

PRE-DISASTER SECONDARY DATA

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Note about this document: This document was a study undertaken in Bangladesh with the support of government departments, NGOs and UN agencies. The document has been reviewed by each of the clusters to ensure accuracy and relevance. This is a living document and should be updated on a regular basis, after the publication of new national data sources and as more information becomes available. Any feedback on the document should be made to ACAPS at info@acaps.org.

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COUNTRY PROFILE

CLIMATE AND GEOGRAPHY

- Bangladesh is 147,570 km² and consists of a flood plain made up of the Ganges, Brahmaputra, and Meghna rivers flowing into the Bay of Bengal.
- The river delta comprises over 230 rivers and tributaries.
- Two thirds of its land areas is <5 metres below sea level, however, the southeast is hilly (WB 2011).
- The average temperature in the cooler months is 12-25° C (November – May) and is 23-35° C (June – September). Humidity averages 70% (BBC 2011).
- Bangladesh is globally considered to be one of the most vulnerable countries to climate change. Inland monsoon flooding and intense tropical cyclones are the main climate related hazards (BCCSAP 2009).

POPULATION PROFILE

- The population is 149,772,364, the eighth largest in the world. It is expected to rise to 230 million by 2050 (Census 2011 WB Indicators).
- Disaggregated pre-crisis demographic and socio-economic data from the 2011 Census is available on the Humanitarian Country Task Team's web platform (HCTT).
- Population density is 1,014 people/km², compared 411 in India, 189 in Nepal, and 119 in France. This makes Bangladesh the eighth most densely populated country in the world (WB Indicators)
- 39.7% of the population is <18 years (CEA 2013).
- 7% of the population is over the age of 60, of those 11% is over 80 (UNDESA 2012).
- The average household size is 4.4 persons (urban 4.4 and rural 4.3) (Census 2011).
- 15.6% are female headed households (Census 2011).
- 73% of the population is rural (WB Indicators).
- Bangladesh is 146 of 187 on the Human Development Index, indicating a low level of human development (UNDP 2012)

- The capital Dhaka was ranked the second worst city in the world to live in based on education, health care, infrastructure, culture and environment, and stability ([Economist Intelligence Unit 2013](#)).
- The literacy rate is 54.1% for men and 49.4% for women.
- The youth (14–24 years) literacy rate is 75.4%, showing a significant improvement in literacy ([CEA 2013 Census 2011](#)).
- The female teenage marriage rate is 32.5% ([CEA 2013](#)).

ADMINISTRATIVE DIVISIONS

- Bangladesh is administratively divided into seven Divisions and 64 Districts.
 - Districts are further divided into Upazilas (also known as Thanas). Official data from the BBS (2011) reports 491 Upazilas. This figure does change as Upazila boundaries are redrawn (combining Upazilas or dividing them) a 2012 estimate from the Local Government Engineering Department (LGED) gives the number of Upazilas as 518.
 - These are further divided into Union Parishads of which there are 4,451 in Bangladesh.
- Disaster Management Committees exist at the District, Upazila and Union level (although the level of activity of these DMCs varies).
- Key local government positions responsible for disaster management are:
 - District Relief and Rehabilitation Officer (DRRO) who reports centrally to the Department of Disaster Management
 - Project Implementation Officer (PIO), who reports to the DRRO and exists at Upazila level
 - Upazila Chairman, an elected representative at Upazila level
 - Union Parishad Secretary, a secretary of the Union level Disaster Management Committee
 - Union Chairman and members who are locally elected to represent at the Union level

HEALTH INDICATORS

- The crude birth rate is 17.88 per 1,000 ([Census 2011](#)).
- The crude death rate is 4.8 to per 1,000 ([Census 2011](#)).
- Fertility rate is 2.2 ([Census 2011](#)).
- The infant mortality rate is 37 per 1,000 live births ([WB Indicators](#)).
- Maternal mortality rate is 240 per 100,000 ([WB Indicators](#)).
- Non-communicable diseases account for 52% of all deaths ([WHO 2011](#)).
- Drowning is the leading cause of death for children in Bangladesh aged 2-10 years ([WHO 2011 UNICEF 2012](#)).

- HIV prevalence is under 0.1% with an estimated 7,500 PLHIV in Bangladesh ([UNAIDS 2012](#)).
- 9.07% of the population has a disability (8.1% male and 10% female) ([HIES 2010](#)).

ECONOMY AND MARKETS

- GDP growth was 6.1% in 2012.
- Agriculture comprises 19% of the GDP and 23% of export, with rice the staple ([MoA, GOB 2013](#)).
- Obstacles such as lack of electricity, land disputes, extreme congestion, and lack of urban planning have hindered economic growth. However, the economy has begun to gain strength, with the potential to generate \$40 billion in exports annually from the clothing industry ([The Economist 2012](#)).
- Off shore and on shore natural gas reserves may bring future prosperity to Bangladesh ([BBC 2012](#)).
- Fluctuating yields, particularly in rice harvests, are associated with climatic conditions and frequency of natural disasters (floods and cyclones). Even when these disasters are low-profile, they can have a devastating impact on food security ([UNICEF 2009](#)).

SOCIO-CULTURAL CHARACTERISTICS

- 98% of the population is Bengali ([UNHCR 2011, CARE 2011](#)).
- 89.5% of the population are Muslims, with Hindus comprising under 10%, and smaller populations of Adivasis, Biharis, Christians, and Ahmadiyyas ([UNHCR 2011, CARE 2011](#)).
- Attacks on minority groups persist. Minorities continue to be subject to violence and other human rights abuses ([RDC 2010](#)).
- The Rohingya are an ethnic, linguistic, and religious minority, numbering between 200,000 and 500,000 in Bangladesh they mostly reside in the South East ([IRIN 19/11/2013](#)),

MEDIA

- Television is the most popular source of news and entertainment in urban Bangladesh. Urban access to television is 91%, compared to rural areas where access to television is 67% ([InfoAsAid 2012](#)).
- Radio ownership has fallen steadily in recent years, from 36% in 1999 to 15% in 2011 ([InfoAsAid 2012](#)).

- A 2011 Survey indicated that 73% of radio listeners tuned into stations on their mobile phones, but only 34% still listened to programmes on a radio set (InfoAsAid 2012).
- One in five Bangladeshis do not watch TV or listen to radio at all (InfoAsAid 2012).
- 27% of females and 13% of males do not watch TV, listen to radio, or are reached by any other media on a regular basis (InfoAsAid 2012).
- 40% of Bangladeshi men and 14% of women read newspapers at least once a week (InfoAsAid 2012).

MOBILE PHONES

- The mobile network covers 98% of the population (InfoAsAid 2012).
- Some *mobile holes* exist in the sparsely populated Chittagong Hill Tracts in the southeast, the mangrove swamps of the Southern Sundarbans in the southwest, and in the extreme northwest (InfoAsAid 2012).
- At end February 2012, there were 87.9 million active mobile subscribers
- 66% of all persons aged 15+ years own at least one mobile phone with an active SIM (InfoAsAid 2012).

POVERTY PROFILE

- Poverty is concentrated in three geographic areas: the northwest, which is affected by droughts and river erosion; the central northern region, which is subject to serious seasonal flooding that limits crop production; and the southern coastal zones, which are affected by soil salinity and cyclones (IFAD, 2011).
- Determinants of poverty include:
 - Land Ownership: the chronically poor do not own cultivable land and depend on volatile daily wage incomes. 4.6% of Bangladeshis are landless. 60.5% are functionally landless, owning under ½ acre (HIES 2010).
 - Literacy: poverty rates are higher, in both rural and urban areas, when household heads are illiterate (JBIC 2007).
 - Gender: women’s wages are half of those of men, and women’s employment is often temporary (JBIC 2007). However, poverty levels are lower for female headed households. Using the upper poverty line, the rate is 32.1% for male headed households and 26.6% for female headed households (HIES 2010).

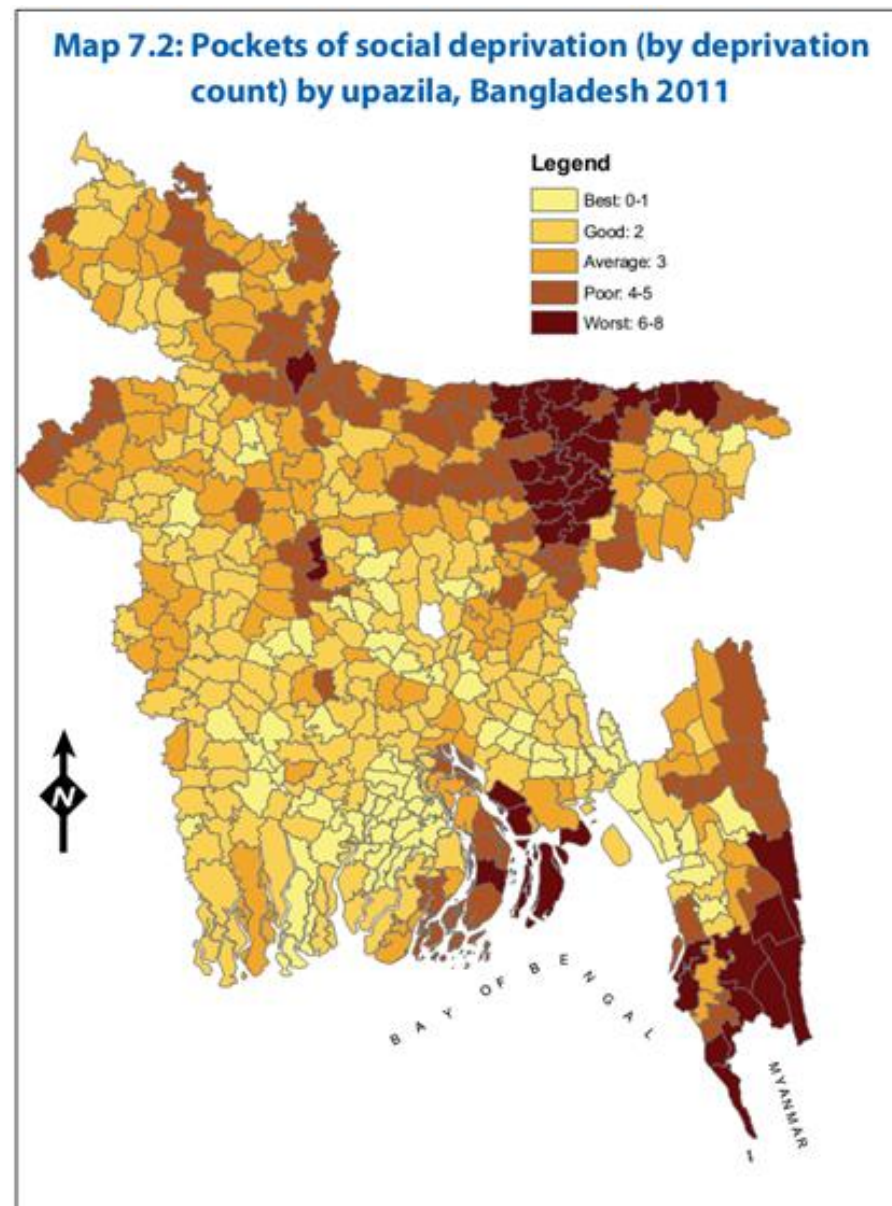


Figure 1: Source, (CEA 2013).

- Monthly income for female-headed households is significantly lower than their male-headed counterparts. Almost all (96%) households reported that men are the only income earners in the household. Out of necessity, relatively more women from the poor are engaged in income earning activities (WFP).
- The average monthly income in 2010 was Tk. 11,479 (rural = Tk. 9,648 and urban = Tk. 16,475). There is a significant underreporting of income (HIES 2010).
- The average monthly expenditure in 2010 was Tk. 11,200 (rural = Tk. 9,612 and urban = Tk. 15,531), representing an increase in real expenditure of 36% from 2005 – 2010 (HIES 2010).
- Families receiving remittances have an income on average 82% higher than families not receiving remittances. Poverty rates are 61% lower for remittance receiving families (HIES 2010).
- 32% of the population has taken loans from financial and non-financial institutions, friends, and money lenders (HIES 2010).
- Per-capita income varies significantly by region. Coastal and *char* households have the lowest per-capita income; northwest and drought-prone households enjoy the highest income and expenditure figures (WFP).
- The recently updated social deprivation map, provides a different picture than the poverty map, due to the different indicators used.
- Social deprivation is concentrated in the north, northeast, southeast, and to a lesser extent south central areas. The best performing districts are Khulna and Barisal, while Sylhet consistently lags behind (CEA 2013).

DISASTER MANAGEMENT FRAMEWORK

- Disaster Management is the responsibility of the Ministry of Disaster Management and Relief. Within the Ministry the Department for Disaster Management (DDM) has a policy and advisory role. Bodies which support Disaster Management include the following, many of these are only activated when an emergency is declared by the government (SOD 2010):
 - The National Disaster Management Council is headed by the Prime Minister and is responsible for formulating new policy and delivering directives on all concerns.
 - The Inter-Ministerial Disaster Management Coordination Council is responsible for implementing policy and is headed by the Minister of Disaster Management and Relief.

- The National Disaster Management Advisory Council is headed by an experienced person nominated by the Prime Minister.
- The National Platform Disaster Management for Disaster Risk Reduction coordinates and provides necessary facilitation to relevant stakeholders.
- The Focal Point Operation Coordination Group of Disaster Management is head by the DG of DDM to review and coordinate the activities of various departments/agencies related to disaster management and also to revive the Contingency Plan prepared by concerned departments.
- The NGO Coordination Committee of Disaster Management headed by the DG DDM reviews the coordinates the activities of concerned NGOs.
- The Committee for Speedy Dissemination of Disaster Related Warning/Signals head by the DG DDM to examine, ensure and find out the ways and means for the speedy dissemination of warning/signals among the people.

DISASTER MANAGEMENT REGULATORY FRAMEWORK

- In 2012 a Disaster Management Act was passed, creating the framework for Disaster Risk Reduction (DRR) and emergency response management.
 - The National Disaster Management Policy is a strategic policy document describing the broad national objectives and strategies for disaster management.
 - The 2010–2015 National Plan for Disaster Management outlines the systemic and institutional mechanisms for DRR and emergency response management. NB, this Plan along with other key documents such as the Standing Order on Disasters (SOD) precedes the DM Act and the associated creation of a separate Ministry of Disaster Management and Relief and Department for Disaster Management (DDM).
- The Guidelines for Government at all Levels (Best Practice Models) are available to guide the Government’s DRR and emergency response management.
- The Standing Order on Disasters (SOD) outlines the national management arrangements and describes the detailed roles and responsibilities of the relevant government bodies at the central and local level (SOD 2010).
- Quantitative information on a disaster in the initial days comes from the Government via their:
 - SOS forms which provide information on approximate loss, damage and emergency requirements, including affected, dead and missing.

- D-Forms include detailed assessment on damage and loss
- Government sitreps based on this information are produced and published on the DMIC website
- All INGOS and NGOs require Government approval for new projects. An FD6 is used in non-emergency situations and takes a minimum of 45 days to be approved. If a disaster has been declared by the Government, a fast-track system allows for use of the FD7 which can be approved in 24 hours.

DISASTER MANAGEMENT COORDINATION STRUCTURES

- The Local Consultative Group Mechanism (LCG) is one of the key the structures through which the Government engages in dialogue with development partners (www.lgcbangladesh.org)
- There are thematic 18 LCG Working Groups (in addition to the LCG Plenary) including the Disaster and Emergency Relief (DER) which is co-chaired by the Ministry of Disaster Management and the UN Resident Coordinator.
- The DER is mandated to ensure effective coordination of national and international stakeholders around all aspects of the disaster management cycle.
 - DER membership consists of senior decision makers from UN agencies, donors, and a representative of both the INGOs and NGOs.
 - The DER is co-chaired by the UN Resident Coordinator and the Secretary, Ministry of Disaster Management and Relief.
- Within the LCG DER, the Humanitarian Coordination Task Team (HCTT) is a working group which provides an operational level forum for coordinated disaster preparedness, response, and recovery across sectors.
- Membership of the HCTT includes:
 - All cluster lead agencies
 - Two donor representatives
 - Three elected representatives of the INGO Forum Emergency Sub Group
 - One representative of the NGO community
 - IFRC.
- In Bangladesh, clusters have been constituted, with Government approval, to engage on disaster preparedness. (This does not imply formal UN Cluster activation). Currently the clusters that have been formed are: WASH, food security, early recovery, health, nutrition, education, logistics, and shelter.
- Cross cluster coordination takes place through the HCTT around preparedness. Clusters are designed to also operate as sub-sets of the relevant thematic LCGs.

- The INGO Forum is a voluntary grouping of all INGOs operating in Bangladesh. The INGO Emergency Sub Committee consists of senior staff of the INGOs that have a humanitarian operational capacity.

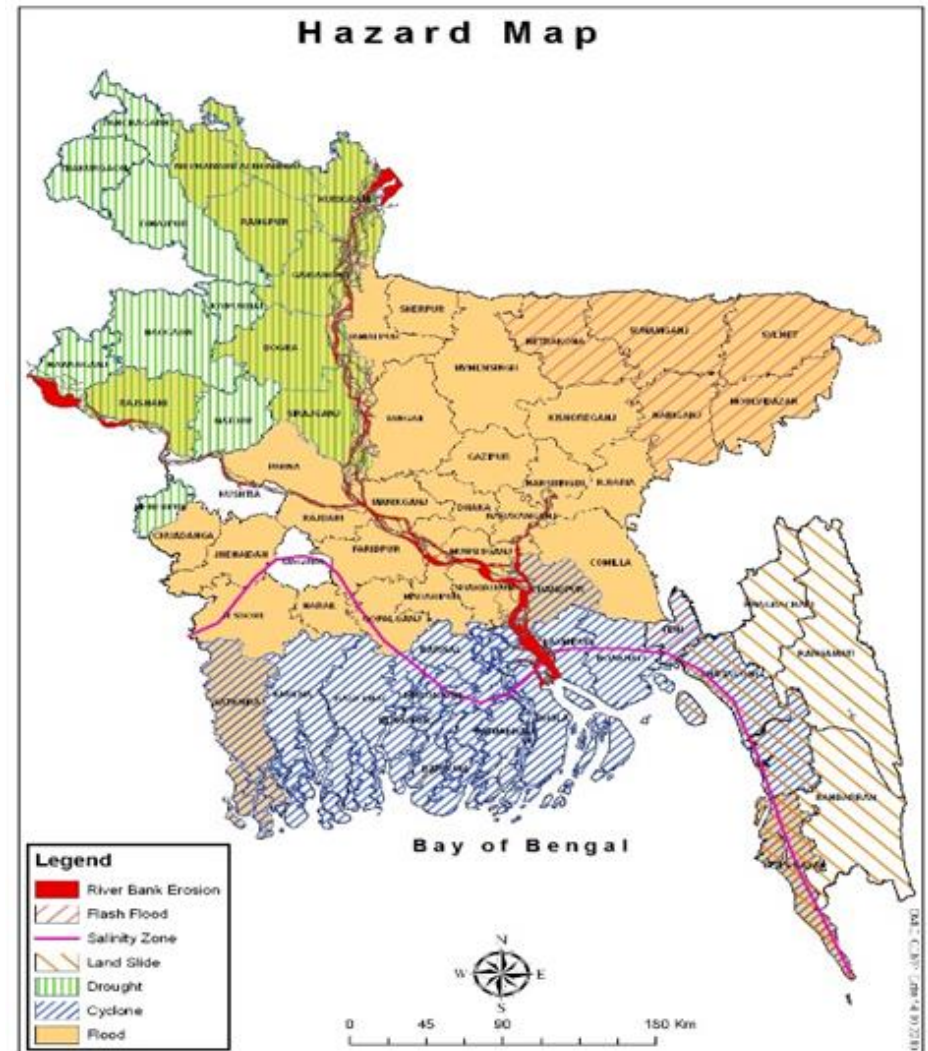


Figure 2: CDMP/DMIC 2010

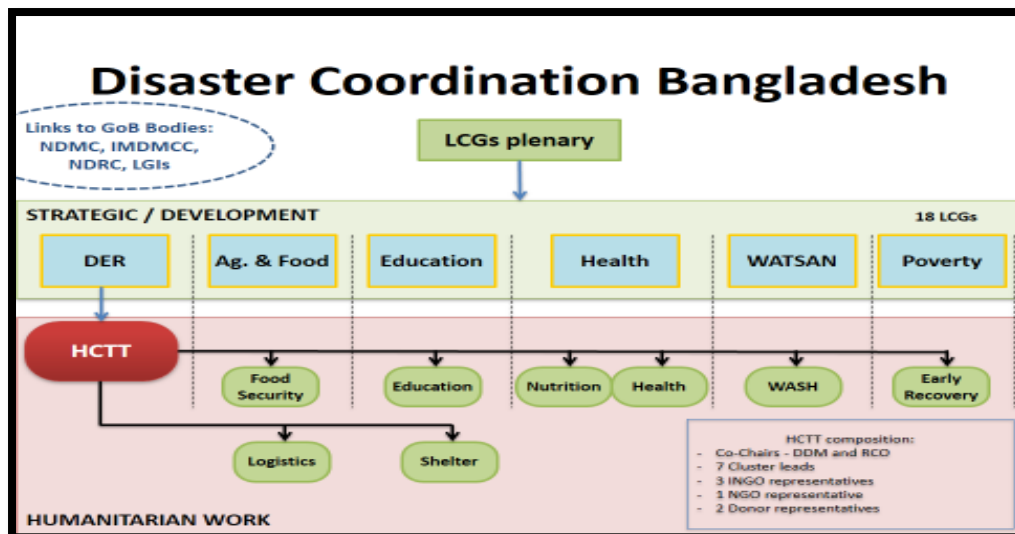


Figure 3 JNA (unpublished)

INFORMATION AND KNOWLEDGE MANAGEMENT

- There are multiple data sources in Bangladesh. For the purposes of disaster management in Bangladesh the key nationally and internationally recognised data sources are:
 - The Census 2011 ([Census 2011](#))
 - The Household Income and Expenditure Survey ([HIES 2010](#))
 - The Multiple Indicator Cluster Survey ([MISC 2009](#))
- These sources have been heavily drawn on for the purposes of this review. A new MICS will be published by the end of 2014.
- The Bangladesh Bureau of Statistics (BBS) also holds a wealth of information provided by surveys and monitoring undertaken by a number of different government departments. The core data is not easily accessible, which means mining data at any scale is too time consuming at the start of an emergency. During the process of writing these Secondary Data Reviews clusters were asked to identify key baseline indicators from secondary data that they require to carry out thorough needs assessments. Some of these are already available and others

will need to be a work in progress. The status of these baselines has been highlighted within the document.

- Information Management is handled both within organisations, UN agencies, INGOs and NGOs as well as in different government departments. For the purposes of Disaster Management there is a Disaster Management Information Centre (DMIC), which is currently in the process of transitioning out of CDMP into the Department of Disaster Management. The information needs of development partners involved in disaster management and the products and services which DMIC can provide is still a work in progress.
- Extracting lessons learnt on disaster response was a key constraint to the secondary data review. There is limited information publically available on low profile disasters. Cyclone responses have the greatest amount of lesson learning, but much is focused on internal and external operational issues, rather than critical analysis of programmatic, strategic, assessment, and coordination issues. This analysis is done, but retained within agency documents including progress and donor reports, which are difficult to access.

HAOR BASIN FLOODING

Flash Flood Data from 2005 Source: (Em-Dat 2014).					
Start	Location	Type	Killed	Affected	Damage (US\$)
June 2012	Sunamganj, Syhlet (Haor Basin)	Flash Flood		318,008	
April 2010	Sylhet, Moulavibazar, Sunamganj (Haor Basin)	Flash Flood	n/a	75,000	n/a

- The Haor Basin, an area of 6,000 m², also known as the Sylhet basin and the Bay of Bengal Basin, is inundated for six months every year. It is in the north east, and the core Haor area crosses Sunamganj, Habiganj, and Moulavibazar Districts.
- The Sylhet sub-basin or Trough (within the larger Haor Basin) is estimated to be sinking at between 4mm to 2.1 cm per year because of down-thrusting under the Shillong massif. This sinking means that annual flooding will become more extensive and will be exacerbated by sea level rise (IFAD 2011).
- It is particularly vulnerable, because of poor drainage and vulnerability to flash floods (IFAD 2011).
- A haor is a saucer-shaped depression, used during the dry period (December to mid-May) for agriculture and as a fishery area during the wet period (June-November) (Harvard 2013).
- Pre-monsoon flooding, including flash flooding, which usually occur from April till mid-May causing agricultural loss and distress, whereas monsoon flooding brings benefits (Harvard 2013).
- The area borders India, presenting trans-boundary issues, and is fed by Indian catchments. The area is drained mainly through the Surma-Kushiyara river system. The terrain generally is flat and the flashy/hilly land characteristics die out within a short distance from the Indian border (Harvard 2013).
- Strong wave action adds to the vulnerability of Haor inhabitants as it can potentially wash away land and poses a major threat to villages in the Haor.

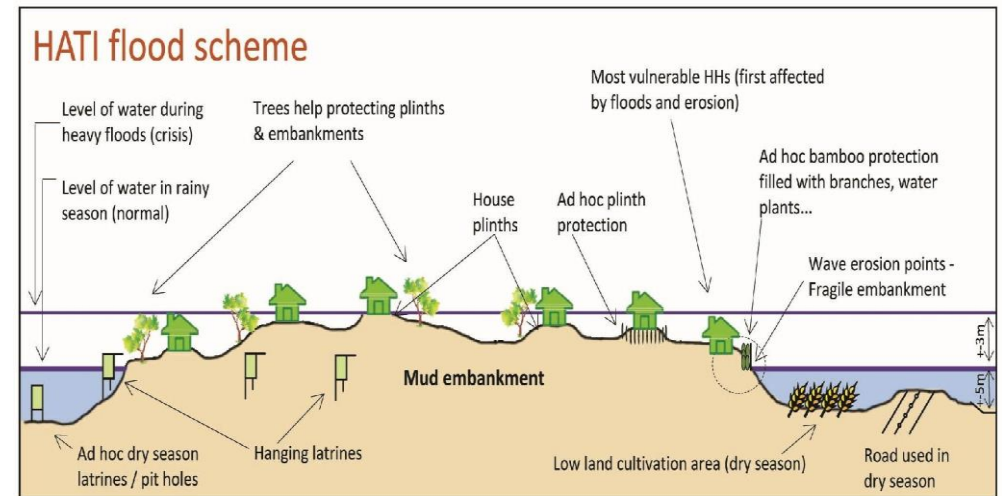


Figure 4: Solidarites International (from (Haor Basin JNA 2012))

- Protection of villages against flood action, proper management of the fishery resources, and securing existing livelihoods such as crop and animal production are critical needs for poor rural households living in the Haor region (IFAD 2011).
- In the Haor area, flash floods come from the steep uplands adjacent to the region in the Asam and Meghalaya hills range in India causing immense damage to standing boro crops, lives, and properties every year (BWDB 2014).
 - In 2012, an estimated 320,000 people out of a population of 2.4 million were affected and in need of assistance due to early flash flooding (JNA SE 2012).
 - In 2010, flooding affected 75,000 people, according to EM-Dat, however the flooding took place in April and destroyed roughly 80% of the crop, creating far greater medium term food security needs.
 - As shown in the figure below, Haor inhabitants are constantly at risk of major flooding. The normal level of water in the rainy season causes considerable damage every year on the island slopes as waves wash away a part of the island soil. The density of population in these islands is high and houses located on the edge of the islands are continually at risk of inundation and erosion. Families in these homes subsequently face the ongoing risk of being displaced. In severe seasons, water levels during inundations can reach 1.5m above the level of the floor of the houses (JNA 2012).

KEY INFORMATION GAPS

The Haor basin is a distinct zone with a specific set of high level pre-existing vulnerabilities. There are a number of large scale development programmes that focus on this area. During this review information was not taken from these development programme sources, as they were not readily accessible. In future revisions to this document learnings from these development programmes should be included to obtain a more detailed analysis.

EARLY RECOVERY

- The Early Recovery cluster is part of the humanitarian coordination structure that is formed to:
 - Address issues not addressed by other clusters such as livelihoods, governance, security and rule of law, and crosscutting issues such as environment, gender etc.
 - Improve preparedness and coordination of early recovery interventions
 - Sensitize and contextualize the concept of early recovery.
 - Facilitate all sectors to move into the recovery phase
- Early Recovery as a *principle* is inherent in the mandate of every cluster.
- There are four pillars of Early Recovery: livelihoods; governance; environment; and community infrastructure.
- To ensure that Early Recovery is an integral part of all clusters, an Early Recovery Network, comprising of focal points from each existing clusters, is managed under the auspices of the UN Resident Coordinator.

THE EARLY RECOVER FACILITY (ERF)

- In Bangladesh, there is a pooled fund in the form of the Early Recovery Facility (ERF).
- The ERF was established by UNDP as a way of financing and implementing emergency response and early recovery efforts to disasters in order to close the gap between the relief phase and long-term recovery.
- There is a programme branch to the ERF which funds early recovery activities and a policy development and capacity building of government branch.

- The ERF is sufficiently flexibility that it can support and complement national efforts during times of emergency response, when necessary.
- To support the government in times of crisis, ERF has pre-approval to spend up to \$60 million at its disposal to be able to quickly respond to emergencies based on build back better approaches.
- The ERF has pre-approval from the Government and does not require additional approval post-disaster.
- The ERF has 49 INGO and NGO partners who are pre-approved and do not require further approvals to commence work.

EDUCATION

EDUCATION KEY CHARACTERISTICS

- Bangladesh has made great gains in education, as per the HDI. But national progress hides regional disparities (CEA 2013).
- Nationally, BANBEIS is responsible for the collection (including annual enrolment data), dissemination, documentation, and publishing of educational information (BANBEIS, accessed 2014).
- Just under one in five (18.9%) Bangladeshi girls attended secondary school in 2008. 47% of enrolment in Government secondary schools and 18% of enrolment in non-government schools was female (BANBEIS).
- Drop-out rates vary according to source and method of measurement. The 2013 ASPR cites a drop-out rate of 27%, but a completion rate of 75% (ASPR 2013). In comparison, the CEA notes that 23% of children aged 6 to 10 are out of school (CEA 2013).
- There is a correlation between remoteness, social deprivation, and out of school children rates. Levels between girls and boys is comparable, and child labour does not appear to be the cause of children dropping out of school (CEA 2013).
- The dropout rate is high due to children's need to help with farming and household chores, child-unfriendly teaching-learning methods, overcrowded classrooms, and unattractive educational environment (UNICEF).
- Of the children interviewed in a 2011 UNICEF study, over 5% of children aged 5-11 are in child labour, increasing to 14% for 12-14 year old children. 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. Among boys aged 12-14 years, 23% was involved in some economic activity (UNICEF, unpublished 2012)¹.

- There has been an increase in the national primary enrolment rate from 50% in 2007 to 97% in 2013 (DPE).
- The national education policy is for children to start school at the pre-primary level, age 5, using nationally approved minimum standards and curriculum (Education Cluster).

National Education Rates	Figures	Source
PRIMARY SCHOOL		
Gross intake rate	106% ²	(MISC 2009)
National primary school attendance	81% - (83% girls and 80% boys)	(MISC 2009)
School attendance rate for 5 year olds	22%	(MISC 2009)
National attendance rates for the poorest quintile	77% - (82% girls and 73% boys)	(HIES 2010 and Education Cluster)
Primary national enrolment rate	97% - (99% girls and 95% boys)	(ASPR 2013)
Completion rate for five-year primary education cycle	67%	(BANBEIS, 2001)
SECONDARY SCHOOL		
Net Attendance Rate	54% - (59% girls and 50% boys)	(CEA 2013, fr 2001)
Dropout rate	66% girls and 58% boys	(BANBEIS,2007)

CHILDREN WITH DISABILITIES

- The mandate for implementing Education For All lies with the Ministry of Education and the Ministry of Primary and Mass Education, but the education of children with disabilities is managed by the Ministry of Social Welfare and is seen as a matter of charity, not a human rights issue (UNICEF 2013).
- In 2012, there were 89,994 children with disabilities at school (ASPR 2013).

¹ From UNICEF *Out of School Children, 2011-12*, unpublished.

SCHOOL YEAR

- The school calendar for primary and secondary school runs from January to December. Exams are at the end of the year.
- At the Union there are adaptable school calendars, which officials can adjust due to disasters, but few diverge from the standard calendar (KI, Education Cluster, 2014).

EDUCATION COORDINATION

- The Education cluster for preparedness is operational and co-led by UNICEF and Save the Children. The cluster has agreed to meet on a bi-monthly basis.
- Primary Education falls under the remit of the Ministry of Primary and Mass Education (MoPME). It is operationalized through the Directorate of Primary Education (DPE) (KI, Education Cluster, 2013).
 - The MoPME and DPE are responsible for all Government primary schools and non-registered Government primary schools.
 - The Bureau of non-formal education (BNFE) operates under DPE and is responsible for schools run by civil society. The bureau is working on an equivalency framework so children from non-government schools are able to sit exams. Currently, only children in BRAC schools are able to sit exams. Government primary schools are free, but students must pay for books, pens etc.
 - *Ebtedayee* Madrasa schools are managed by the Madrasa Education Board but recognized by DPE and included in the Annual School Census (ASC). These schools teach with a mixed religious and government curriculum. *Coumi* Madrasa schools do not follow the government curriculum and are not included in the DPE ASC.
- Secondary Education falls under the remit of the Ministry of Education and is operationalised by the Directorate of Secondary and Higher Education.
- Currently, there is no Education cluster website.

² indicating either that students are double enrolled and/or attendance rolls are not accurately compiled.

PRE-CRISIS BASELINE EDUCATION DATA

- There is no integrated management information system for non-formal primary education (ASPR 2013).
- The following indicators are used to provide the baseline for Phase 1 and Phase II assessments:

Baseline Indicator	Notes
Disaggregated demographic data	2011 Census data, available in excel on HCTT web platform. Disaggregated to Union level.
List of schools in the affected area	Data not currently available with the cluster
Number of student's in the affected area	Data not currently available with the cluster
Primary school National Attendance Rate	Data collected for Annual School Survey. Disaggregated data not currently available with the cluster
Secondary National Attendance Rate	Data collected for Annual School Survey, Disaggregated data not currently available with the cluster
At least one toilet in the school	Data collected for Government Primary Schools for the Annual School Survey. Disaggregated data not currently available with the cluster
Separate girls and boys toilets	Data collected for Government Primary Schools for the Annual School Survey. Disaggregated data not currently available with the cluster
Potable water supply ³	Data collected for Government Primary Schools for the Annual School Survey. Disaggregated data not currently available with the cluster
Number of schools acting as flood / cyclone shelter	Data available with the WASH cluster

IMPACT OF HAOR FLOODING ON EDUCATION

- Education in the Haor basin is disrupted each year during the flooding period, as parents do not let their children attend school due to fear of drowning (Haor Basin JNA 2012)

³ There is no standardised water quality testing in Bangladesh. The focus of the school water supply is to ensure there is water available for handwashing not drinking water (UNICEF KI).

- In 2012, it was noted that most schools were closed in the most affected areas due to the flooding (Haor Basin JNA 2012).
- An increase in the numbers of children dropping out of school is expected after flash floods (Haor Basin JNA 2012).
- In addition to the lower attendance due to parents' concerns, schools are also closed as education centres to accommodate people as collective centres. As in other areas, there is no national budget available for repairs that may be required by the school after the schools reopen (Haor Basin JNA 2012).

LESSONS LEARNT

There are no specific lessons learnt on education response in the Haor basin that could be accessed during this review.

KEY GAPS IN INFORMATION

- Accurate information on school closure due to flooding (including the number of schools closed and the time they are closed for each year to build a profile over time).
- Specific understanding of education support to the Haor Basin, including the Floating Schools programmes.
- Figures on numbers of schools in the area beyond the present information on registered and non-registered schools.
- Access to core data from which the ASPR and BANBEIS take their figures.
- Information and lessons learnt on impact of flooding in the Haor Basin on education.

GAPS IN INFORMATION

- Information on past impact on education from flash flooding and landslides
- Figures on numbers of schools beyond registered and non-registered.
- Access to core data from which the ASPR and BANBEIS take their figures
- Lessons learnt on education responses to flash flooding and landslides.

KEY CHARACTERISTICS

- The Haor Basin is highly food insecure and is one of the target regions for the Food Security and Nutrition Surveillance Project (FSNSP).
- Rural poor Haor household livelihood depend upon fisheries and off-farm labour.
- Infrastructure is poorly developed with submersible rural roads providing some connectivity during the dry season and boats the main source of transportation during the flood season. The poor transportation network limits the incentives for increasing production, discourages rural growth, limits access to markets and off-farm employment opportunities and limits access to existing social services particularly health and education (IFAD 2011).
- There are submergible dykes in the basin to protect the rice harvest, however these are breached on an annual basis (CDMP 2011).
- During the dry season the area is drained, but some beels (deeper ponds within the overall basin) are permanent and never drain (Haor Basin JNA 2012).
- When beels do dry out, they expose rich alluvial soil which is used extensively to enhance rice cultivation (Haor Basin JNA 2012)
- Due to the annual flooding patterns, people only plant one boro crop per year and aim to harvest before the flash flooding season begins in May (Haor Basin JNA 2012)
- Women living in the Haors are particularly disadvantaged and vulnerable. Lack of roads affects women more than men, they find it difficult to travel by boat or walk on muddy tracks. This means they have less access to education, health services and employment which in turn contributes to social barriers (IFAD 2011).
- Women are the heads of roughly 10% of households. These female heads of household are widows, divorced or deserted, and almost 90% are poor (IFAD 2011).
- Women have little participation in decision-making processes in Haor society, and their contribution in the family remains unnoticed and undervalued. The result of this low value placed on women is early marriage and pressure for dowry payments. Early marriage and lack of access to family planning and health services results in large families, which in turn contributes to health problems and reduces opportunities for women to earn an income (IFAD 2011).

⁴The above applies to cyclone based emergencies but it is anticipated that these packages will be recommended for flooding as well.

FOOD SECURITY AND LIVELIHOODS COORDINATION

- The Food Security cluster meets regularly in Dhaka. Technical Working Groups are set up on an *ad hoc* basis to work on particular issues (including needs assessment).
- The cluster is co-led by WFP and FAO in Dhaka.
- The cluster has up-to-date mapping in the form of a 4W (using the new standardised IMWG tool).
- There is a comprehensive cluster website <http://foodsecuritycluster.net/>
- As reflected in the contingency plan, all cluster members have agreed on⁴ (FSC Contingency Plan 2013):
 - A standardised recommended response package for dry food for the first 7 days (immediate response)
 - A recommended short-term (week 2-8) standardised food package (food only)
 - A recommended short-term (week 2-8) standardised package (cash and food mix).

PRE-CRISIS BASELINE LFS DATA

- The WFP VAM Unit is preparing a compendium of proxy indicators/variables of food security and nutrition along with their disaggregation level and source, not published yet (KI, VAM, 2014).
- The VAM unit has also requested the Bangladesh Bureau of Statistics (BBS) to generate food security related proxy variables at upzila level from the 2011 Census. This should include percentage of households with major income sources from agriculture lay labour and those with major income sources from non-agricultural activities (KI, VAM, 2014).
- Key indicators to provide a baseline for Phase 1 and Phase 2 assessments have been agreed by the FSC Technical Working Group (see table at end of Food Security and Livelihoods section).
- Additional pre-crisis data should include seasonal price trends and access to markets.

IMPACT OF HAOR FLOODING

- The Haors are subject to sudden flash floods before the main monsoon season and farmers say that they lose their rice crop in one year out of four. This risk of total loss means it is unwise to invest in high levels of inputs, and much of the area is sharecropped. While sharecropping shares risk between landlord and tenant, it does not provide incentives to maximise production (IFAD 2011).
- Even though people have adapted their lives and livelihoods to live in the Haor areas, early flash flooding can have a devastating effect as there is only one Boro crop planted annually (Haor Basin JNA 2012)
- In 2010 the flash floods occurred in April and washed away immature crops, it is estimated that in the affected areas 80% of the Boro harvest was lost (Oxfam 2010)
- In 2012 the flash floods occurred after the harvest and people had already secured their food, meaning there was not an immediate food security need (Haor Basin JNA 2012)
- Markets are usually located on the highest part of land, known as Hati to maximise resilience to flash floods (Haor Basin JNA 2012).

LESSONS LEARNT

- There were no specific lessons learnt regarding flooding in the Haor Basin found during this review.

Food Security and Livelihoods Pre-Crisis Baseline Indicators	
Baseline Indicator	Notes
Demographic data	Census data, available in excel on HCTT web platform in excel. Disaggregated to union level.
Poverty levels	Available from WFP, in excel. Disaggregated to Upazila level.
Livelihood groups	The JNA is in discussion with the cluster and the information management working group about where and how to access this data.
Number of landless	Disaggregated to Division level in the HIES. The JNA is in discussion with the cluster and the information management working group about where and how to access this data.
Integrated food security phase classification (IPC)	Acute analysis available for coastal Districts.
Number covered by government social safety nets	This data is not readily available.. For those enrolled on the Vulnerable Group Development programme WFP could request this information.

KEY INFORMATION GAPS

- Baseline figures for seasonal migration to and from the Haor region.
- Collated food security and livelihoods lessons learnt.
- Specific information regarding the distinct livelihood patterns of this region.

HEALTH

KEY CHARACTERISTICS

- Even in non-disaster situations, health coverage in the Haor basin is limited due to poor infrastructure, limited number of facilities, high gaps of qualified staff, and high transport costs/transportation difficulties (IFAD 2011).
- The <5 mortality rate is one of the highest in the country. At 94 per 1000, it is significantly above the national average of 64 (MICS 2009).
- Sunamganj has been identified by UNICEF as one of the six districts in Bangladesh most vulnerable to pneumonia (Haor Basin JNA 2012).
- Most births in Sunamganj (85%) are delivered by traditional birth attendants. Nationally, 76% of deliveries take place in the home (UNFPA 2013MICS 2009).
- Across the FSNSP surveillance zones, the Haor region has the lowest level of ANC coverage for women (FSNSP, 2012, unpublished).
- Health service provision is through the Government, the private sector, and the NGO sector.
- The health services provider structure is built on the country's administrative pattern which follows the national government, division, district, upazila, union, and ward administrations (Health Sector Profile 2010).
- Bangladesh faces many challenges in improving the health of the population, particularly the poor and vulnerable. Maternal and neonatal mortality, though decreasing, are not reducing at an acceptable rate (Health Sector Profile 2010).
- Health care is provided for free at the community clinic level (Health Bulletin 2012).
- The for-profit sector is a key service deliverer for all income groups (providing 30% of services to the poorest two quintiles). There is a modest role played by the NGO sector which typically provides less than 10% of services for all income groups (with perhaps slightly more for the poorest quintile) (Health Sector Profile 2010).

CHILD HEALTH

- Nationally drowning is the leading cause of death for children aged 2-10 years, followed by pneumonia, and malnutrition ([UNICEF 2005](#)).
- Drowning, usually occurs close to home, in and around the local community, and the majority of drowning deaths occur during sunny weather. It is a neglected form of child mortality and often goes unreported ([UNICEF 2012](#)).
- The leading causes of mortality for infants are pre-term birth, pneumonia, and birth asphyxiation ([UNICEF 2005](#)).
- The leading causes of morbidity for infants are acute respiratory infections (ARI), diarrhoea, and malnutrition ([UNICEF 2005](#)).
- The leading causes of morbidity for children aged 1-17 are ARI, diarrheal diseases, and fever UNICEF ([UNICEF 2005](#)).
- The 2007 Bangladesh Health and Demographic Survey indicated that about 37% of sick children receive care from a trained provider, with girls and the poor having lower rates ([BDHS 2011](#)).
- 86% of children 12–23 months are fully vaccinated; the figures is 85% for girls and 87% for boys ([BDHS 2011](#)).
- Coverage for measles is 88%, the GoB target is 90% ([BDHS 2011](#)).

DISEASE

- Diarrhoea is highly prevalent throughout the year, but typically spikes in April and October ([Icddr,B I/V 2013](#)).
- The main public health diseases are tuberculosis, malaria, dengue, and soil-transmitted helminthiasis ([WHO 2010](#)).

DISABILITY

- 9.07% of the population has a disability (8.1% male and 10% female). The figure is 9.63% in rural areas and 7.49% in urban areas ([HIES 2010](#)).
- Disability caused by injury, after infancy, is more than twice as likely to happen to boys as to girls ([UNICEF 2005](#)).

HEALTH COORDINATION

- In Bangladesh, WHO-BAN has been leading the UN DER (Disaster and Emergency response) health Cluster and ensuring health sector coordinating mechanisms

involving UN agencies, NGOs, CBOs, Health authorities, donors, and community members, including between the centre and the field, and other sectors/clusters.

- The Health cluster responds to both emergencies and to assess health sector preparedness activities on an ongoing basis ([ERM 2012](#)).
- The Health cluster responds to both emergencies and to assess health sector preparedness activities on an ongoing basis ([ERM 2012](#)).
- Health cluster information management tools such as UN-DER Health Cluster Standard Operating Procedures, post disaster disease surveillance for morbidity and mortality, Agency Inventory format, and the 3W were developed and finalised in 2012 ([ERM 2012](#)).
- The Ministry of Health and Family Welfare (MoHFW) is responsible for the implementation, management, coordination and regulation of national health and family planning related activities, programs and policies.
- The MoHFW regulates the private and NGO sector.

CONTINGENCY PLANNING AND PREPAREDNESS

- The Emergency Preparedness and Response Programme is an active unit of Directorate General of Health Services for adequate disaster preparedness activities and response to emergencies ([EPR 2013](#)).
- The Directorate General Health Services, WHO, and other stakeholders manage a buffer stock of drugs and medical supplies which in the past have been used during emergencies at district and Upazila levels, including emergency drugs (antibiotics, IV fluids, antipyretics, analgesics, topical ointments, drops, nebulizer, anti-snake venom injections etc.) ([KI, Health Cluster 2013](#)).
- Guidelines exist for health professionals and community health volunteers for disaster preparedness and response and are available through the health cluster ([EPR 2012](#)).

HEALTH PRE-CRISIS BASELINE DATA

- All Government health facilities are mapped in this link: [Health Infrastructure in Bangladesh](#).
- Health Data is available through the Health Management Information System.

- Health indicators from the Haor region are some of the worst in the country. This needs to be extracted from MICS and other sources to provide a disaggregated pre-crisis baseline.

IMPACT OF HAOR FLOODING ON HEALTH SERVICES

- In 2012, three out of 12 health facilities were not accessible after the floods, and there was no health data to demonstrate an impact on the health status of the affected people, related to the floods ([Haor Basin JNA 2012](#)).
- Health risks are associated with the evacuation of patients, loss of health workers, and loss of health infrastructure including essential drugs and supplies. In the medium-term, infected wounds, complications of injury, poisoning, poor mental health, communicable diseases, and malnutrition are indirect effects of flooding. In the long-term, chronic disease, disability, poor mental health, and poverty-related diseases including malnutrition are the potential legacy ([NIH 2010](#)).

LESSONS LEARNT

There were no specific lessons learnt regarding flooding in the Haor Basin found during this review.

KEY INFORMATION GAPS

- An agreed list of pre-crisis baseline data.
- Specific analysis of the baseline health situation in the Haor basin should be completed.
- Information on number of deaths due to drowning as this is cited as a key reason parents do not send children to school in the flooding season.

INFRASTRUCTURE / LOGISTICS

LOGISTICS KEY CHARACTERISTICS

- The communication infrastructure in the Haor basin is poorly developed with submersible rural roads providing some connectivity during the dry season and boats being the main source of communication during the flood season ([IFAD 2011/05](#)).

- 56.1% of the population has access to electricity, 52.8% in urban areas and 13.6% in rural areas ([CEA 2013](#)).

LOGISTICS COORDINATION

- The Logistics cluster is led by WFP.
- The Logistic Cluster meetings are held on monthly bases with participation from UN and INGOs.

CONTINGENCY PLANNING AND PREPAREDNESS

- A Logistics cluster contingency plan is being prepared.

STORAGE

- The Directorate of Food has set up an early warning system for floods which enables Local Supply Depots and the Central Stores Depots to adopt contingency measures ([Logistics Cluster 2013](#)).
- The Water Development Board passes regular information on water levels due to incessant rains and floods to the Directorate of Food who in turn passes on this information to the districts ([Logistics Cluster 2013](#)).
- During an alarm situation, the Central Stores Depots and Local Supply Depots erect a Baffle Wall up to three feet at the entrance of the godowns/warehouses to prevent water from entering inside ([Logistics Cluster 2013](#)).
- There are numerous warehouses managed UN and INGOs throughout the country that are identified and mapped for emergency preparedness.

IMPACT OF HAOR FLOODING ON LOGISTICS

- Access and transport is a major issue in the Haorbasin. Most linking roads are submerged for six months of the year and movement is mainly only possible by boat. Motorized vehicle transportation is possible only in major towns ([Haor Basin JNA 2012](#)).

INFORMATION GAPS

- The Logistics Capacity Assessment will be updated at the end of March 2014.
- Understanding of key supply routes during Haor flooding.

NUTRITION

NUTRITION KEY CHARACTERISTICS

- Rates of stunting are highest in the Haor region, out of all the FSNSP surveillance zones, where half of the children are stunted (FSNSP, 2012, unpublished)
- The Haor region has a greater rate of adult malnutrition than the rest of the country (FSNSP, 2012, unpublished)
- Nationally child <5 nutrition has decreased since the 1990s, but the rate of reduction has been slow (UNREACH, Unpublished)
- Chronic stunting and wasting are persistent challenges (UNREACH, Unpublished)
- The pattern and change in wasting has been small and inconsistent.

BDHS National Nutrition Data		
Type of Malnutrition	2007	2011
Wasting	17%	16%
Severe wasting	3%	4%
Stunting	43%	41%
Severely stunted	16%	15%
Underweight	41%	36%
Severely underweight	12%	10%

- The main causes of under nutrition are inadequate hygiene (hand-washing) and inadequately diversified diets of mothers and young children (KI, Nutrition cluster, 2014).
- Due to maternal malnutrition and early pregnancy, one in five babies is born with a low birth weight (WFP 2012).
- Seasonality remains an important issue in malnutrition. Summer months see higher levels of malnutrition, connected with childhood morbidity and restricted access to food. This matches the flooding season which leads to increased diarrhoeal diseases which in turn is linked to increases in malnutrition (UNICEF 2009).
- Spikes in wasting during the monsoon months are particularly great in the Haor region (FSNSP, 2012, unpublished)

NUTRITION COORDINATION

- Nutrition falls under the Ministry of Health. The Institute of Public Health Nutrition (IPHN) is responsible for formulating policy and strategies for nutrition activities, programmes, research, training, and surveillance. It hosts the National Nutrition Services (NNS) which aims to reduce the prevalence of malnutrition among the people of Bangladesh with special emphasis on children, women, adolescents, and underprivileged sections of society (IPHN).
- The Nutrition cluster for preparedness meets on a monthly basis, coordinated by UNICEF and co-chaired by IPHN.
- Sub-national cluster coordination mechanisms have been established, with District disaster focal points identified, and district disaster management committees trained on nutrition in emergency.
- The 3W mapping and cluster contact list has been updated and is available via the Nutrition cluster.

PRE-CRISIS BASELINE NUTRITION DATA SURVEILLANCE

- Nutrition data is collected by a number of different actors including, the BDHS, the Food Security Nutritional Surveillance Project (FSNSP) and individual agencies.
- FSNSP provides up-to-date seasonal information on nutrition and food security in six regions of Bangladesh as well as nationally. The data is collected for the post Aman season (February – April), Monsoon (June – August) and post Aus Harvest (October – December) (FSNSP 2013).
- The Haor region is one of the surveillance zones included in the FSNSP, detailed nutrition data is constrained within it (FSNSP).
- A set of standard nutrition indicators have been integrated into routine Health Management Information System which will substantially increase nutrition data available from monthly health clinic reports, including information on coverage of essential nutrition interventions, and the anthropometric status of children. This information will allow trend analysis at disaggregated levels, which is critical to early warning.
- IPHN/NNS recently established a Nutrition Information and Planning Unit to regularly monitor and analyse the nutrition situation based on a diverse range of sources, including routine information from the Health sector, FSNSP surveillance, surveys, etc.

NUTRITION DISASTER PREPAREDNESS

- In collaboration with the Ministry of Food and Disaster management, the NNS is developing a guideline for disaster preparedness that aims to prevent and treat malnutrition after disasters. Once completed, all health workers will be trained so that they can respond to the nutritional needs of the population in an emergency. A strong emphasis is for Health Workers to promote, protect and support breastfeeding, and appropriate complementary feeding and hygiene among children <2 (IPHN).
- The Nutrition cluster maintains a district level inventory of stocks pre-positioned by cluster members, including anthropometric equipment and essential nutrition supplies.
- A detailed Nutrition cluster contingency plan is being finalised
- The nutrition cluster has established a Rapid Nutrition Assessment Team which is expected to lead post disaster rapid nutrition assessments and nutrition surveys.
- Phase three JNA assessment guidelines for nutrition are under development.
- The Nutrition cluster has contributed to setting standards for scaling-up a full set of direct nutrition interventions needed to prevent under-nutrition and micronutrient deficiencies, through development of job aids and tools under the *Nutrition in Emergencies* national training module.

IMPACT OF HAOR FLOODING ON NUTRITION

- In the Haor basin, pre-crisis nutrition vulnerability nutrition and the impact on food and livelihoods could impact on child feeding practices that could further compromise nutrition after a disaster.
- In light of the high prevailing rates of malnutrition, the nutrition situation could easily and quickly deteriorate after flooding.
- A lack of shelter and/or water result in decreased hygiene, often with limited available space where women feel comfortable to continue breastfeeding and/or engage in complementary feeding (KI, Nutrition cluster, 2014).
- Where food crops and markets are destroyed and/or disrupted results in less access to diversified nutritious food leading to inadequate energy and micronutrient intake (KI, Nutrition cluster, 2014).
- Lack of shelter/water and disruption to livelihoods are typically the first sectors to be compromised when a disaster hits which is why under-nutrition often aggravates soon after an emergency (KI, Nutrition cluster, 2014).

- Disasters may not have a direct and immediate impact on nutrition, but they create situations that increase vulnerability and can lead to a rise in under-nutrition in a short amount of time, complicated by factors such as inadequate hygiene, a lack of shelter for private and safe spaces for women to breastfeed or feed children, and inaccessibility to nutritious food. The nutrition situation of pregnant/lactating women and children, who are most vulnerable, should be closely monitored at all times (KI, Nutrition cluster, 2014).

LESSONS LEARNT

- Concurrent sectoral interventions implemented post disaster will go a long way in mitigating and reducing the deterioration of nutritional status.
- Nutrition sensitive strategies should be mainstreamed into responses of key sectors (KI, Nutrition Cluster, 2014):
 - Food security/livelihoods to ensure vulnerable populations have access to and consume adequately diversified nutritious diets.
 - Shelter to ensure mothers have safe, private, and hygienic spaces to breastfeed infants and young children.
 - WASH to ensure caregivers hand wash with soap before handling of food and feeding to avoid contamination and subsequent illness in children that can lead to under-nutrition.
 - Health to ensure essential health and nutrition services are delivered by health providers at quality and scale to vulnerable populations (including micronutrient supplementation, counselling and promotion, disease management, management of acute malnutrition, etc.).

INFORMATION GAPS

- Impact Haor flooding on nutrition status
- Evidence of previous emergency nutrition interventions in the Haor basin.

SHELTER

SHELTER KEY CHARACTERISTICS

- There is no clear written definition of *partially or completely destroyed* house, the consensus among shelter cluster partners is:
 - *Partially damaged* is where any component of a house (roof/wall/foundation/column) is damaged, but the house is repairable.
 - *Completely destroyed* is when the house is severely damaged or washed away and cannot be repaired.

Shelter Types in Bangladesh	
Pucca	Fully brick structures
Semi-pucca	Floors and/or walls made of brick and the rest made from tin (metallic sheet)
Kutchha	Floors made of soil and roof and walls made of tin
Jhupri	Floors made from soil and roof/walls made from bamboo

EMERGENCY SHELTER

- Temporary shelter in emergency response is defined as *a temporary structure which provides adequate shelter for a short period of time immediately after the event* (Shelter TWG).
- Where possible, shelter materials used for emergency responses should be appropriate for early recovery. This can be difficult due to the different needs for building on embankments and on flat ground (Shelter Cluster TWiG 2009).

TRANSITIONAL SHELTER

- Transitional shelter/semi durable shelter for transitional response is defined as *a structure which provides adequate shelter which covers a period of time from the emergency phase until longer term durable solutions can be provided. If required they can be dismantled and relocated* (Shelter Cluster TWG).
- The Shelter cluster has developed standard shelter kit lists for people displaced to embankments and one for people living on their own land or returned home (Shelter Cluster TWiG 2009).

SHELTER COORDINATION

- The Shelter cluster is led by UNDP during non-emergency periods and led by IFRC during emergency responses.
- The shelter cluster for preparedness is established and meets regularly. There is a Technical Working Group who meet on a regular basis.
- There is a website which is a resource for humanitarian agencies working in the Shelter sector ([Shelter Cluster](#)).
- The location of NFIs is still under discussion in Bangladesh between the shelter cluster, early recovery cluster and the food security cluster (KI, [Shelter TWG, 2014](#)).

PRE-POSITIONING AND CONTINGENCY PLANNING

- There are pre-positioned shelter items, by both cluster members and the Government. These are currently in the process of being mapped.

Main Features of Standardised Transitional Shelter (Shelter TWG 2013)	Flooding and cyclones in inland and coastal areas
Plinth	Height variable Above 1 ft HFL, 5" Brick wall with 10" X 10" brick pillar
Columns and frame	10 No RCC (5 in x 5 in with T section)
Wall Cladding	CGI + Bamboo Mat
Trusses and CGI fixing	Timber truss , Tin Screw (Bolt), Cyclone strap
Foundation	Below 1.5 ft GL , T Shape
Roof shape	hipped
Roof slope	30- 35 degree
Length of Canopy	1.5 ft
Plinth space for veranda	6ft wide extended earth filling
Ceiling	bamboo mat
Window	3 No (Beneficiary choice)
Door	2 No (Beneficiary choice)
Height (PL to Ceiling)	minimum 7 ft
Latrine	Single Chamber, minimum 5 to 7 ring, Bamboo/ wooden Pole, .24 mm CI sheet for wall cladding, 0.30 mm CGI sheet, Ramp, ferro-cement work
Gender	Partition, Two no of door, secured toilet
Disability/Age	Staircase/ramp (Railing for older people)

PRE-CRISIS BASELINE SHELTER DATA

- The key baseline required for the shelter cluster is available on the HCTT website in excel format.
- The data on land ownership which is key complex issue facing the shelter cluster is difficult to find.

Baseline Indicator	Notes	Location
Disaggregated demographic data	2011 Census data, available in excel on HCTT web platform. Disaggregated to Union level.	JNA Baselines
Type of housing	2011 Census data, available in excel on HCTT web platform. Disaggregated to Union level.	JNA Baselines
Land Ownership	Disaggregated to Division level in the HIES. The JNA is in discussion with the cluster and the information management working group about where and how to access this data.	n/a

IMPACT OF HAOR FLOODS

- There are a limited and insufficient number of flood shelters in the Haor area (most that do exist have been built by Care or by the Government) ([Haor Basin JNA 2012](#)).
- The capacity of these shelters is generally sufficient to hold 10-15 families in each. They are inaccessible for most of the Haor residents because they are located considerable distance from where they live ([Haor Basin JNA 2012](#)).
- In case of major inundations, most families temporarily migrate to nearby schools often staying for several weeks. They usually face severe food shortages and serious issues related to WaSH ([Haor Basin JNA 2012](#)).
- The flash flooding season begins before the monsoon, therefore people who experience damage to their houses during this time are exposed during the monsoon season unless repairs can be managed quickly.
- In 2012, it was estimated 3,000 shelters were destroyed or partially destroyed as a result of the flash flooding ([Haor Basin JNA 2012](#)).

LESSONS LEARNT

No shelter lessons learnt documents directly related to Haor basin flooding were found during this review.

KEY INFORMATION GAPS

- Understanding on Haor appropriate shelter responses.
- Updated situation of Haor flood shelters.

WASH

WASH KEY CHARACTERISITCS

- There are no systematic mechanisms for water quality monitoring and surveillance in Bangladesh ([UNICEF 2009a](#)).
- There are greatly varying figures on sanitation coverage due to different terminology for improved sanitation ([UNICEF 2009a](#)).
- The National Sanitation Strategy aims to have 100% of the population with access to sanitary latrines by 2015. Currently, 60% of the population has latrines, 32% hygienic and 25% unhygienic ([DPHE](#)).

Bangladesh Sanitation Definitions (MISC 2009)	
Hygienic sanitation facilities – GoB	Improved sanitation facilities - WHO/UNICEF JMP
Facilities that are individual or shared by maximum of two households	Individual facilities
Flush or pour-flush toilet/latrine to: <ul style="list-style-type: none"> ▪ Piped sewer ▪ Septic tank 	Pit latrine with a slab and water seal
Pit latrine with a slab and water seal	Pit latrine with slab and lid, no water seal
Pit latrine with slab and lid, no water seal	Pit latrine with a slab and flap, no water seal
Pit latrine with a slab and flap, no water seal	Pit latrine with a slab but no lid nor water seal
VIP latrine	VIP latrine
Composting latrine	Composting latrine

WASH COORDINATION

- At the national level, the Local Government Division of the Ministry of Local Government, Rural Development and Cooperatives is responsible for the overall development of the Water Supply and Sanitation (WSS) sector.
- The Department for Public Health Engineering (DPHE) is responsible for implementation of GoB WSS projects.
- The DPHE is represented down to the Upazila level. At the Union level, there is a Union WASH Committee.
- The WASH cluster for preparedness is functioning and is coordinated by UNICEF's WASH department and co-coordinated the DPHE.
- Accountability is to the national cluster and no message or action should be taken on behalf of the cluster without discussion with the national cluster.
- The WASH cluster website is currently under construction.

CONTINGENCY PLANNING

- The WASH cluster has developed a Contingency Plan for 2014, with potential caseloads included.
- There is an up-to-date list of prepositioned supplies, government, UNICEF, and cluster members in the plan.

PRE-CRISIS DATA

- The WASH cluster has selected the following Indicators as the key WASH baseline ([WASH cluster 2014](#)):

Indicator	Notes
Number of water points	Government only
Arsenic contamination	
Sanitation coverage including	Unimproved, improved, shared and open defecation
Number of primary schools	Government, registered non-government and community schools
Number of flood shelters	Total number, capacity and other use
Number of toilets in shelters	Separate male/female, which floor and water supply
Water supply in shelters	

- The datasets used for the pre-crisis data are:

- The Multiple Indicator Cluster Survey ([MISC 2009](#))
- The Bangladesh Health and Demographic Survey ([DHS 2011](#))
- World Bank: Hard-to-Reach Areas ([Hard-to-Reach 2011](#)).
- As the Haor basin is one of the surveillance areas of the FSNP, there are more detailed hygiene baselines available. However these need to be extracted from reports in order to make them easily accessible and useful during a flood in the Haor.

LIMITS OF PRE-CRISIS DATA

- The indicators do not provide information on whether WASH facilities within flood shelters are currently functioning or not functioning.
- National level surveys are not annual, therefore at times data is out of date.
- Disaster responses in certain areas can dramatically alter coverage, which is not reflected in this data

IMPACT OF HAOR FLOODING ON WASH

- WASH findings from the 2012 JNA included ([Haor Basin JNA 2012](#)):
 - Access to safe and sanitary latrine facilities is worsened by floods, as most latrines used during the monsoon season, are *hanging latrines* located at the edge of the islands and opening into the water. These are likely to be impacted by the increasing water level and consequent land erosion.
 - Insufficient or damaged sanitation facilities disproportionately affect women and girls, who are likely to face security and privacy issues when bathing and using latrines.
 - Flooding of latrines causing increased excreta in open water may lead to an increase in skin diseases and water borne diseases. This can be particularly dangerous for children <5. This is especially relevant in islands with little or no clean water access where people rely on open water sources (flood water) for drinking, cooking, and bathing purposes.
 - Past experience indicates that the risks of water borne diseases increase when the flood levels recede around the islands/*hati*.

LESSONS LEARNT

- No WASH lessons learnt documents directly related to Haor basin were found during this review.

GAPS IN INFORMATION

- Lessons learnt from WASH interventions.
- Analysis of the pre-existing WASH vulnerabilities.