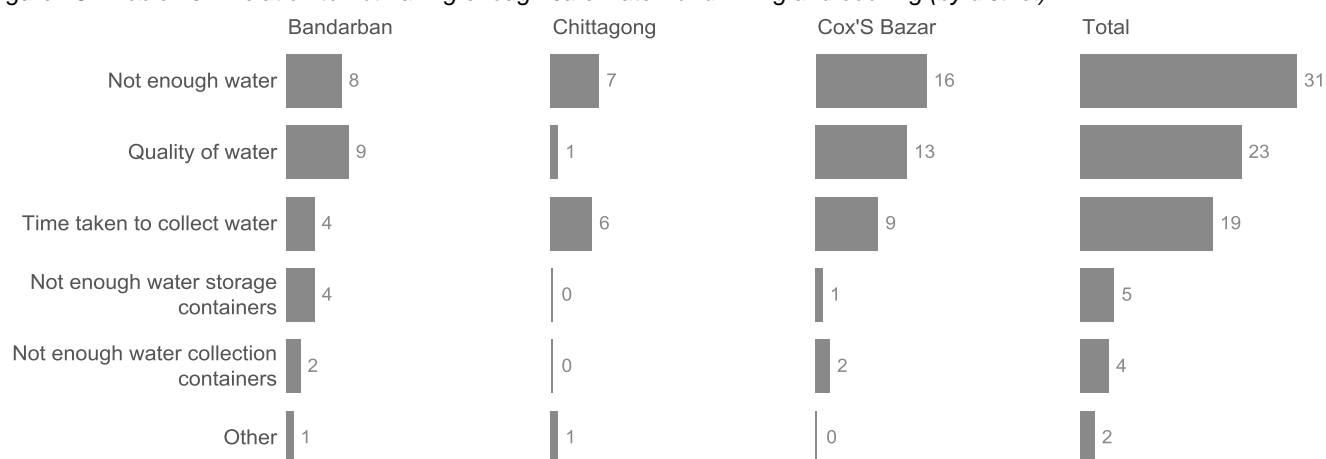
Reports indicate the flooding has damaged WASH infrastructure, reduced the number of safe drinking water sources and damaged latrines. People's access to the facilities that remain is restricted.

Drinking/Cooking Water: Findings from community group discussions found that 41 out of the 54 community groups reported problems in relation to safe drinking /cooking water. Problems were reported across all types of sites, in all 3 districts and by both male and female groups.

Problems reported were in-line with lessons learned from other recent flooding in the area. Access to drinking water from deep and shallow tube wells was reduced, while the use of drinking water from rainwater and other open and unprotected sources increased.

Of the community groups reporting problems, the main problems were insufficient quantity of water, quality of water and time taken to collect water as shown below.

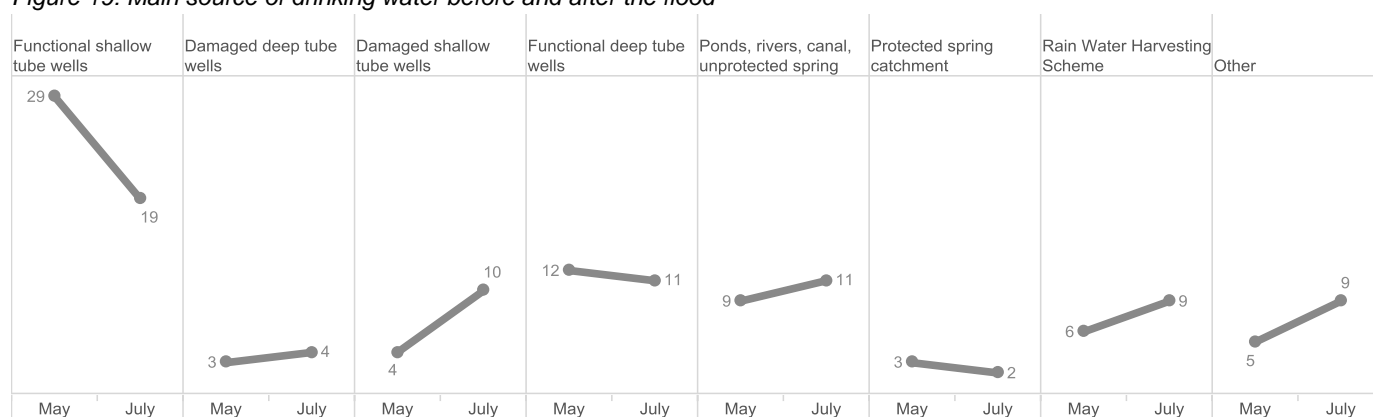
Figure 18: Problems in relation to not having enough safe water for drinking and cooking (by district)



Given this, it is unsurprising that the main priorities voiced by community groups in relation to water were accessing enough water and the quality of water. Female community groups also prioritised the need for water storage and water collection containers. This is in line with the fact that the role of collecting water falls largely to women and girls in Bangladesh. Assessment team's observations confirmed the absence of sufficient water containers. Given the role of collecting water falls largely to women and girls, the increase in time taken to collect water raises protection risks.

Changes in main sources of drinking water were reported; these are mainly that there has been a decrease in the use of functional shallow tube wells and a corresponding increase in the use of damaged tube wells as water sources. An increase in rainwater harvesting has also been reported.

Figure 19: Main source of drinking water before and after the flood

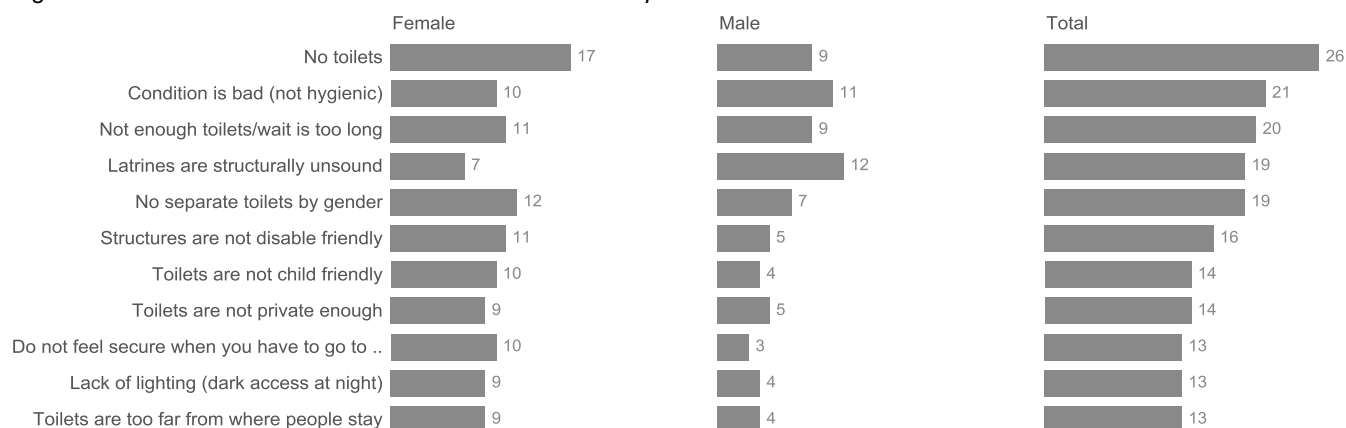


Sanitation: Sanitation findings also corresponded to past experiences with flooding in the area. 38 out of 41³ community groups reported problems in relation to having clean and safe toilets. Differences between the concerns of the male and female groups are important in relation to access to sanitation. For female groups having no toilet at all was identified as the main problem and this was reported almost twice as many times as it was for male groups. Women also expressed more concern than men over issues around privacy, gender segregation, lighting, security/safety, distance to go to the toilet and the suitability of toilets for children and disabled. This is in line with general perceptions about women facing more difficulties than men in accessing latrines in general in Bangladesh and specifically after disasters and the vulnerability they face in moving even small distances from their families at night. On the other hand the main issues perceived by men in relation to clean and safe toilets were around them being structurally sound and hygienic. Information from CGDs was in line with the observations of the field assessment teams who reported generally that there were no gender specific toilets and that the number of toilets where people were staying was generally not sufficient.

³ It is unclear why there is only 41 community group records for sanitation. This may be a misunderstanding in relation to the WASH section of the questionnaire.

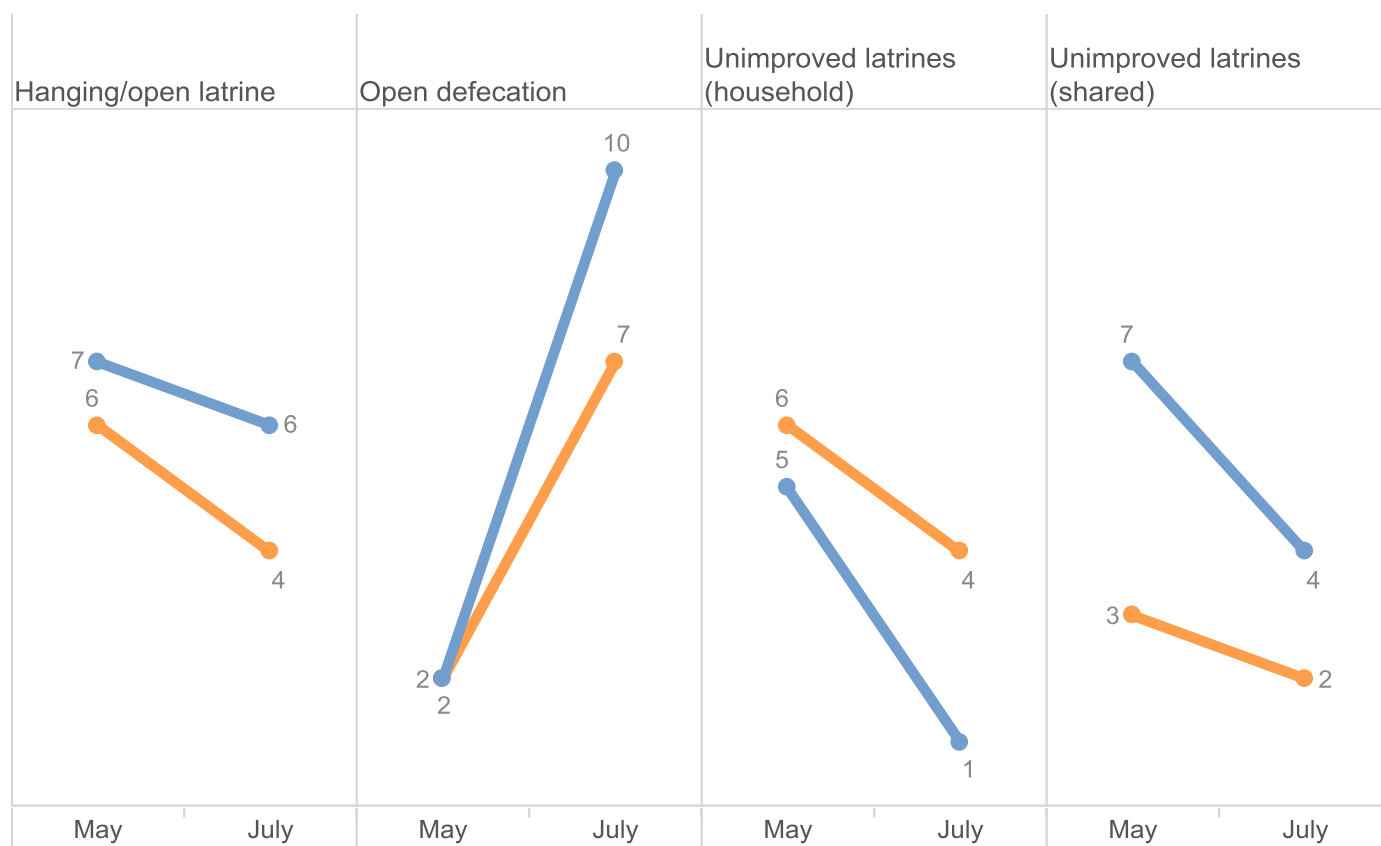
In the 2012 floods, the use of sanitary latrines was reduced in all districts, as toilets were washed away and open defecation increased. Damaged or non-functioning water sources, as well as lack of access to proper hygiene facilities in many temporary shelters, increased the health hazards to the displaced population.

Figure 20: Problems with access to clean and safe toilets reported



Both male and community groups in all districts and 3 types of sites reported changes in their place of defecation as a result of the floods. The main change reported was an increase in open defecation being reported from all types of sites but with the greatest number of reports coming (unsurprisingly) from communities who were displaced.

Figure 21: Places reported by female and male community groups where people mostly defecated before and after the floods



Priorities in relation to sanitation: The most frequently mentioned priority overall in relation to sanitation is having a place to go to the toilet. Hygiene supplies was the second most mentioned priority and this was particularly noted in Cox’s Bazar district and in communities that were displaced. There is generally a higher demand by women regarding places to go to the toilet, ability to bathe and water collection vessels.

Baseline:

- At the national level, only one third of secondary towns in Bangladesh have piped water, and where it exists it is often contaminated due to leakages and intermittent supply (UNICEF 2009). Recently published MICS 2012-13 study revealed that more than 65% of the population in Bangladesh drink unsafe water, containing chemicals (including arsenic) and bacteria (Daily Star, 10/07/2015). 61 of 64 districts are affected by arsenic contamination.
- According to MICS 2012-13, 97.9% is the national average to improved drinking water sources. In Bandarban, Chittagong and Cox's Bazar average improved water sources access subsequently is 45.8%, 98.3% and 99.8%. Based on BDHS 2011 survey, average improved water access time at these three districts is 20,17 and 16 minute, whenever national average improved water source access time is less than 15 minute.
- MICS 2012-13 reported, national average of arsenic contamination >50 ppb is 12.2% when except Chittagong (10.3%), Bandarban and Cox's Bazar have no arsenic contaminated water sources. Overall, 41.7% of the population had source water with detectable E. coli, while it was 61.7% for household samples, reflecting contamination occurring between the point of collection and use. The proportion of the population having water containing very high levels of contamination (>100 cfu/100 ml) was 7.4% at the source and 13.5% at the household level. However, MICS 2012-13 didn't published yet district level E.Coli contamination rate but GOB-UNICEF 2014 WASH household assessment report indicate, Bandarban 98% and Cox's Bazar 91% water source bacteriologically contaminated.
- MICS 2012-13 reported, Bandarban, Chittagong and Cox's Bazar improved sanitation status is 17.7%, 50.3% and 51.3% whenever, Bangladesh national average is 55.9%. So, it indicates, in Bandarban more than 82% people are using unimproved sanitation and both in Chittagong and Cox's Bazar have 50% unimproved sanitation. Beside of household sanitation facility, child faeces management is a big concern for WASH professional which is related to environmental empathy. MICS 2012-13 reported national average of safe child faeces disposal is 38.7%, however in Bandarban and Cox's Bazar safe child faeces disposal rate is only 4.5%, 12% and in Chittagong its 46.4%.
- MICS 2012-13 reported hand-washing pattern using two proxy indicator, one, availability of hand washing places and two, availability of soap or other cleaning agent. National average of proxy indicator one is 59.1%; where Bandarban, Chittagong and Cox's Bazar average is 16.3%, 76.8% and 24.1% and national average of proxy indicator two is 94% where Bandarban, Chittagong and Cox's Bazar average is subsequently 96.8%, 90.9% and 99.4%.

Education

Government D-Form information reports that 109 education institutions have been completely destroyed, with 296⁴ education institutions damaged to some degree.

Available reports on the impact of the current flooding indicate that almost every school in the flood hit area is affected in some way (Agrajatra, 28/06/2015). 39 out of 54 community groups reported facing a problem in relation to education of their children due to floods. Communities report a decrease in school attendance. While 51 of the 54 community groups reported that most children normally attended school regularly but, as a result of the floods this response has reduced to 29 community groups reporting that their children are attending school regularly now. In around half of the sites visited by the assessment teams noted the presence of school age children outside the school during school hours and in 15 sites teams noted that schools were being used as shelters for the displaced people.

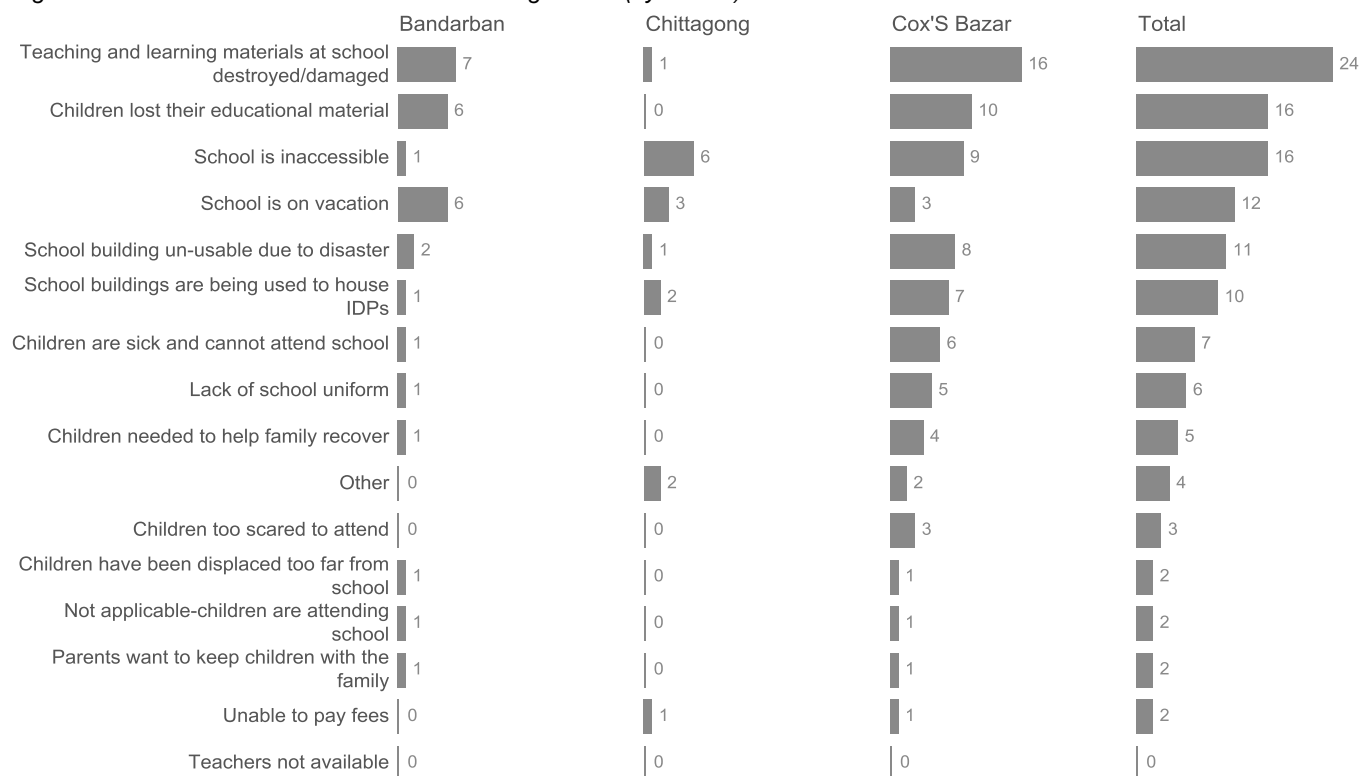
A broad range of reasons were given for why children were not able to attend school. There is a significant need for education materials including teaching and learning materials at schools (reported by 24 community groups) and also children's own educational materials (reported by 16 community groups) because of damage in the floods. The graph below shows a higher number of response mentioning problems preventing children attending school in Cox's Bazar district than in Bandarban or Chittagong. There were also more problems reported by community

⁴ Information from the D-Forms of 29 upazilas as received on 14th July 2015.

groups of displaced people related to damaged houses. Children losing educational materials, approach road to schools inaccessible were found to be the other major areas for non-functioning of the schools properly.

Reports from the community groups, observation from the assessment teams notes the loss of prime time of learning at this point of academic year in schools and the cosequence of the same in the final examination in Nov-December.

Figure 22: Main reasons for children not attending school (by district)



Flooding occurred during mid-year examination time (May–June), disturbing a vital component of education (British Council, 2015). This may need to be addressed with local education authorities if it impacts children's progression to the next academic year. Cox's Bazar and Bandarban districts have among the worst rates in terms of youth literacy (60.6% and 52.5% as of 2011 respectively), secondary school net attendance (37.2% and 36.8%), out of school children (28.5% and 31.6%), and child workers (9.4% and 11.8%) in the country (BIDS, 2013).

In spite of many successes in relation to education (e.g. national primary enrolment rates reached 97% in 2013) (DPE), Bangladesh continues to face challenges in relation to quality education. The most significant of this is high dropout rates, at around 20-30%. The high dropout rates can be attributed to a range of factors including; households' reliance on children to help with farming and household chores, child-unfriendly teaching methods, overcrowded classrooms, and unattractive educational environments. Education dropouts usually increase after disasters (ASPR 2013; UNICEF).

Child labour is an issue in Bangladesh, with over 5% and 14% of children aged 5-11 and 12-14 in child labour as of 2011. The proportion of child labourers among children attending school is about 6%, but increases to 22% for children not attending school. Boys are three times more likely to be involved in child labour than girls (UNICEF, 2012).

While specific lessons learned regarding education in flash flooding and landslide affected areas are hard to find, in disasters generally in Bangladesh schools are frequently damaged, inundated with mud and/or water or used as collective centres for displaced people. The longer time children are unable to attend school, the more likely they will be drawn into other activities including supporting their families recovering from the disaster and the more challenging it will be for them to resume their studies.

Child Protection

It is difficult to obtain primary data that relates specifically to child protection in the initial days following a disaster through a multi-sector assessment such as the JNA. The information that has been collected through community group discussions in this case should be seen as indicative that there could be reasons for more specialized understanding and monitoring of the situation in regard to the safeguarding of children in affected areas.

Community groups in Chittagong and Cox's Bazar reported the following:

- In 8 CGs it was reported that there were children observed at the site who were alone
- In 14 CGs there were children who were staying with people other than their usual care givers
- In 7 CGs children were reported as missing from the area
- In 7 CGs there were reports of increased violence towards boys and girls

These occurrences were not reported in the CGDs in Bandarban district.

In addition to these concerns, there in 20 CGDs there were reports of children being sent away due to safety concerns. This was mentioned in all 3 districts.

Underlying vulnerabilities that pertain to protection risks children face need to be seen as a key source of information for understanding the post disaster situation. In Bangladesh, trafficking, sexual abuse and exploitation are threats for children, with over 13,000 children trafficked out of the country over 2004–2009 and as many as 20,000 children exploited in street prostitution. There is a lack of enforcement mechanisms of specific laws protecting children and limited data on the number of affected children (Save the Children, 2012). Recent media reports have highlighted that the Cox's Bazar district is a prominent location for people trafficking in Bangladesh.

Access to Affected Areas, Communication and Infrastructure

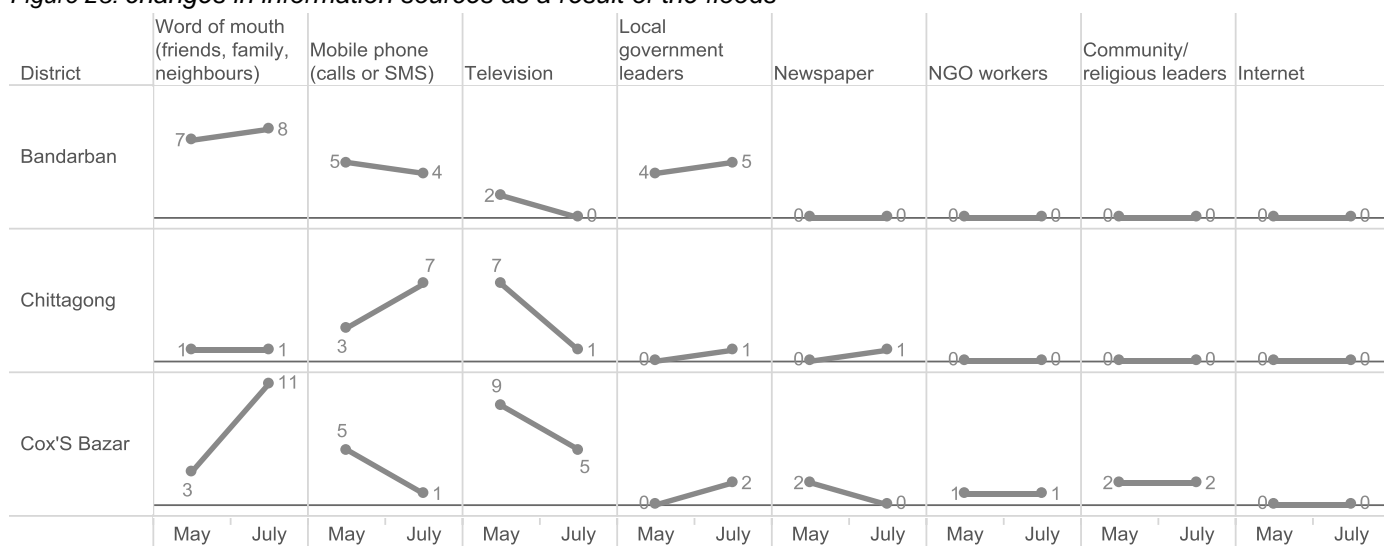
Access: Access in the southeast of Bangladesh can be challenging under normal, non-disaster circumstances. Only 9.5% of roads are paved; in southern areas and transportation by waterways is significant. Thousands of people in shoals off the Padma and Meghna rivers have been cut off by water since 24 June (INGO Emergency Sub-Committee, 28/06/2015). As of 9 July, they remain stranded, but are receiving assistance. Large numbers of people in affected areas during the highest point of the flood experienced severe constraints in movement, and conditions restricted their access to school buildings and health clinics. Even as the floodwaters receded, roads that were damaged by the flooding continued to present an obstacle to people's access to basic services (Agrajatra, 28/06/2015).

Communication, transport infrastructure and flood embankments have been damaged; in some cases, both communication and physical access have been completely cut off by flash floods and debris from landslides (INGO Emergency Sub-Committee, 28/06/2015). Some locations reported no electricity and mobile network during the last few days of June (EKATA, 25/06/2015). Road communication between Cox's Bazar town to Teknaf, Ramu, Edgha and Ramu- Naikhanchori was cut off by flooding. Bandarban has also been cut off from the rest of the Keranirhat-Bandarban (INGO Emergency Sub-Committee, 28/06/2015). The current status of communications infrastructure is unclear.

Lessons learned from the 2012 floods found that a combination of poor communication and lack of flood shelters in southern districts affected by the floods resulted in communities being unable to evacuate for safe shelter. This was most evident in Bandarban district. Roads, in particular, needed rehabilitation to enable access to water sources and markets. Lack of local warehouse/stock also delayed the response (Phase III Assessment 2012; Clusters/Government, 08/2012).

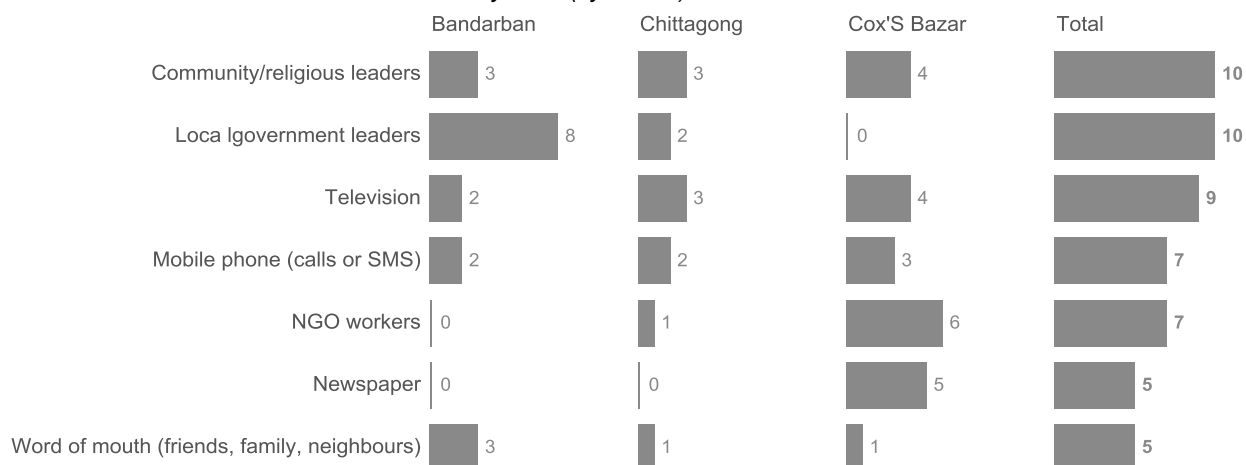
Communication: Changes in the main source of information have been reported as a result of the flooding with people relying more on word of mouth and information from local leaders and less on television (which was reported as their main source of information before the floods).

Figure 23: changes in information sources as a result of the floods



As the following graph shows there is great diversity in the sources people trust for information. In Bandarban local government officials are reported as the most trusted sources of information whereas in Cox's Bazar no community group reported them as a trusted source. The key message from this information is that when communicating with affected communities care needs to be taken to identify the most useful way to pass on key messages.

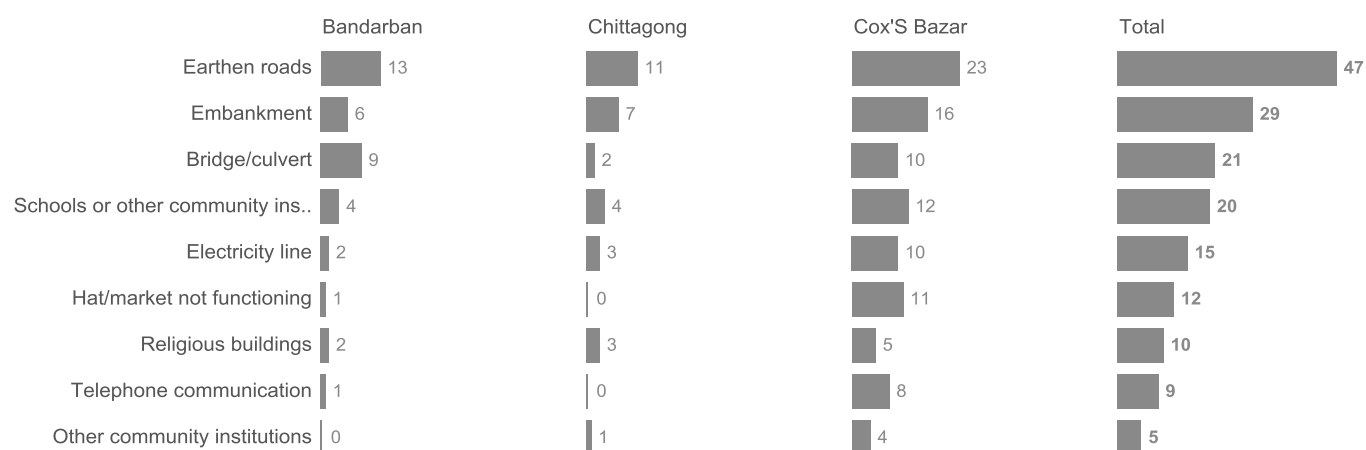
Figure 24: Most trusted information sources currently used (by district)



Damage to community infrastructure:

A diverse range of damages have been reported by community groups as shown in the graph below.

Figure 25: Damage to community infrastructure (by district)



Vulnerabilities and Protection Issues

Most information that relates to vulnerable groups and key protection concerns needs to be drawn from pre-disaster sources and knowledge of the social dynamics of the affected area. How these underlying concerns interface with the impact of a disaster event may exacerbate protection issues.

Gender Based Violence:

Many women in Bangladesh face multiple and intersecting forms of discrimination, including women with disabilities, indigenous and minority women, and migrant workers. Comprehensive disaggregated data on all forms of violence against women is lacking, despite widespread acknowledgement that it is of serious concern across the country.

Violence against women encompasses many forms including sexual assault, domestic violence, socioeconomic violence, child marriage, and dowry killings. Bangladesh has the highest prevalence of physical violence against an intimate partner out of six in Asia-Pacific countries, with 87% of married women having experienced violence by their current spouse, and 77% in the 12 months prior to the assessment (Daily Star, 08/12/2015; Government, 2014).

Women are even more vulnerable to domestic violence, harassment and loss of privacy in temporary shelters, and harassment in relief queues during and after disasters. In particular, as psychological stress increases during disasters and more men are left without employment, frustration in the form of abusive language or exertion of physical force is reportedly more likely. The reasons given for this abuse range from women not being able to manage resources properly, to not serving food on time, to not being able to procure relief materials (WEDO, 2008).

Female community groups have expressed their concern in regard to the lack of privacy in crowded shelters and security in regard to available latrines and bathing facilities since the disaster.

Minority Groups:

The Chittagong Hill Tracts, in Chittagong division and including Bandarban district, are home to more than 12 indigenous tribes, mostly Buddhists, who have lived there for centuries. Resettlement of landless Bengali Muslims since the 1970s in the area has led to on-going sectarian tension, which sometimes results in open conflict. Many of these minority groups live in hard-to-reach hilly areas, which are subject to access constraints and have faced a range of development challenges and are vulnerable to disasters including flash floods and landslides as well as rodent plagues affecting agriculture (international media, 17/12/2014). In the Chittagong Hill Tracts, violence against minorities by Bengali Muslim minorities is of particular concern (OHCHR, 04/2014).

Rohingya Refugees and Undocumented Myanmar Nationals:

In southeast Bangladesh, approximately 30,000 Rohingya refugees have been assisted in two official camps for more than two decades. In addition to the registered refugees, approximately 45,000 unregistered Rohingya reside in makeshift sites and more than 150,000 are thought to reside in host communities in Cox's Bazar district. There are reports that food shortages for the Rohingya communities pre-date June flooding (Kaladan Press Network, 02/07/2015). There are reports of marginalization and discrimination of Rohingya in Bangladesh and of sporadic conflict with host communities. They are often confronted with violence, abuse, arrest and detention; women and girls are particularly exposed. Some of the hostility towards Rohingya can be explained by the widespread poverty of Cox's Bazar, which reports some of the lowest social and economic indicators nationwide.⁵

Other vulnerabilities:

Although not specifically addressed in the JNA, older people and those with disabilities face particular challenges in the conditions following a disaster such as this. As noted by female community groups, toilet facilities are not appropriate for their needs. They will face greater than usual difficulties in terms of movement in the current muddy and dangerous conditions and may have challenges being able to access any assistance that is provided.

⁵ <http://fpmu.gov.bd/agridrupal/sites/default/files/Jamaluddin.pdf>

Acronyms

Acronym	Expansion
ACAPS	The Assessment Capacities Project
ARI	Acute Respiratory Infection
BBS	Bangladesh Bureau of Statistics
BDRCS	Bangladesh Red Crescent Society
BDT	Bangladesh Taka
CFW	Cash for Work
CG	Community Group
CGD	Community Group Discussion
CGI	Corrugated Iron
DAE	Department of Agricultural Extension
DDM	Department of Disaster Management
DGHS	Directorate General of Health Service
DLS	Directorate of Livestock Services
DMIC	Disaster Management Information Committee
DPHE	Department of Primary Health and Engineering
EiE	Education in Emergencies
FAO	Food and Agriculture Organisation
FFW	Food for Work
FS	Food Security
GAM	Global Acute Malnutrition
GoB	Government of Bangladesh
Ha	Hectare
HCTT	Humanitarian Coordination Task Team
HH	Household
IEHK	Interagency Emergency Health Kit
INGO-ESG	International Non-Government Organisations – Emergency Sub-Group
IPC	Integrated Food Security Phase Classification
JNA	Joint Needs Assessment
LCG DER	Local Consultative Group for Disaster Emergency Response
MoA	Ministry of Agriculture
MT	Metric Tonne
NA	Not Available/Not Applicable
NGO	Non Government Organisation
ORS	Oral Rehydration Salt
SAM	Severe Acute Malnutrition
Tk	Taka
ToR	Terms of Reference
ULO	Upazila Livestock Officer
UMNs	Undocumented Myanmar Nationals
UN	United Nations
WB	The World Bank
WASH	Water, Sanitation and Health
WFP	World Food Programme
WHO	World Health Organisation

Annex 1- Team composition

District	Upazilla	Lead Agency	Role	Name	Participating Agency
Bandarban	Lama	Concern Universal	Team Leader	Md. Walidul Islam	CU
			Team Member	Md. Asiful Islam	CU
			Team Member	Md. Abul Kalam	EKATA
			Team Member	Farzana Boby	EKATA
			Team Member	Monika Roy	EKATA
			PIO	Khondakar Md. Fizanur Rahaman	Government
			UNO	Khaled Mahamud	Government
	Alikadam	FAO	Team Leader	Dr. Sabjal Uddin	FAO
			Team Member	Lino Prue	FAO
			Team Member	Mohammed Nazim Uddin	UNDP
			Team Member	Sheikh Ahmed	EKATA
			Team Member	Jannatul Naima	EKATA
			PIO	Md. Rafiqul Islam	Government
			UNO	Md. Al Amin	Government
	Naikhongchhari	FAO/WFP	Team Leader	Subahis Chakma	FAO
			Team Member	Sainamgpru Chakma	BHDC
			Team Member	Khamajon Tripura	UNDP
			Team Member	Reboti Ranjan Chakma	WFP
			Team Member	Osman Sarowar	EKATA
			PIO		
			UNO	A. S. M. shahidul islam	Government

District	Upazilla	Lead Agency	Role	Name	Participating Agency
Chittagong	Satkania	UNICEF	Team Leader	Md. Ruhul Amin	UNICEF
			Team Member	Md. Farid Uddin	SARPV
			Team Member	Md. Nazrul Islam	SARPV
			Team Member	Ms. Jakia Sultana	SARPV
			Team Member	Ms. Hosne Ara Doly	SARPV
			Team Member	Ms. Mosarofa Khanam	SARPV
			Team Member	Md. Zahidul Manir	UNICEF
			PIO	Md. Monirul Islam	N/A
			UNO	Mr. Mohammed Ullah	N/A
			Banskhali	UNICEF	Team Leader
	Team Member	Debashis Das			SARPV
	Team Member	Jannatul Ferdous			SARPV
	Team Member	Resmi Sultana			SARPV
	Team Member	Paul Asim Biswas			World Vision
	Team Member	Biplob Kanti Dhar			World Vision
	Team Member	Farook Rahman			BDRCS
	PIO	Md. Masudur Rahman			N/A
	UNO	Mr. Arir Ahammed			N/A

District	Upazilla	Lead Agency	Role	Name	Participating Agency
Cox's Bazar	Chakaria	CARE	Team Leader	Aminul Haque	Muslim Aid
			Team Member	Mehid Hasan Shishir	IFRC
			Team Member	Md. Samsuzzman	Save the Children
			Team Member	Meri Mollik	MUKTI
			Team Member	Mahabuba Siddique Munni	MUKTI
			Team Member	Rased Uddin Mukul	Agrajatra
			Team Member	Obidur Rahman	Agrajatra
			Team Member	Farhana Babi Kalam	SARPV
			PIO	Md. Ahsan ullha	N/A
			UNO	Md. Sahedul Islam	N/A
	Ramu	WFP	Team Leader	Nusrat Jahir/Nandini Sabrina	WFP
			Team Member	Md. Sadek Ali	MUKTI
			Team Member	Sanjoy Baidya	MUKTI
			Team Member	Rasheda Khanam	MUKTI
			Team Member	Bappi Barua	MUKTI
			Team Member	Chaity Rajoana	SARPV
			PIO	Md Zubair Hasan	N/A
			UNO	Mr Masud Hosain	N/A
	Cox's Bazar Sadar	IOM	Team Leader	Iqbal Mahmood	IOM
			Team Member	Rupashi Dey	MUKTI
			Team Member	Nancy Shova Bayen	YPSA
			Team Member	Minhaj Uddin Ahmed	UNHCR
			Team Member	Khorshed Alam	MUKTI
			Team Member	Narayan Chandra Dey (reserve)	Handicap International
			Team Member	Kamrunnahar Munni (reserve)	MUKTI
			PIO	Mohammad Baki Billah	N/A
			UNO	Mr Md Shahidul Islam	N/A
			Pekua	CA	Team Leader
	Team Member	Golam Sarwar			Muslim Aid
	Team Member	Ratan Sharma			Agrajatra
	Team Member	ABM Aminul Haque			Agrajatra
	Team Member	Shenaz Begum			Agrajatra
Team Member	Neelima Akhter Chowdhury	Agrajatra			
PIO	ABSENT	N/A			
UNO	Md Marufur Roshir Khan	N/A			

Annex: D-Form Database

Table: Upazila-Wise Damages and Loss database received through D-Form

Name of Upazila	Affected Union	Affected Area (Square KM)	Total Affected People	Number of Death	Number of People Buried	Number of Injuries	Number of Affected Households	Number of Fully Damaged Houses	Number of Partially Damaged Houses
Bandarban Sadar	5	123	4900	2		1	850	250	350
Rowangchori	4	100	300				300		10
Thanchi	4	160	695				285		280
Lama	5	120.05	54680			47	13670	335	1934
Ruma	4	50.12	300				300		
Alikadam	2	200	11102				2920	620	16
Nikhongchori	5	127	48471			1	15100	267	1935
Total Bandarban	29	880.17	120448	2	0	49	33425	1472	4525
Cox's Bazar Sadar	11	150	282000	2	2	15	47000	5500	8250
Chakaria	19	411	431763	6	6	120	86352	10500	34540
Ramu	10	320	380000	7	7	20000	47125	7000	10000
Pekua	7	46.4	108000	1	1	350	31000	2400	10800
Moheshkhali	9	50	3000			1	522	102	400
Kutubdia	3	18	11814			97	1915	189	811
Ukhia	1	8	250			15	50	12	18
Teknaf	3	12	5810	4	4	4	962	94	1136
Total Cox's Bazar	63	1015.4	1222637	20	20	20602	214926	25797	65955
Stakania	19	140	165000				60000		3000
Mirshorai	2	5	17000				300		300
Sitakunda	5	20	50000				2400		100
Swandip	16	70	75000				350		150
Fotikchori	5	15	17000				200		100
Rawjan	14	25	45000				820		820
Rangunia	3	5	12000				370		370
Boalkhali	2	6	2500				150		120
Potia	3	6	2500				700		200
Anwara	2	3	1200				400		100
Bashkhali	10	15	38000				650		150
Chondonaish	2	7	1050				230		50
Lohagora	3	2	1800				150		100
Hathazari	2	1.5	1200				110		50
City Corporation	6	15	35000				1200		1000
Total Chittagong	94	335.5	464250	0	0	0	68030	0	6610
Grand Total	186	2231.07	1807335	22	20	20651	316381	27269	77090

Table: Upazila-Wise Damages and Loss database received through D-From (Continue)

Name of Upazila	Number of Livestock Affected	Number of Poultry Affected	Amount of Crops Damaged	Amount of Crops Partially Damaged	Salt Bed Damaged	Shrimp Farm Damaged	Fully Damaged Education Institution		Partially Damaged Education Institution	
			Acre	Acre	Acre	Acre	School/Madrassa	College	School/Madrassa	College
Bandarban Sadar	3	250	10			3				
Rowangchori	100	120	30	20						
Thanchi				109.85						
Lama	345	4150	241	532.5					15	
Ruma			5							
Alikadam	15	16000	40	72					3	
Nikhongchori	392	3940	210	220						
Total Bandarban	855	24460	536	954.35	0	3	0	0	18	0
Cox's Bazar Sadar	15	20000	150	120		4700			6	
Chakaria	100	2730	4643	709		20000	50		100	2
Ramu	27	6650	667	150	8	1730	56		63	
Pekua	1050	19000	2050	11.61		3500			53	2
Moheshkhali					420	330				
Kutubdia			20	110	600		3			
Ukhia				20		203				
Teknaf			110	1200		1420			2	
Total Cox's Bazar	1192	48380	7640	2320.61	1028	31883	109	0	224	4
Stakania			320						50	
Mirshorai			200	150						
Sitakunda			300	350						
Swandip			700	850						
Fotikchori			600	750						
Rawjan			1000	1600						
Rangunia			200	250						
Boalkhali			50	80						
Potia			150	200						
Anwara			100	150						
Bashkhali			400	600						
Chondonaish			80	150						
Lohagora			90	100						
Hathazari			60	80						
City Corporation										
Total Chittagong	0	0	4250	5310	0	0	0	0	50	0
Grand Total	2047	72840	12426	8584.96	1028	31886	109	0	292	4

Table: Upazila-Wise Damages and Loss database received through D-From (Continue)

Name of Upazila	Mosques Damaged	Fully Damaged Roads (KM)		Partially Damaged Roads (KM)		Fully Damaged Embankment (KM)	Partially Damaged Embankment (KM)	Fisheries Farm Damaged	Damaged Tubewell	Lake and Pond Damaged
		Paka	Katcha	Paka	Katcha					
Bandarban Sadar					30	0			0	
Rowangchori			10		20	0.2			0	
Thanchi				2	20	0			210	
Lama	14	9.8	21.6	25.95	61.7	0			240	115
Ruma					16	0			0	
Alikadam	11	1	50	5	34	0			35	
Nikhongchori	54	13	70	25	75	70	64		340	215
Total Bandarban	79	23.8	151.6	57.95	256.7	70.2	64	0	825	330
Cox's Bazar Sadar		7	52	10	260	11	8	110	240	670
Chakaria	275	2	20	15	50	15	25	38	4091	6409
Ramu	300	2	40	3	45	9	12	5	847	1450
Pekua	155	51	78	45	75	94	65	35	780	2100
Moheshkhali		5	20	10	30	13	3		18	25
Kutubdia		9	6	5	7	3	7		8	200
Ukhia			12		6	0			0	190
Teknaf		1	3	5	10	0	1.5	35	0	85
Total Cox's Bazar	730	77	231	93	483	145	121.5	223	5984	11129
Stakania		1		20	150	0	20	200	0	1000
Mirshorai					25	0		15	0	48
Sitakunda					30	0		18	0	55
Swandip				1	25	0	2	25	0	15
Fotikchori					15	0		10	0	8
Rawjan				1.5	23	0		30	0	300
Rangunia					20	0		10	0	7
Boalkhali					10	0		12	0	8
Potia					12	0		10	0	15
Anwara					5	0		5	0	8
Bashkhali					15	0		15	0	20
Chondonaish					6	0		7	0	5
Lohagora					7	0		7	0	8
Hathazari					4	0		5	0	7
City Corporation				2		0			0	
Total Chittagong	0	1	0	24.5	347	0	22	369	0	1504
Grand Total	809	101.8	382.6	175.45	1086.7	215.2	207.5	592	6809	12963

Annex: Maps

Figure 26: Flood affected upazilas vs number of unions affected by floods

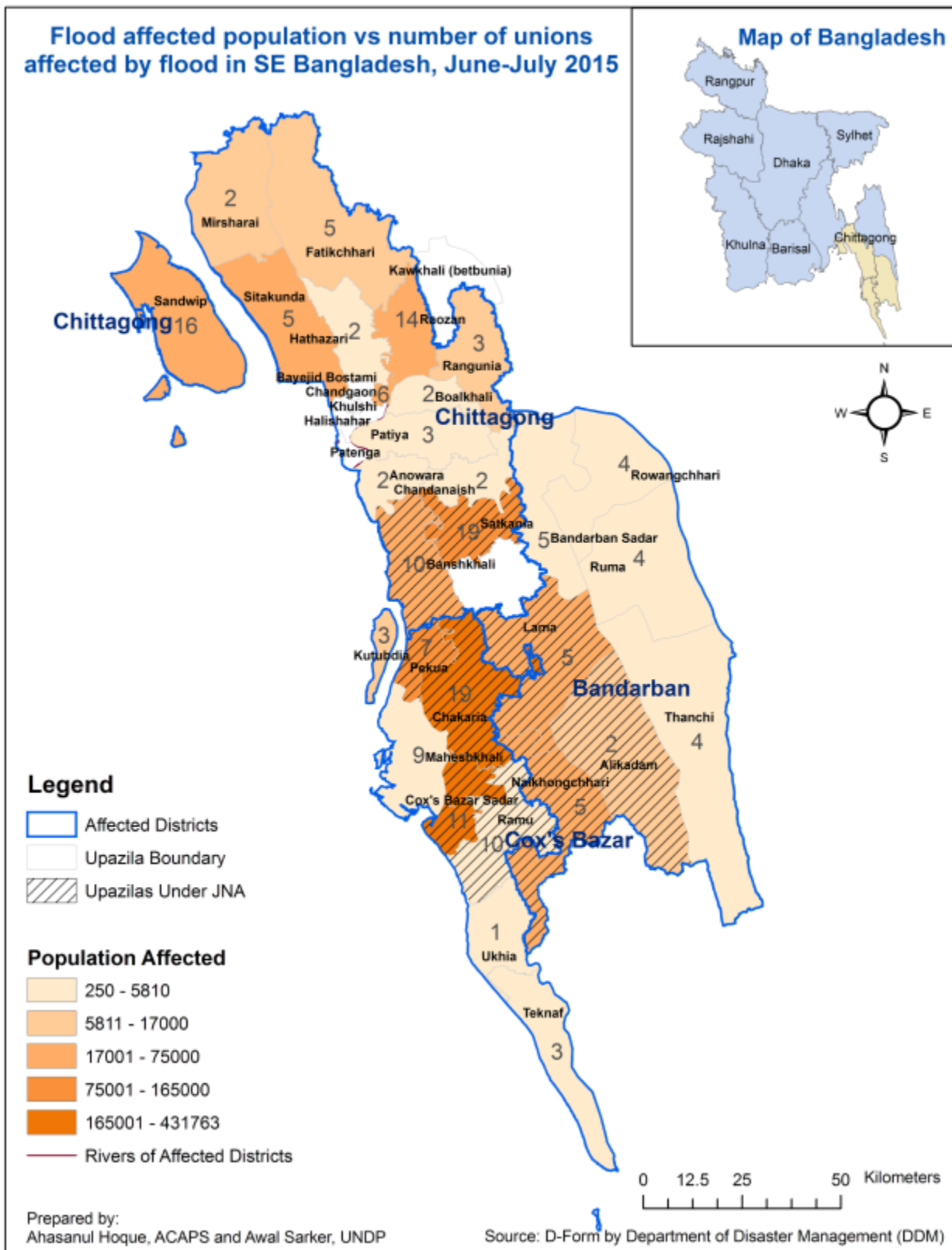


Figure 27: Total number of households affected and damaged houses

