

Bangladesh Emergency Response Preparedness Plan

2014



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List of Abbreviations

CDMP	Comprehensive Disaster Management Plan
CRP	Contingency Response Planning
CWC	Communicating with Communities
DDM	Department for Disaster Management
DER	Disaster and Emergency Response
DGHS	Director General of Health Services
DRR	Disaster Risk Reduction
DMC	Disaster Management Council
ERM	Emergency Response Management
ERP	Emergency Response Preparedness
FAO	Food and Agricultural Organization
FFWC	Bangladesh Flood Forecast and Warning Center
FSCD	Fire Services and Civil Defence Directorate
HA	UN Humanitarian Advisor
HCTT	Humanitarian Coordination Task Team
IDP	Internally Displaced People
IFRC	International Federation of Red Cross and Red Crescent Societies
IOM	International Organization for Migration
IASC	Inter-Agency Standing Committee
IFRC	International Federation of Red Cross and Red Crescent
IHR	International Health Regulation
IMWG	Information Management Working Group
INGOs	International Non-Governmental Organizations
JNA	Joint Needs Assessment
LCG	Local Consultative Group
LGA	Local Government Agencies
LGD	Local Government Division
MPA	Minimum Preparedness Actions
NGOs	Non-Governmental Organizations
PHEICs	Public Health Emergency of International Concern
PRP	Preliminary Response Plan
SOD	Standing Orders on Disasters
SOP	Standard Operating Procedures
SRP	Strategic Response Plan
TRM	Tidal River Management
UNDP	United Nations Development Programme
UN HABITAT	United Nations agency for human settlements
UNHCR	UN High Commissioner for Refugees
UNICEF	United Nations Children's Fund
UNRC	United Nations Resident Coordinator
UNOCHA	United Nations Office for the Coordination of Humanitarian Affairs
WFP	World Food Programme
WHO (DERG)	World Health Organization (Disaster Emergency Response Group)

1. Introduction

1.1 Background

The 2014 Bangladesh Response Preparedness Plan is developed on the basis of the IASC Inter-Agency Emergency Response Preparedness (ERP) guidance issued in August 2012. The primary aim of the ERP approach is to optimise the speed and volume of critical assistance delivered immediately after the onset of a humanitarian emergency. It provides practical guidance to assist IASC members, other UN agencies and NGOs in preparing to respond to potential emergencies with appropriate humanitarian assistance and protection. It focuses on practical and concrete preparedness and response actions and responsibilities and it seeks to harmonize the overall coordination in regard to emergency preparedness and response at inter-agency level. The ERP approach has three inter-related levels of action:

- a) Inter-Agency Response Preparedness Planning and Standard Operating Procedures;
- b) Cluster/Sector Response Preparedness Planning and Standard Operating Procedures;
- c) Organization Specific Response Preparedness Planning.

The three levels of preparedness are linked with each other and follow the same structural approach, with the Cluster/Sector Response Planning linked to the Inter-Agency Response Planning. In this way, the new ERP methodology strengthens coordination not only at the inter-agency level but also among clusters/sectors avoiding fragmentation and ensuring coherence.

1. Context Analysis and Risk Profile

2.1 Context Analysis

Bangladesh is a country vulnerable to a number of natural and man-made disasters. While cyclones and floods may pose the greatest risk to Bangladesh at national level, it has been identified that the North Eastern and South Eastern regions of Bangladesh are vulnerable to earthquake¹. Bangladesh ranks 5th in the World Risk Index 2012, which shows that the country bears the combination of extreme exposure and high vulnerability.

WorldRiskIndex overview

Rank	Country	WorldRiskIndex	Exposure	Vulnerability	Susceptibility	Lack of coping capacities	Lack of adaptive capacities
1.	Vanuatu	36.31 %	63.66 %	57.04 %	34.17 %	81.19 %	55.78 %
2.	Tonga	28.62 %	55.27 %	51.78 %	27.91 %	81.31 %	46.11 %
3.	Philippines	27.98 %	52.46 %	53.35 %	33.92 %	83.09 %	43.03 %
4.	Guatemala	20.75 %	36.30 %	57.16 %	37.28 %	81.18 %	53.04 %
5.	Bangladesh	20.22 %	31.70 %	63.78 %	43.47 %	86.84 %	61.03 %
6.	Solomon Islands	18.15 %	29.98 %	60.55 %	43.96 %	84.26 %	53.42 %
7.	Costa Rica	17.38 %	42.61 %	40.80 %	21.59 %	65.63 %	35.19 %
8.	Cambodia	17.17 %	27.65 %	62.07 %	45.93 %	86.68 %	53.61 %
9.	Timor-Leste	17.13 %	25.73 %	66.59 %	52.88 %	87.58 %	59.32 %
10.	El Salvador	16.89 %	32.60 %	51.82 %	28.92 %	76.71 %	49.82 %

Figure 1. World Risk Overview (2012)

¹ Bangladesh Disaster Risk Management Profile- 2006.

Flooding

Floods by nature are complex events caused by a range of human vulnerabilities, inappropriate development planning and climate variability. There are different ways of classifying and categorizing floods along geographic and geophysical characteristics. In Bangladesh, floods are most commonly classified as:

- **Flash floods**, which affect both the hilly areas of the south east and can cause landslides and the Haor Basin area of the north east;
- **River flooding**, also known as monsoon flooding, an annual event which can be extreme some years;
- **Water logging**, is the name given to the phenomenon in the southwest of Bangladesh where river flooding is unable drain and causes prolonged flooding.

Widespread and prolonged flooding can lead the population to become extremely vulnerable and can bring devastation to crops, livestock, and property as well as disrupt livelihoods and cause loss of life and livelihoods options.

Cyclones

The coastal belt of Bangladesh, which comprises 13 districts, is at risk from cyclones. There are three distinct geographies of the coastal belt:

- Southwest region near the Sundarban mangrove forest;
- Active delta area of the central south region;
- Southeast hilly areas region.

The coastal zone accounts for 32 per cent of the geographic area of the country and 28 per cent of the population (Paul 2009). In the last 53 years, 24 cyclones have hit Bangladesh. Since 1995, there have been five severe cyclones, ranked in a category range between 3 and 5. There are two cyclone seasons, one from April-May (pre-monsoon), and the other from October-November. Historical records suggest that a post-monsoon cyclone is twice as likely as a pre-monsoon cyclone. Increases in ocean surface temperature and rises in sea levels as a result of climate change are predicted to increase the intensity of cyclonic storms. Storm surges are expected to cover an additional 15 per cent of the land, with a greater inundation level.

Earthquakes

Geographically, Bangladesh is located close to the boundary of two active plates: the Indian plate in the west and the Eurasian plate in the east and north. In the past, there were several earthquakes that caused severe damages to life and properties. However, it seems that Bangladesh has not experienced any large earthquake since the 20th century, for about 100 years. The 1918 earthquake is thought not to be a characteristic one, since the magnitude was small for the plate boundary fault. This may mean that Bangladesh has a high risk of a large earthquake occurrence in the near future. Several major active faults, e.g. the plate boundary fault (the northern extension of the subduction fault) and the Dauki Fault, are inferred in Bangladesh. These faults are likely to generate large earthquakes over M 8. As per the seismic macro-zonation studies, urban areas such as Chittagong, Sylhet, Dhaka, Rangpur, Bogra, Mymensingh, Comilla, Rajshahi are located within possible seismic active zones.

Social Instability

The year 2013 was marked by political unrest in the country that resulted in strikes/hartal, blockades and continued violence. There were 75.5 days of countrywide strikes and blockades, with the highest frequency recorded in the months of November and December 2013, during the run up to the general elections held on 05 January 2014. The prolonged and increasingly violent hartal and blockades had negative impact on

different sectors of the economy and the population and raised serious concern amongst humanitarian and development partners. The general elections held on 5 January 2014 were the bloodiest in Bangladesh's history and resulted in approximately 408 politically-related deaths and 81 non-political deaths. During the actual poll, there was a low turnout due to the fact that the main opposition party, the Bangladesh Nationalist Party (BNP), boycotted the process. The European Community reports suggest a 39.8 per cent turnout, while other estimates indicate that between 6.5 and 17 million voted, out of 92 million people registered.

Industrial Hazards

Rapid economic growth and industrialization in Bangladesh have posed a huge environmental cost in the country. Hazardous wastes from industrial process, medical waste, e-wastes and Bangladesh's thriving scrap recycling business are polluting the air, soils and water ways. The inadequate management of the country's hazardous waste has recently gained significant attention.

The country has already lost up to 90 per cent of its original wild life habitat to agriculture, infrastructure, and deforestation. Four in five city dwellers lack access to safe drinking water within 1000 meters of their house². Both public and private sectors have initiated action to tackle the issue of hazardous waste management. However, public awareness is still limited, even amongst the educated social strata. Electronic waste (e-waste) is a new emerging threat, and awareness in this domain is especially low. There is the need to undertake an assessment focused on the problems and possible solutions regarding e-waste, including the issue of illegal dumping by foreign ships into the territorial seas of Bangladesh. Environmental degradation in Dhaka city is pervasive, accelerating, and unabated, putting at risk people's health and livelihood and hampering the economic growth needed to reduce the level of poverty of the country.

A comparison of data between 1994 and 2007 on 22 hazardous waste generated by industries shows that the number of hazardous waste units have increased rapidly. The most incremental increases are recorded in pesticides (more than six times), textiles including dyeing and printing (more than four times), paints and varnishes (more than three times), plastics (more than three times), industrial chemicals (nearly doubled) and pharmaceuticals (82 per cent).

Risk of Endemics / Pandemics

Endemic: An endemic disease is one that is usually present in a given geographical area or population group at relatively high prevalence and incidence rates, in comparison with other areas or populations.

Epidemic: An epidemic is the occurrence or a sudden severe outbreak in a community or region of a number of cases of a disease that is unusually large or unexpected for the given place and time.

Pandemic: A pandemic occurs when an epidemic becomes very widespread and affects a whole region, a continent, or the entire world.

Control of communicable diseases continues to remain a public-health priority in Bangladesh. Communicable diseases of public health importance include: avian influenza (H5N1, H7N9, H9N2); MERS-CoV, malaria, kala-azar; infestation with filarial and other worms; tuberculosis; HIV/AIDS and Sexually Transmitted Diseases (STDs); emerging zoonotic diseases (like Nipah); anthrax, food and waterborne diseases (like hepatitis) due to viruses; diarrheal disorders; enteric fever and leptospirosis; arthropod borne diseases (like dengue and chikungunya).

Bangladesh is a signatory of the 2005 International Health Regulation (IHR) and made good progress in capacity building nationwide following the 2005 IHR 5. Progress was made particularly in the field of

² <http://www.sos-arsenic.net/english/environment/healthhazards.html>

surveillance, management of potential PHEICs (Public Health Emergency of International Concern) and laboratory strengthening.

The pandemic situation is an emergency situation and the impact in terms of morbidity and mortality, social and economic consequences might be significant. To meet the emergency situation and reduce its impact, pandemic contingency plans have been developed. The plans include mechanism for developing surge capacity to manage the patients, to sustain essential services and reduce the social impact. Bangladesh is always at risk of pandemics due to external risk factors such as extended porous border (with significant cross border movements of people and a lack of quarantine stations); imports of avian species, particularly breeder chickens; low level awareness of transmission of diseases among the population. Bangladesh has a strong surveillance system up to the grass-root level, which has the capacity to combat any upcoming endemic, epidemic and pandemic diseases. Bangladesh has a number of target-oriented programmes on malaria, kala-azar, filarial and intestinal worms, avian and pandemic influenza and has achieved significant progress in these domains.

2.2 Risk Profile

In order to identify the hazards most relevant for Bangladesh, a risk analysis was conducted with government officials and members of the Humanitarian Coordination Task Team (HCTT). The risk analysis focused on the following five threat categories which have potential humanitarian consequences:

1. Natural hazards, either hydro-meteorological (floods, landslides, storms, droughts) or geophysical (earthquake, volcanic eruption, tsunami);
2. Armed conflict and civil unrest;
3. Epidemics and pandemics;
4. Drastic changes in the socio-economic environment;
5. Environmental hazards (industrial accidents, severe pollution).

Once the hazards for Bangladesh were identified, they were ranked twice on a scale of 1 to 5; once to reflect their perceived impact and the second time for likelihood of occurrence. Multiplying these two variables gave a value indicating the gravity — low, medium or high — of a given risk.

The outcome of the risk analysis was a commonly agreed inter-agency Country Risk Profile for Bangladesh (Figure 2). On the basis of this classification of risks, seven main hazards were ranked as having a high gravity/seriousness which resulted from the combination of perceived impact and likelihood. Out of these risks, Earthquake, Flooding (River Flooding/Waterlogging) and Cyclone were prioritized by HCTT members for the development of Contingency Response Plans (CRP) due to the high vulnerability, low preparedness level and limited local capacities and resources related to these hazards.

A set of Minimum Preparedness Actions (MPA), that is a list of practical preparedness actions, is also identified and implemented as part of this response preparedness plan in order to mainstream a minimum level of emergency preparedness for the humanitarian/development community in country. The MPAs are based on a multi-hazard approach. While they do take into account the risk profile agreed for Bangladesh, they are not risk-specific. The actions focus on continuity of operations of the HCTT and on cross-cutting issues necessary to enable the humanitarian community to state its capacity and the value it can add to national response. The process ensures that roles and responsibilities, effective coordination mechanisms at inter-agency level and between clusters/sectors are clearly defined.

Figure 2. Country Risk Profile: Bangladesh

Impact	5. Critical			Earthquake		Food Contamination*
	4. Severe				River/Monsoon flooding Waterlogging Cyclone	Industrial Hazards*
	3. Moderate			Social Instability	Flash floods Drought Cold wave	Saline Intrusion
	2. Minor				Tornado	Epidemics
	1. Negligible					
		1. Very Unlikely	2. Unlikely	3. Moderately Likely	4. Likely	5. Very likely
Likelihood						
Likelihood : 1= Very unlikely (up to 20% chance of the event happening) 2 = Unlikely (20-40%) 3 = Moderately likely (40-60%) 4 = Likely (60-80%) 5 = Very likely (over 80%)				Impact : 1 = Negligible (minimal impact on overall population) 2 = Minor (minor impact on overall population) 3 = Moderate (moderate impact on overall population) 4 = Severe (severe impact on overall population) 5 = Critical (major impact on overall population)		

*Hazards to be cross-checked and referenced with official data and statistics

HCTT members discussed risk monitoring mechanisms that should be applied for all the hazards identified in the risk analysis. The Bangladesh Meteorological Department issues early warnings in relation to some of the risks identified. Monitoring these early warning mechanisms and tools will enable the HCTT to decide whether the hazard has reached a threshold that requires the activation of the related Contingency Response Plan (Figure 3.)

Figure 3. Bangladesh Meteorological Department: Early Warning

Warnings for		Issued Before				
		As Needed	12 Hrs	24 Hrs	18 Hrs	10 Hrs
Cyclone	Alert	X				
	Warnings			X		
	Danger				X	
	Great Danger					X
Storm Surge						X
Inland River port		X				
Thunderstorms / Squalls		X				

3. Overall Management and Coordination

3.1 Disaster Management Framework

Disasters Management in Bangladesh 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. A list of additional bodies which support disaster management in country is herewith enclosed. It should be noted that many of these institutions are only activated when an emergency is declared by the government (SOD 2010):

- **The National Disaster Management Council** is headed by the Honourable Prime Minister and is responsible for formulating new policy and delivering directives on all concerns.
- **The Inter-Ministerial Disaster Management Coordination Committee** 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 for Disaster Risk Reduction** coordinates and provides necessary facilitation to relevant stakeholders.
- **The Focal Point Operation Coordination Group of Disaster Management** is led 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 and coordinates the activities of concerned NGOs.
- **The Committee for Speedy Dissemination of Disaster Related Warning/Signals** is headed by the DG DDM to examine, ensure and find out the ways and means for the speedy dissemination of warning/signals among the people.

3.2 Disaster Management Regulatory Framework

In 2012, a Disaster Management Act was passed, creating the framework for Disaster Risk Reduction (DRR) and Emergency Response Management (ERM) in Bangladesh. 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 ERM. The guidelines for government at all levels (Best Practice Models) are available to guide the Government's DRR and ERM.

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).

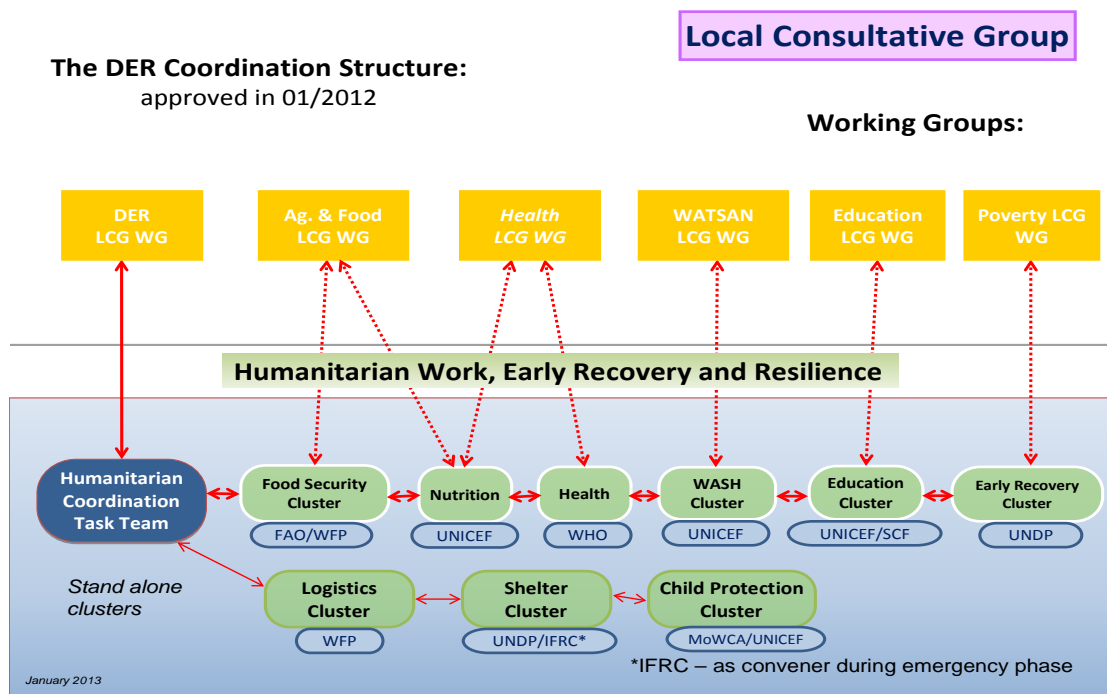
3.3 Disaster Management Coordination Structures

The Local Consultative Group Mechanism (LCG) is one of the key structures through which the Government engages in dialogue with development partners³. There are 18 thematic LCG Working Groups (in addition to the LCG Plenary) including the Disaster and Emergency Response (DER) which is co-chaired by the Secretary of Disaster Management and the UN Resident Coordinator.

³ <http://www.lcgbangladesh.org/HCTT.php>.

- 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.

Figure 4. Coordination Structure in Bangladesh



3.4 Humanitarian Coordination Task Team

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. The HCTT will act as an advisory group to the DER providing advice, taking forward agreed actions on behalf of, and feeding back to, the wider LCG DER group. The HCTT also acts as coordination platform of the thematic clusters. 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 and IFRC. In Bangladesh, clusters were formed, with the Government’s approval, to engage on disaster preparedness⁴. Currently, the clusters that were formed are: WASH, food security, early recovery, health, nutrition, education, logistics, child protection and shelter. Inter-cluster coordination takes place through the HCTT. In addition, the following working groups that support coordination were established: needs assessment, communications with communities, and information management. Clusters are also designed to operate as sub-sets of the relevant thematic LCGs. The INGO Forum is a voluntary group that includes all the INGOs operating in Bangladesh. The INGO Emergency Sub-Committee consists of senior INGO staff that has a humanitarian operational capacity.

KEY FUNCTIONS OF THE HCTT	
As an advisory body to the LCG/DER	Provide policy advisory on humanitarian matters to the broader disaster management and development policy forums.
	Facilitate decision making at the central level particularly in cases of slow onset, localized and/or small to medium scale disaster events.
	Monitor and feed information to the DER leaders on the status of humanitarian preparedness, response and recovery as well as lessons learned from humanitarian coordination.
As a coordination platform of humanitarian thematic clusters	Formulate and formally adopt minimum requirements for the clusters’ preparedness, response and recovery.
	Provide secretarial and common services for the inter and cross-clusters matters.
	Facilitate the coordination of clusters’ activity and/or operation planning, implementation, and monitoring.
	Liaison and brokerage of technical guidance and support among clusters access and, as appropriate, the regional and global sources.
	Facilitate the adoption of, and contingency planning for, the most critical humanitarian response preparedness tasks particularly involving the coordination of government and national / international capacities.
	Act as an inter-cluster coordination meeting (ICCM) in the immediate onset of humanitarian response when requested by DER Chair/Co-chair.

⁴ This does not imply formal UN Cluster activation.

4. Minimum Preparedness Actions (MPA)

The Minimum Preparedness Actions (MPA) represent a set of core preparedness activities that need to be undertaken to achieve positive outcomes in the initial emergency response phase. The MPAs focus on practical actions to improve emergency response, accountability and predictability. MPAs are based on a multi-hazard approach and are not risk specific. MPAs ensure that roles and responsibilities and effective coordination are defined at inter-agency and sector levels.

	Completed		Ongoing		Not started
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4.1 Inter-Agency MPAs

INTER-AGENCY MPAs					
Coordination	Status			Due date	Lead
Maintain an inclusive Humanitarian Coordination Task Team (HCTT) with the participation of NGOs and Red Cross/Crescent Movement.				n/a	HCTT
Ensure inter-agency coordination with regular meetings.				n/a	HCTT
Agree on a coordination structure for response with HCTT members including clusters/sectors structures with respective responsibilities during an emergency.				Dec.2014	HCTT
Ensure that humanitarian agencies are aware of the Government coordination structures for emergency response.					Humanitarian Advisor (HA)
Share with DDM possible resources available for emergency response (with the international community in country or additional resources that can be requested) and mechanisms to access them, including requesting/accepting humanitarian assistance					HA
Ensure that clear procedures/protocols are in place between the HCTT and the Government for requesting/accepting international assistance.				Q1 2015	HCTT
Ensure that requirements such as custom clearances, visas, and access to affected populations are established and clear to all relevant stakeholders.				Dec.2014	Logs Cluster
Establish a proper and functioning communication system with the Government to ensure the timely flow of information before and during an emergency – including at the national and district level.				Dec.2014	HCTT / CDMP
Compile a list of government counterparts (technical and political) at the national and local level.				Dec.2014	Every cluster lead
Identify the Government's intent to use foreign military assets in emergencies and explore areas of cooperation/coordination. Compile a list with contact details of the relevant FP for civil-military				Dec.2014	Logs Cluster

coordination in the Government.					
Decide on a primary and alternative location where the HCTT can meet during emergencies.				Dec. 2014	HCTT
Establish a humanitarian Early Warning System (EWS) with clear early warning indicators and triggers for Contingency Response Planning and early action.				Dec. 2014	HCTT
Contingency Plan and Response Strategy	Status			Due date	Lead
Ensure that contingency response plans related to the identified hazards for Bangladesh are developed and used as the basis for sectors response plans.					HCTT
Identify HCTT focal points in charge of the finalization of the Bangladesh Response Preparedness Plan.					HA
Develop sectorial response plans for the identified hazards (floods, cyclones and earthquakes).				Nov. 2014	Clusters leads
Conduct a simulation exercise to test the Bangladesh Response Preparedness Plan.				January 2015	HCTT / OCHA
Assessments	Status			Due date	Lead
Agree on a common assessment methodology outlining responsibilities for conducting a preliminary scenario definition to gain a broad overview of the situation.					HCTT/JNA
Review available assessment tools at inter-agency level, including governmental ones, for a more in-depth assessment following the preliminary assessment.					HCTT/JNA
Develop/revise a multi-cluster needs assessment tool, with clear roles and responsibilities, validate it with government and partners, and train members in conducting this assessment.					HCTT/JNA
Create a roster of candidates to be trained and easily deployed for needs assessments in case of emergencies.					HCTT/JNA
Ensure that necessary equipment for conducting the assessments are available (calculators, GPS, etc.).					HCTT/JNA
Information Management	Status			Due date	Lead
Update Quarterly the Common Operational Datasets (COD) and Fundamental Operational Datasets (FOD).					IMWG
Maintain and disseminate FODs related to development or preparedness activities, including a contact list of humanitarian/development actors in Bangladesh, a schedule of meetings, "Who does What Where When" (4W) products, a survey of surveys, standard place names and place codes (P-codes), baseline data, as well as thematic and base maps.					IMWG
Maintain emergency related FODs and disseminate it, primarily in HCTT Website – it should include, among other, Sector 3W, Contact Lists, at least on a quarterly basis.					IMWG
Improve humanitarian access information gathering and provide regular analysis.				Dec. 2014	IMWG
Provide orientation to sectors and clusters to gather emergency related data, data analysis and how to contribute to data standardization and sharing.				Dec. 2014	IMWG
Ensure that each cluster/sector has a designated and active IM Focal point engaged in the IMWG and its relevant humanitarian-focused activities.				Dec. 2014	IMWG/clusters leads

Invite key government agencies to participate in IMWG.				
Inform the IMWG about the cluster/sector planned data gathering activities, envisioned approaches and planned data gathering forms.				Dec. 2014 Clusters leads / IM focal point
Reporting	Status		Due date	Lead
Have pre-formulated report templates readily available to allow joint situation reporting.				HA / UNCAG
Ensure that reporting focal points have been identified in cluster/sector lead agencies and other partners.				Dec. 2014 Clusters leads
Provide orientation and guidance for emergency reporting focal points/sector and clusters, on joint situation reporting.				UNCAG
Agree on basic structures and timeline to allow joint situation reporting (incl. role of clusters).				Dec. 2014 UNCAG
Public Information	Status		Due date	Lead
Put in place a protocol on how media issues should be handled at country level, and identify a spokesperson.				Q1 2015 UNCAG
Conduct training for RC/HC and cluster lead on principles of crisis communications and on the development of key messages, and develop a media and communication strategy for the country.				Q1 2015 UNCAG
Ensure that lists of national and international media and media contacts in the country are up-to-date.				UNCAG
Communication with Affected Communities	Status		Due date	Lead
Develop and agree on contextualized messages available for use by all responders in emergency situations.				Dec. 2014 CwC
Support coordination with communications infrastructure/collaboration to ensure that the role of government, non-governmental humanitarian responders, media and private sector actors in an emergency is clear.				Dec. 2014 CwC
Awareness-raising and skill-building in communication, technology use and two-way communication processes.				Dec. 2014 CwC

Resource Mobilization	Status			Due date	Lead
Ensure that partners are familiar with the procedures on ERF, CERF, CHS, Preliminary Response Plan (Flash Appeal), Strategic Response Plan and share this information with key partners.	Green				HA
Compile a list of contacts for in-country donors and technical focal points to be contacted.		Yellow		Dec. 2014	IMWG
Maintain information on stock-pilings at sector/cluster level.		Yellow		Dec. 2014	IIMWG
Identify human resources surge needs by sectors in case of emergency, available surge mechanisms at regional or global level (stand-by partnerships, internal deployment, external recruitment, others) and mechanisms for their activation.			Red	Q1 2015	Every cluster lead
Training	Status			Due date	Lead
Identify needs and opportunities for training and capacity building for HCTT members and government counterparts on emergency preparedness and response.		Yellow		Dec. 2014	HCTT
Ensure (through trainings and awareness workshops) that members of humanitarian/development organizations are familiar with the cluster approach and are aware of cross-cutting issues such as GBSV, HIV/AIDS, protection, etc. in emergency settings.	Green				HA
Conduct training on humanitarian principles, roles and responsibilities, humanitarian architecture and available international response tools for the government, the military and civil society, including local NGOs at national and district levels.		Yellow		2015	HA
Conduct civil-military coordination trainings and workshops according to the civil-military coordination strategy and action plan developed for Bangladesh.		Yellow		2015	OCHA / WFP
Conduct simulation exercises for the humanitarian team and government, if applicable and feasible. The response processes to be tested should be based on specific needs of the HCTT.		Yellow		January 2015	HCTT/OCHA

4.1 Sector specific MPAs

Sector Specific MPAs				
Food Security	Status		Due date	Lead
Update and share regularly contact list of sector participants.	Green			All members
Identify focal points for joint assessments with FSN expertise.	Green			All members
Agree minimum assistance package, including ration and cash value.	Green			All members
Set up/maintain beneficiary feedback (and complaint handling) mechanisms.	Green			All members
Sub-national cluster coordination mechanism established (cyclone).	Green			All members
Sub-national cluster coordination mechanism established (flood).		Yellow	Q1 2015	FSC CC
Contingency plans developed (Flood-Cyclone).	Green			
SECTOR SPECIFIC MPA				
WASH	Status		Due date	Lead
Agree on WASH district leads (might be the same as HRF Provincial leads or different), develop and share contact list and communication tree.	Green			UNICEF
Identify focal points for joint assessments with WASH expertise.		Yellow	Dec. 2014	UNICEF
Prepare and print additional 2-page sanitation hygiene leaflets for distribution (check appropriate language and pictorials).	Green			UNICEF
Develop/print/translate summary of WASH standards and disseminate to PDRD and district leads for assessments.	Green			UNICEF
Verify existing contingency stocks and if necessary preposition additional stocks in likely affected areas.	Green			Cluster members
Agree minimum assistance package, in line with WASH standards – safe water, hygiene promotion and information.	Green			UNICEF
Based on lessons learned from previous responses provide capacity building/training to partners on identified gaps.		Yellow	Dec.2014	UNICEF / Cluster members
SECTOR SPECIFIC MPA				
SHELTER	Status		Due date	Lead
Update and share regularly contact list of sector participants.	Green			Shelter Cluster IM
Assess shelter contingency stock available in country; identify supply chain for rapid procurement and		Yellow	Nov. 2014	Shelter Cluster

delivery.				
Identify focal points for joint assessments with shelter expertise (available for coastal areas).			Nov. 2014	IFRC / UNDP
Finalize and endorse shelter guidelines and standards, in line with Sphere standards.			Nov. 2014	IFRC / UNDP
SECTOR SPECIFIC MPA				
HEALTH	Status		Due date	Lead
Update and share regularly contact list of sector participants.				DGHS / WHO
Identify a sector co-lead.				DGHS / WHO
Update mapping of NGOs engaged in health response during emergencies.			Dec. 2014	DGHS / WHO
Identify focal points for joint assessments with health expertise.				DGHS / WHO
Conduct (preparedness) gap analysis, review disease surveillance mechanism and outbreak investigation mechanism, monitor diseases trends, review stockpile levels.			Dec. 2014	DGHS / WHO
Quantify resources available for emergency response (financial resources, human resources, medicines and equipment).			Dec. 2014	DGHS / WHO
SECTOR SPECIFIC MPA				
EDUCATION	Status		Due date	Lead
Update and share regularly contact list of sector participants.				
Identify focal points for joint assessments with education expertise.			Feb. 2015	
Prepare emergency preparedness and response plan.				
Agree minimum assistance package, in line with INEE standards and National Guidelines on Education in Emergencies.			March 2015	
Training cluster focal points on Education cluster preparedness and response plan.			June 2015	
SECTOR SPECIFIC MPA				
LOGISTICS	Status		Due date	Lead
Update and share regularly contact list of sector participants.			June 2015	WFP
Identify focal points for joint assessments with logistics expertise.			June 2015	WFP
Sector stockpiles available in country identified, updated at least twice per year and shared with partners, and supply chain identified for rapid procurement and delivery.			June 2015	WFP
Capacity building/training to partners on identified gaps provided.			June 2015	WFP
Prepare a list and mapping of geographical resources / facilities (regional availability).			Nov.2014	All members
Finalise the one-stop-shop / fast tracking of logistics / entry point of humanitarian cargo in-country.			Dec. 2014	WFP
Site plan for open space for temporary shelter for humanitarian workers.			Dec. 2014	Log Cluster
SECTOR SPECIFIC MPA				
EARLY RECOVERY	Status		Due date	Lead
Update and share regularly contact list of sector participants.				
Identify focal points for joint assessments with early recovery expertise (for coastal regions only).			Dec. 2014	Cluster members

SECTOR SPECIFIC MPA				
NUTRITION				
	Status		Due date	Lead
Update and share regularly contact list of sector participants.	Green			IM Focal Point
Identify focal points for joint assessments with nutrition expertise in vulnerable districts.	Green			Cluster Coordinator
Agree minimum assistance package, including ration and cash value.	Green			Cluster Coordinator
Set up/maintain beneficiary feedback (and complaint handling) mechanisms.		Yellow	Dec. 2014	
SECTOR SPECIFIC MPA				
CHILD PROTECTION				
	Status		Due date	Lead
Update and share regularly contact list of sector participants.	Green			
Identify focal points for joint assessments with protection expertise in vulnerable districts.		Yellow	Nov. 2014	MoWCA – UNICEF
Identify sector co-lead.	Green			
Mapping of NGOs engaging in Child Protection Activities.	Green			
Rolling out the review of previous gap analysis (including GBV).		Yellow	Nov. 2014	MoWCA – UNICEF
Updating of mapping of resources.		Yellow	Nov. 2014	MoWCA – UNICEF
Develop a business continuity plan.		Yellow	Dec. 2014	MoWCA – UNICEF

5. Standard Operating Procedures

The Standard Operating Procedures (SOP) will guide the HCTT in its initial emergency response when rapid decision-making is required. The SOP includes actions at the Early Warning Phase and actions for the Response Phase.

TIMELINE	Early Warning Phase (immediately upon receipt of early warning information regarding an imminent threat)	Responsibility
ACTIONS TO TAKE WITHIN THE FIRST 24 HOURS	<ul style="list-style-type: none"> • Contact the UN Humanitarian Affairs Advisor and other key partners to inform of the threat and share available details. Information to be cross-checked at field level by local HCTT or similar forum (including from local sources, local authorities, private sector, etc.). 	<ul style="list-style-type: none"> • Organisation who received the warning; • Clusters to follow up and start collecting and sharing relevant information.
	<ul style="list-style-type: none"> • Alert the RC of the imminent threat. 	<ul style="list-style-type: none"> • UN-Humanitarian Affairs Advisor
	<ul style="list-style-type: none"> • Contact the DDM at working level to inform of/verify the threat and obtain additional information where available. 	<ul style="list-style-type: none"> • RC/UN-Humanitarian Affairs Advisor
	<ul style="list-style-type: none"> • Alert sector/cluster leads and heads of working groups (i.e. JNA, CwC, IM). 	<ul style="list-style-type: none"> • RC/UN-Humanitarian Affairs Advisor
	<ul style="list-style-type: none"> • Issue Flash Update by e-mail to HCTT and sector/cluster leads, donor representatives, others. 	<ul style="list-style-type: none"> • RC/UN-Humanitarian Affairs Advisor
	<ul style="list-style-type: none"> • Inform OCHA Regional Office and Headquarters of potential threat. 	<ul style="list-style-type: none"> • UN-Humanitarian Affairs Advisor
	<ul style="list-style-type: none"> • Inform UNDAC and INSARAG of potential threat, as well as regional response mechanisms. 	<ul style="list-style-type: none"> • RC with support of UN-Humanitarian Affairs Advisor
	<ul style="list-style-type: none"> • Alert UN Communications Group and members to be on standby. 	<ul style="list-style-type: none"> • Office of the RC
	<ul style="list-style-type: none"> • Analyze the possible need for an UNDAC team to be deployed before the disaster. 	<ul style="list-style-type: none"> • RC with support of Humanitarian Affairs Advisor
	<ul style="list-style-type: none"> • Review capacity to respond and share information with RC on available stocks, personnel available for inter-agency assessments, staff deployable for a possible response. 	<ul style="list-style-type: none"> • Humanitarian Affairs Advisor • HCTT
	<ul style="list-style-type: none"> • Gather relevant data and maps. 	<ul style="list-style-type: none"> • IM Working Group
	<ul style="list-style-type: none"> • Sector/cluster to assign/confirm reporting and information management focal points and to proactively share any relevant information on preparedness actions taken. 	<ul style="list-style-type: none"> • cluster lead
	<ul style="list-style-type: none"> • Share CODs/FODs with all humanitarian actors. 	<ul style="list-style-type: none"> • IM Working Group
	<ul style="list-style-type: none"> • Contact the INGO focal point and encourage regular information-sharing between HCTT and local NGOs through an agreed template. 	<ul style="list-style-type: none"> • UN-Humanitarian Affairs Advisor
<ul style="list-style-type: none"> • Identify constraints for accessing potential affected populations. 	<ul style="list-style-type: none"> • HCTT 	

TIMELINE	Response Phase (once threat is confirmed)	Responsible org.
ACTIONS TO TAKE WITHIN THE FIRST 24 HOURS	<ul style="list-style-type: none"> Obtain a brief overview of the scale and scope of the emergency (preliminary scenario) based on available information from national authorities, UN agencies, national and international NGOs, civil society organizations, Red Cross/Crescent Movement, the media, GDACS, Clusters, JNA. 	<ul style="list-style-type: none"> RC / UN-Humanitarian Affairs Advisor
	<ul style="list-style-type: none"> Contact the Government to: <ol style="list-style-type: none"> Review national capacity to deal with the emergency. Clarify its intent to declare a state of emergency. Clarify its intent to request, welcome or decline international assistance: <ul style="list-style-type: none"> If welcomes assistance, outline support options available, request approval for additional humanitarian staff's entry into the country and the need for UNDAC team. If declines, but assistance is nonetheless required, HCTT to increase their capacity to respond. Request logistical assistance for site visits if required. 	<ul style="list-style-type: none"> UNRC
	<ul style="list-style-type: none"> Based on preliminary scenario and the Government's capacity, assess if an international response is warranted. 	<ul style="list-style-type: none"> RC
	<ul style="list-style-type: none"> In case of earthquake or collapse of urban structures, encourage the Government to call for international Search and Rescue assistance, preferably from INSARAG members. 	<ul style="list-style-type: none"> RC
	<ul style="list-style-type: none"> Based on the scenario: <ol style="list-style-type: none"> If additional capacity is required, request additional human resources (surge capacity); If warranted, request deployment of an UNDAC team and other regional mechanisms. 	<ul style="list-style-type: none"> UNRC, with support from UN-Humanitarian Advisor and clusters leads
	<ul style="list-style-type: none"> Activate the relevant contingency response plan. Clusters and Working Groups leads to activate their respective contingency response plans. 	<ul style="list-style-type: none"> RC / HCTT Clusters/Sectors
	<ul style="list-style-type: none"> If a decision is made not to activate the contingency response plan but assistance is requested by the Government, assistance to be coordinated through the HCTT. 	<ul style="list-style-type: none"> RC
	<ul style="list-style-type: none"> After consultation with the HCTT (by e-mail or through a meeting), offer humanitarian assistance to the Government, on behalf of the HCTT. 	<ul style="list-style-type: none"> RC
	<ul style="list-style-type: none"> Ascertain the possibility of common planning of response activities. 	<ul style="list-style-type: none"> RC
	<ul style="list-style-type: none"> Decide on activation of additional clusters, as deemed necessary. Inform the ERC of the activation of additional clusters, for approval by the IASC. Sector/Cluster leads to ask for deployment of dedicated coordinators and any other surge capacity needed. 	<ul style="list-style-type: none"> RC

	<ul style="list-style-type: none"> Request assistance and surge capacity from OCHA regional office and headquarters, UNDAC, INSARAG, as deemed necessary, as well as from other regional mechanisms. 	<ul style="list-style-type: none"> RC (in consultation with Secretary of Disasters Management)
ACTIONS TO TAKE WITHIN THE FIRST WEEK	<ul style="list-style-type: none"> Organise an LCG-DER meeting. 	<ul style="list-style-type: none"> RC / HCTT
	<ul style="list-style-type: none"> Call regular HCTT meetings, as well as inter-cluster meetings, including national authorities whenever possible. Cluster and Working Groups leads to initiate cluster/sector meetings. Ensure inter cluster coordination and regular interaction and coordination with local NGOs. 	<ul style="list-style-type: none"> RC/UN-Humanitarian Affairs Advisor
	<ul style="list-style-type: none"> In consultation and collaboration with Disasters Management Committees, cluster/sector members to participate in joint needs assessments, coordinated by HCTT co-chairs in the affected areas, using agreed methodology. 	<ul style="list-style-type: none"> UN-Humanitarian Affairs Advisor Consult with the RC / RC Movement
	<ul style="list-style-type: none"> Analyse information from the assessments as soon as possible and share with HCTT and Information Management WG. 	<ul style="list-style-type: none"> Sector/cluster leads
	<ul style="list-style-type: none"> Liaise with appropriate Government institutions, Police, Ministry of Defence on security matters. 	<ul style="list-style-type: none"> UNDSS
	<ul style="list-style-type: none"> Consider potential need for using Military and Civil Defence Assets and if necessary, request OCHA to coordinate. 	<ul style="list-style-type: none"> RC to liaise with government (with support from Humanitarian Affairs Advisor); Log Cluster support for use of logistic MCDAs.
	<ul style="list-style-type: none"> Organise donor briefing. Ascertain intentions of donors to fund the response. 	<ul style="list-style-type: none"> RC / UN-Humanitarian Affairs Advisor
	<ul style="list-style-type: none"> After consultation with the government, and if required, discussion with donors, to launch a Preliminary Response Plan (PRP). 	<ul style="list-style-type: none"> RC
	<ul style="list-style-type: none"> Mobilize emergency funds, including through emergency cash grants, the Emergency Response Fund (ERF) and the Central Emergency Response Fund (CERF). 	<ul style="list-style-type: none"> RC/ UN-Humanitarian Affairs Advisor
	<ul style="list-style-type: none"> If access constraints are due to: <ol style="list-style-type: none"> Bureaucratic impediments: advocate with Government for simplified visa, entry and travel procedures to affected areas for staff and relief goods. 	<ul style="list-style-type: none"> RC / UN-Humanitarian Affairs Advisor HCTT
	<ul style="list-style-type: none"> Provide inputs on assistance, needs and gaps. 	<ul style="list-style-type: none"> Clusters leads and IMWG
	<ul style="list-style-type: none"> Issue regular Situation Reports (daily if necessary). 	<ul style="list-style-type: none"> DMIC
	<ul style="list-style-type: none"> Develop key messages for the HCTT. 	<ul style="list-style-type: none"> UN-Humanitarian Affairs Advisor UN Communications Group
	<ul style="list-style-type: none"> Support clusters in obtaining information from concerned ministries/directorates and preparing a coordinated Strategic Response Plan (SRP). 	<ul style="list-style-type: none"> RC / UN-Humanitarian Affairs Advisor HCTT

7. Contingency Response Planning

Given the multiple risks faced by Bangladesh and to simplify the use of the present document, a detailed contingency response plan including scenario, objectives, response strategy, and sectorial plans has been developed for earthquakes. In relation to the two additional risks prioritized for Bangladesh (flooding and cyclone) the ERP includes the following sections: scenario, planning assumptions, operational constraints and strategy to overcome them. Should the established risk monitoring mechanisms indicate that these risks (flooding and cyclone) have reached a threshold that requires an increased level of preparedness, the HCTT will develop a dedicated emergency response strategy.

7.1 EARTHQUAKE CONTINGENCY RESPONSE PLAN

7.1.1 Scenario



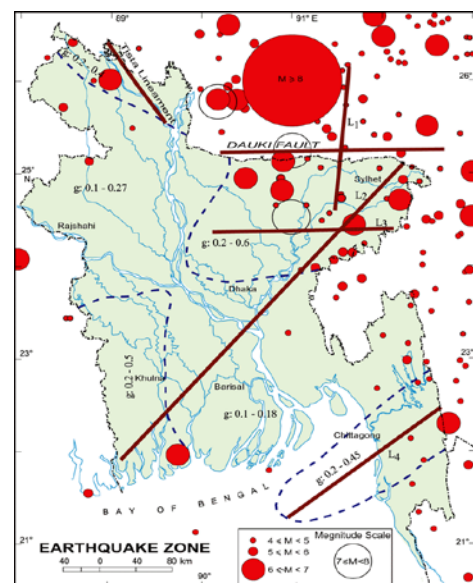
Over the past decades, urbanization in Bangladesh has been rapidly taking place without proper guidance. As a result, many of the urban centers have developed haphazardly. These urban centers are fast growing and influence the economic developments of the country. It is therefore essential to have a realistic understanding of the nature, severity and consequences of likely damage/loss that a possible earthquake event could cause. A strong earthquake affecting a major urban center like Dhaka, Chittagong, or Sylhet may result in damage and destructions of massive proportions and may have disastrous consequences for the entire nation.

In the tectonic map of Bangladesh, Dhaka is near the Modhupur Fault and Plate Boundary Fault 3.

the rapid urbanization, population growth, population migration and development of major economic zones in and around Dhaka. Major causes that lead to a very high seriousness of the risk analysis related to earthquakes, include the haphazard urbanization and sub-standard construction of buildings.

During sustained strong shaking, poorly consolidated, water saturated sediments can liquefy and lose their ability to support loads. The foundations and supports of structures built on liquefiable sediments can fail, causing damage or destruction during major earthquakes. Much of the country is of loose sandy soil and most of it remains in saturated condition round the year, thereby increasing the vulnerability to liquefaction in case of sustained ground motions. Possibility of fire outbreaks in the event of an earthquake as a secondary hazard is another source related to possible high economic losses.

The rapid increase in vulnerability of the city is evident from



7.1.2 Planning Assumptions

- Earthquakes are impact type events and provide no warning preventing any pre-event response activities;
- Earthquakes within the three cities of Dhaka, Sylhet and Chittagong will cause large numbers of deaths and injuries and extensive damage and destruction of buildings, emergency facilities and infrastructure;
- There is likelihood of secondary effects following an earthquake or aftershocks which may include tsunami, fire, flood, liquefactions, subsidence, damming of rivers, landslides, and dam failure, release of hazardous and toxic chemicals;
- Strong aftershocks will continue for several days resulting in further building collapse;
- Access will be severely restricted due to debris, landslides, collapsed bridges etc.

SCENARIO: Earthquake	
Humanitarian Consequences	Humanitarian caseload and geographic area of assistance
<ul style="list-style-type: none"> - Destruction of houses, shelters, properties, livestock and crops - Induced fire - Deaths, missing and injured - Contamination of water - Destruction of education and health care facilities - Destruction of agriculture - Family separation - Safety and security risks - Protection (gender-based violence, child protection) - Shortage of food and drinking water - Damage to infrastructures, transportation, communication, supply chain - Dead body management - Interruption of education - Destruction and loss of assets - Psychosocial impact - Mass casualty management 	<p>The number of people that will be injured and killed by the earthquake can be estimated into four severity levels that describe the extent of the injuries. The levels are described as follows;</p> <p><u>Severity Level 1:</u> Injuries will require medical attention but hospitalization is not needed.</p> <p><u>Severity Level 2:</u> Injuries will require hospitalization but are not considered life-threatening.</p> <p><u>Severity Level 3:</u> Injuries will require hospitalization and can become life threatening if not promptly treated.</p> <p><u>Severity Level 4:</u> Victims are killed by the earthquake.</p> <p>The casualty estimations are for two times of day: 2:00 AM and 2:00 PM. These times represent the periods of the day that different sectors of the community are at their peak occupancy loads. The 2:00 AM estimate considers that the residential occupancy load is maximum and the 2:00 PM estimate considers that the educational, commercial and industrial sector loads are maximum⁵.</p>
Priority Needs	Sectors/Areas
<ul style="list-style-type: none"> - Debris clearance / access to people - Mass casualties management - Emergency health assistance to treat injured people and set-up mobile clinics; ambulances 	<ul style="list-style-type: none"> - Health - Logistics - WASH

⁵ Detailed description of the casualties in the city of Chittagong, Dhaka and Sylhet can be found in the National Contingency Earthquake Response Plan.

<ul style="list-style-type: none"> - Treatment for water-borne diseases, skin infection - Services for psychological support, cadaver disposal - Medicines and other related equipment - Re-establishing health services - Provision of safe water, temporary latrines, soap and hygiene promotion education - Provision of NFIs, and temporary shelters - Crow management - Provision of high energy food and rationing - Ongoing treatment of malnutrition, Supplementary food for children under five and pregnant/lactating women - Provision of firewood - Provision of seeds, fertilizers and rice banks - Renovation of dams and embankment - Resumption of education - Renovation of education facilities or construction of TLS, - Provision of information and advice to affected communities 	<ul style="list-style-type: none"> - Shelter - Food Security - Nutrition - Education - Early recovery - Protection - Emergency Telecommunications
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7.1.3 Operational constraints and strategy to overcome them

The following is a list of current concerns and constraints that need to be addressed to ensure that the suffering of people affected by the crisis are minimized.

Concerns	Action Required
Disruption in the communication system	Look into common emergency radio frequency; Better understanding of mobile phone operators; Mapping of communication systems; Develop contact list of cluster members; Establish regular meetings of ICT focal points.
Disruption in key supplies (electricity / gas)	Procure solar panels; Ensure availability of portable generators.
Lack of response capacity (first responders dead or injured)	Emergency meetings in pre-defined (self-sustained) locations; Develop /share contingency plans to ensure that field teams are aware of them.
Unavailability of decision-makers	Encourage Government counterparts to develop / share contingency plans.
Disruption to infrastructures, and transport system (road, airport, seaports).	Ensure coordination of logistic planning among Government, humanitarian/development actors and national military; Promote awareness of contingency plans of airports and seaports; Agree on the coordination system that will be activated if national authorities cannot ensure management of the infrastructure system in country; Awareness of UNHAS activation procedures
Limited Search and Rescue Capacity	Bangladesh Red Crescent Society (BDRCS) to mobilise volunteers.
Problems in law and order (crowd control, looting)	Strengthen CwC.
Lack of open spaces	Establishment/ identification of primary locations for community centres.
Post-Traumatic Stress Disorder	Training / Refresher for health professional.
Dead body / mass casualty management	Mapping of resources; training in both areas; assessing existing capacity; develop SOPs.

7.1.4 Planned Response Strategy

Goal: To mitigate the impact of a major earthquake in Bangladesh and save as many lives as possible.

Objective: To ensure that effective and timely humanitarian assistance is provided to people in need. All activities will be conducted in coordination with and in support of the Government of Bangladesh.

Coordination

The Government of Bangladesh has made a strong commitment to the protection of life and property of the people and the environment of Bangladesh from the consequences of disasters. The **Ministry of Disaster Management and Relief** shall undertake the **leadership responsibility for implementation of the *National Earthquake Contingency Plan*** endorsed by the National Disaster Management Council (NDMC). The Department of Disasters Management (DDM) will coordinate activities that HCTT members will be in the position to conduct in support of the Government of Bangladesh.

Standard Operating Procedures

The standard Operating Procedures (SOP) will guide the HCTT in its initial emergency response activities in support of the national response. Given the nature of earthquakes as sudden-onset disaster, the SOP include actions only related to the Response Phase.

SOP guidance period: First 24 hours to 7 days post event.

Response Phase			
Timeline	Area	Needed Actions	Actors
ACTIONS TO BE TAKEN WITHIN THE FIRST 24 HOURS	COORDINATION	Notification of earthquake occurrence to/from concerned authorities.	MoDM&R/ DDM/ HCTT
		Contact the Government to: <ol style="list-style-type: none"> 1. Review national capacity to deal with the emergency. 2. Clarify its intent to declare a state of emergency. 3. Clarify its intent to request, welcome or decline international assistance: <ul style="list-style-type: none"> - If welcomes assistance, outline support options available, request approval for additional humanitarian staff's entry into the country and the need for UNDAC team. - If declines, but assistance is nonetheless required, HCTT to increase their capacity to respond. 4. Request logistical assistance for site visits if required. 5. Convene an emergency HCTT meeting in a pre-determined location. 	RC/UN Humanitarian Affairs Advisor
	SEARCH AND RESCUE	Based on preliminary scenario and the Government's capacity, assess if an international response is warranted.	FSCD

		Encourage the Government to call for international Search and Rescue assistance , preferably from INSARAG members.	UNRC
		Facilitate the submission of a request for USAR teams.	RC/ HCTT
		Upon arrival of first international Search and Rescue Teams , activate the Reception and Departure Center (RDC) at key logistic hubs.	FSCD / supported by Logistics Cluster
		Based on the scenario: <ol style="list-style-type: none"> 1. If additional capacity is required, request additional human resources (surge capacity); 2. If warranted, request deployment of an UNDAC team and other regional mechanisms. 	UNRC, with inputs from Clusters leads
	HUMANITARIAN FINANCING	<p>Agree on the activation of funding mechanisms and submit the request to access them:</p> <ol style="list-style-type: none"> 1. In consultation with the HCTT and the ERC, assess the need for a Preliminary Response Plan (PRP); 2. If warranted, assign a PRP Focal Point; 3. In consultation with the HCTT, assess the need for a CERF rapid response grant in parallel with the development of a PRP; 4. Evaluate the possibility of sending a written request to OCHA for an Emergency Cash Grant; 5. Evaluate the possibility of sending a request to UNDP/BCPR for resources from UNDP's Immediate Response to Sudden Crisis (TRAC1.1.3 Category II Resources), copied to the relevant BCPR Regional Bureau. <p>Ascertain intentions of in-country donors.</p>	RC / HCTT
ACTIONS TO BE TAKEN WITHIN THE FIRST WEEK	COORDINATION	Upon arrival of the UNDAC team, organize briefings with national authorities and the HCTT to discuss coordination mechanisms and structures.	HCTT / HA
		Agree on responsibilities and reporting lines of the UNDAC team.	RC / HCTT
	ASSESSMENTS	Contact identified Focal Points for the conduction of coordinated and preliminary joint needs assessments.	HCTT / BNASP
		Consolidated and disseminate preliminary results of joint needs assessments.	BNASP / HCTT
		If needed, make arrangements for the organization of Post-disaster Needs Assessment.	BNASP / HCTT
		Engage donors in needs assessment and response planning as appropriate in order to build trust and increase their understanding of priorities and funding needs.	RC / HCTT

	RESPONSE PLANNING	In consultation with the HCTT and, where possible, national authorities, based on the Inter-Agency Contingency Response Plan and available needs assessment results, develop a Strategic Response Plan (SRP) including early recovery and a protection strategy.	HCTT / HA
	OPERATIONAL RESPONSE	<p>Coordinate response activities through regular meetings with the HCTT, including national authorities whenever possible.</p> <p>Ensure liaison with appropriate Government institutions, Police, Ministry of Defense on security matters.</p> <p>If applicable, liaise with domestic and foreign military forces in-country. Based on consultations with UN Humanitarian Civil-Military Coordination (UN-CMCoord) Officers, adopt a civil-military coordination strategy.</p>	HCTT / HA
	ACCESS	<p>Based on the Inter-Agency Contingency Response Plan and in consultation with the HCTT, identify which actors affect access to affected populations.</p> <p>Remind all parties of their obligations to meet the basic needs of affected populations.</p> <p>Encourage all parties to allow and facilitate relief activities. Explain the strictly humanitarian character of these activities (e.g. by referring to the humanitarian principles) and gain parties' acceptance of these activities.</p> <p>Develop a humanitarian negotiation analysis and strategy for dealing with identified access issues.</p>	RC / HA
	MEDIA	<p>In consultation with the HCTT, as per the Inter-Agency Contingency Response Plan :</p> <ul style="list-style-type: none"> -Establish an emergency public information team to develop a crisis communication plan. -Agree on who speaks to the media. <p>If capacity within the RC office is limited, request surge capacity from OCHA.</p> <p>Hold a press conference. Issue a press release and/or an official statement.</p>	HCTT / IMWG

7.1.5 Summary of sector/cluster contingency action plans

Response Phase		
Area	Needed Actions	Actors
Health	Preparedness planning for Hospitals	DG-Health Services WHO (in close coordination with other health cluster members)
	Arrangements for Medicare for injured and sick	
	Child care and reproductive health	
	Mobilization of doctors and medical teams from other areas	
	Activation of control room at affected areas for disseminating information to the National Health Crisis Management Centre & Control Room of DGHS	
	Mortuary services (responsibility of civil / local administration)	
	Disease surveillance and outbreak / Epidemic control	
	Resume Immunization	
Food Security Cluster	Needs analysis survey (to identify needs for victims)	WFP, FAO, UNICEF, IFRC, NGOs
	Supply and distribution of food items	
Shelter	Pre-identification of safe areas and establishment of temporary shelters	IFRC, UNDP, IOM
	Identification of open spaces	
	Collection and distribution of emergency shelter items (tents, tarpaulins etc. and assistance to people for erecting such emergency shelters)	
	Identification of people needing shelters in camps	
	Identification of camps for displaced	
	Shelter management (coordination)	
	Maintenance of information related to IDPs (IOM to act as info hub)	
	Supply and distribution of other relief items (NFI)	
WASH	Hygiene promotion	UNICEF
	Restoration of water supply and drainage	
	Sanitation	
	Waste disposal	
	Emergency WASH facilities in IDP camps	
	Cholera – control operations	
	NFI distributions	
Logistics	Vulnerability assessment	WFP
	Damage assessment and planning for restoration of transportation facilities connected with	
	Road, Rail, Sea and Air transportation	
	Contingency stock of food	
	One-stop-shop ; Reception and Departure Centre (RDC)	
	Processing of VISAs and travel clearances	
	GIS / GPS equipment and technical services	
	Food storage / warehouse management	
	Accommodation facilities for humanitarian workers (tents)	
Nutrition	Nutrition assessment (rapid or full survey) to ascertain the severity and verify needs for a response	UNICEF

	Management of acute malnutrition (management of Severe Acute Malnutrition (SAM), targeted supplementary feeding, blanket supplementary feeding)	
	Promotion and support for optimal maternal and child nutrition through the promotion and support for optimal Infant and Young Child Feeding Practices (IYCF)	
	Monitoring of violation of the Breast Milk Substitute code; Treatment/prevention of micronutrient deficiency diseases.	
	Monitor the application of the code on marketing of breast milk substitutes	
Child Protection	Child Protection needs assessment (CPNA)	MoWCA
	Activation of CFS	UNICEF
	Family training	Red Cross / Social Affairs
	Establish psycho-social services	
	Coordination with other clusters (Food / Wash / Shelter / Education)	
	Process of re-integration (family reunion /Back to school campaigns)	UNICEF / INGOs
Early recovery	Governance	ERF, UNDP.
	Debris Management	Government
CwC	Identify available communication channels	BBC Media Action
	Identify information needs of affected population	UNICEF
	Supply information and advice, using a selection of the most appropriate and available communication channels	

7.2 Flooding Contingency Response Plan

This contingency response plan covers two related hazards:

- **River flooding**, also known as monsoon flooding, an annual event which can be extreme some years;
- **Waterlogging**, the phenomenon in the southwest of Bangladesh where river flooding is unable drain and causes prolonged flooding.

7.2.1 Scenario: River Flooding – Waterlogging

Flooding occurs annually in Bangladesh. The country experiences an annual monsoon from April – October with 80 per cent of annual rainfall occurring during this time. The average precipitation during the rainy season, June-August, is 321-437 mm per month. Following the 2007 floods, damage caused by the flooding could be categorized as direct and consequential. For example, the failure of the flood protection system (direct impact) resulted in far reaching consequential impacts in household health and food security.

River floods are the most common type of floods in Bangladesh and refer to both the “normal” annual inundation of up to 25 per cent of the country as well as extreme flooding which can inundate up to 70 per cent of the country. River flooding is also referred to as monsoon flooding. Riverbank erosion is caused by heavy rainfall, heavy rainfall upstream, and increased flow of water. Bangladesh lost more than 1,000 km² of land along the major rivers during the last 30 years: this land would have provided living space for about one million people.

SCENARIO: River Flooding		
Impact of River Flooding on Sectors		
SECTOR	IMPACT	HUMANITARIAN CONSEQUENCES
SHELTER	Shelters need to ensure that mothers have safe, private, and hygienic spaces to breastfeed infants and young children.	Many flood affected people camp out on roofs, roads, embankments or bamboo structures etc. Children in these situations are extremely vulnerable and are less likely to receive assistance than children in flood shelters as they are harder to identify and harder to reach.
WASH	Water points are inundated and latrines are washed away. In areas where there is little available land, displaced people will continue to have inadequate WASH facilities .	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.
EDUCATION	Enable play and education to continue throughout floods.	Children’s mental well-being is significantly improved if they are able to process and release stress through structured play.
FOOD SECURITY	Adoption of negative coping strategies : distress selling of assets; migration to non-affected areas to work (e.g. as agricultural day labour, rickshaw puller, household help and non-agricultural day labour; Advance selling of labour; taking loans from NGOs and Mohajans (local money lenders) and borrowing from relatives; reduction of meal frequency and meal size.	Food security/livelihoods to ensure vulnerable populations have access to and consume adequately diversified nutritious diets.

<p>NUTRITION</p>	<p>Flooding may not directly and immediately impact nutrition, but they create situations that increase vulnerability and can lead to a rise in under nutrition in a short amount of time. The nutrition situation of pregnant/lactating women and children, who are most vulnerable, should be closely monitored at all times.</p> <p>In a disaster, a lack of shelter and/or water will result in decreased hygiene, often with limited available space where women feel comfortable to continue breastfeeding and/or engage in complementary feeding. Food crops and markets are destroyed and/or disrupted resulting in less access to diversified nutritious food leading to inadequate energy and micronutrient intake.</p>	<p>Pre-existing high malnutrition rates could increase vulnerability of children <5 in the event of a disaster, and in light of the high prevailing rates of malnutrition, the nutrition situation could easily and quickly deteriorate after a major flood.</p> <p>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.</p>
<p>HEALTH</p>	<p>The adverse human health consequences of flooding are complex and difficult to attribute to the flood event itself. Diarrhea, ARI, Skin-Eye-Ear Infections, Snake bite, Drowning, etc. are usually triggered by flood.</p> <p>Drowning and snake-bite are the main causes of death during flood. Health risks also are associated with the inundation of health facilities by flood waters. In the medium-term, poor mental health and starvation are indirect effects of flooding. In the long-term, chronic disease, and poverty-related diseases including malnutrition are the potential legacy.</p> <p>Post disaster disease outbreaks can be triggered by damaged water and sanitation systems; non-availability of transport in and around all flood-affected areas and disruption of communications seriously can hinder pregnant women's ability to access health facilities for childbirth. Motorized country boats should be arranged for transport to health centres in flood-prone locations; Mobile <i>boat hospitals</i> should be equipped with all related facilities and trained staff for maternal and infant health to promote access to safe child birth facilities in the flood affected areas.</p>	<p>Increased rates of diarrhea , respiratory infections, hepatitis A and E, typhoid fever, skin-eye-ear infections, snake-bite, drowning.</p> <p>The public health needs of the affected population increase as a consequence of people living under open sky, lack of safe drinking water, and damage to sanitary systems. Flood shelters should have increased separate accommodations for pregnant mothers. At least one room should be earmarked for child delivery and breast feeding.</p>
<p>LOGISTICS</p>	<p>Critical infrastructures and means of communication can be disrupted. Floods make roads impassable, destroy bridges, increase the danger in travelling on and crossing rivers, and increase the costs of boat transportation when roads cannot be used.</p>	<p>This impedes access to all key services including health and education as well as markets.</p>
<p>CwC</p>	<p>Power loss and infrastructure damage may cause loss of access to electronic media (including TV, radio and mobile phone). Increased isolation in communities cut off by flood waters will reduce effectiveness of inter-personal communication and informal communication networks.</p>	<p>Reduced ability of affected communities to obtain accurate and timely information about the situation they are facing and thus reduced ability to respond independently and effectively. Appropriate and operational communication channels need to be used</p>

		in order to meet information needs of affected population, through provision of accurate, consistent, trusted and practical information.
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Waterlogging occurs due to a complex set of natural and man-made factors which cross sectors and have multiple inter-related causes. Since 2000, communities in Satkhira, Jessore, and Khulna Districts have been waterlogged on an annual or bi-annual basis, with some areas reported to be under water for six – eight months of the year. In 1971, the rivers in these Districts were key transport links, moving people and goods around Bangladesh. It is now estimated that 40 per cent of these rivers are no longer viable for boat transport due largely to siltation preventing the free flow of river traffic.

Waterlogging can increase at the end of the monsoon period (August/September) creating an even more significant problem. People displaced as a result of waterlogging reside on high ground (roadsides and embankments) while others remain marooned in raised homesteads. In recent years, this situation has lasted for two – three months. The waterlogging in 2013 was estimated to have left 280,000 in need of assistance. Government and development partners all agree that there is the need for long-term solutions to this recurring problem. However, a shared analysis of the situation does not exist.

SCENARIO: Water Logging		
Impact of Water Logging on Sectors		
SECTOR	IMPACT	HUMANITARIAN CONSEQUENCES
SHELTER	<p>The length of time many houses have been sitting in water can have a severe impact on the mud buildings and houses can collapse as a result of the mud becoming saturated and no longer able to hold its form.</p> <p>Displaced persons with severely damaged homes experienced delays in return due to long term flooding and lack of access to materials needed for repairs and rebuilding.</p>	<p>Houses built with mud and other primary natural materials damaged or completely destroyed.</p> <p>Many household economic activities in rural Bangladesh take place in the home. Such income stops when a house is damaged by disaster.</p>
WASH	<p>The main concerns from water disasters are the destruction of water and sanitation infrastructures. An estimated 70-80 per cent of water pumps were submerged in previous waterlogging which contaminates water used for cooking and drinking and causes diseases.</p> <p>The 2011 waterlogging illustrated that while water levels were high, people with access to boats could travel to collect water. However, access to clean drinking water became increasingly difficult as water began to recede when boats can no longer be used to reach distant water points and transport water.</p> <p>An important concern is related to how water and sanitation interfaces with gender. Women and adolescent girls face particular difficulties travelling to collect water and using latrines located close to where people are staying but</p>	<p>Women washing in stagnant water and contracting skin diseases and other infections as a result.</p>

	which do not provide sufficient privacy. Bathing is also a particular concern for women and adolescent girls because modesty, and social convention, prohibited women from bathing with the water from hand pumps.	
EDUCATION	Areas most vulnerable to waterlogging include the worst performing Upazilas in terms of primary school attendance in Satkhira. However, there are also best performing Upazilas in Khulna. In areas affected by waterlogging, schools might be closed or occupied by IDPs. High risk of school dropouts in areas affected by waterlogging as children are unable to study at home and due to loss in family income may be required to seek employment.	In 2013, there were no reported school closures due to waterlogging. Direct observation in some waterlogged areas noted that teachers had moved teaching materials from waterlogged schools and that lessons were taking place in alternative learning spaces. Increased drop-out rates.
FOOD SECURITY	Food, in terms of quality, quantity and diversity, can be less than required. Vulnerable groups who are unable to leave their village, including older people and child-headed households, are reliant on Government food aid. Food access hampered by people being marooned (in their homes/locations which may be on raised plinths or high ground and surrounded by water) and unable to access markets easily. The destruction of the fish farms and submergence of the agricultural fields means that there are few, and in some cases no, daily wage opportunities. Household food storage can be inadequate, due to the fact that areas might already be experiencing the annual lean season where food stocks are expected to be limited or non-existent, particularly for the poorest families.	Affected poor households manage the limited quantity of food by sharing one meal among all family members. Families move from their homes, even though the houses are not damaged. The lack of income severely hampers access to food for the affected people (due to lack of purchasing power). Households do not prioritise food for young children and lactating or pregnant mothers. These vulnerable groups are at risk of malnutrition as they (along with the rest of the affected population) consume insufficient, and less than usual, food. Serious food needs for landless and marginal farm families and the extremely poor.
NUTRITION	Waterlogging may not have a direct and immediate impact on nutrition, but it creates a situation that increases vulnerability and can lead to a rise in under-nutrition in a short amount of time. Complicating factors can be inadequate hygiene, a lack of shelter for private and safe spaces for women to breastfeed or feed children, and inaccessibility to nutritious food. In light of the high pre-existing rates of malnutrition, the nutrition situation could easily and quickly deteriorate during a period of waterlogging and, particularly, increase the vulnerability of children <5. Food crops and market are destroyed and/or disrupted resulting in less access to diversified nutritious food leading to inadequate energy and micronutrient intake.	Lack of shelter and/or water will result in decreased hygiene, often with limited available space where women feel comfortable to continue breastfeeding and/or engage in complementary feeding. In waterlogging, the nutrition situation of pregnant/lactating women and children, who are most vulnerable, should be closely monitored at all times.
HEALTH	Post disaster disease outbreaks can be triggered by damaged water and sanitation systems. The public health needs of the affected population increase as a consequence of people living under open sky, lack of safe drinking water, and damage to sanitary systems.	Diarrhea, ARI, and skin-eye-ear infections are common in post disaster situations. In the 2011 waterlogging assessments people prioritised the following

	<p>People living on the embankments do not have access to health care and those in marooned houses or damaged houses are unable to make the journey to health facilities, largely because they could not afford transportation costs (as boats are required and in limited supply).</p>	<p>health concerns(JNA 2011):</p> <ul style="list-style-type: none"> o Diarrhoea o Skin diseases o Snakebites o Access to safe birth support o A reduction in access to health care reported
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Poor maintenance of embankments and other water infrastructure and natural river-bed silting has resulted in drainage congestion. Over time, this congestion has caused waterlogging to become a regular problem in the area whenever excess water (either through heavy rainfall or upstream flooding) is experienced. There is debate as to whether structural river management is still protecting flood prone areas or creating long-term unintended negative outcomes.

Tidal River Management (TRM) is a traditional practice in parts of the Bangladesh delta. Communities cut a point in the embankment which will allow the river water to flow into the flood plains during high tide. This water is full of sediment which is then deposited on the flood plain, while the water flows out. This process does not allow sediment to be deposited on riverbeds and in fact deepens the river bed, allowing it to be congestion free. There are difficulties with TRM regarding the governance and compensation processes of the scheme and some question the ease at which it could be scaled up in relation to the magnitude of the problem.

7.2.2 Planning Assumptions: River Flooding – Waterlogging

Flooding Data from 2005 Sources: (Em-Dat 2014).				
Start	Location	Type ¹	Killed	Affected
September 2009	national	General Flood	n/a	250,000
October 2010		General Flood	15	500,000
July 2009	Dhaka, Comilla, Rajshahi, Habiganj	General Flood	16	500,000
August 2008	Bogra, Sirajganj (North)	General Flood	12	615638
June 2008	Cox's Bazar, Chittagong	General Flood	16	20,002
July 2007	46 Districts	General Flood	1,230	16,000,000
June 2006	Sylhet, Zakiganj, Kanaigh	General Flood	n/a	76,000
July 2005	Kurigram, Gaibandha, Lalmanirhat	General flood	23	1,000,000

Figure 5. Flooding Data (2005)

Flooding occurs annually in Bangladesh. Normal river flooding in Bangladesh is beneficial to the ecosystem; the alluvium that comes with flooding and seasonal variability in water level and flow can facilitate the balance of the ecological system. Normal seasonal flooding is within the usual coping mechanisms of the population. In 1988, 1998, 2004 and 2007 Bangladesh experienced devastating flooding, well beyond the annual norms. In 1998 the flooding lasted for 10 weeks, from July – September and affected 30 million people.

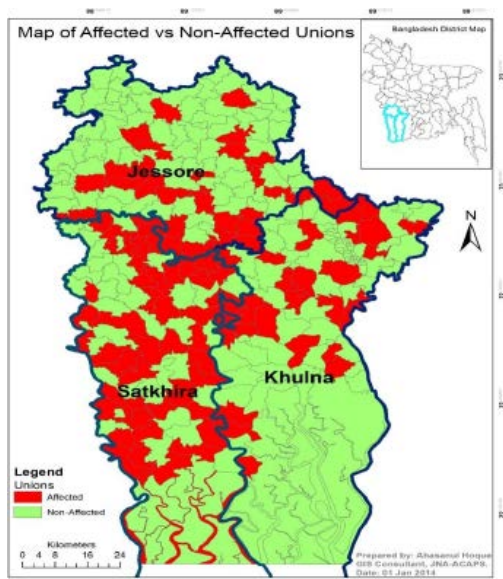


Figure 6. Map of 2013 Waterlogged Unions (JNA)

Waterlogging occurs due to a complex set of natural and man-made factors which cross sectors and have multiple inter-related causes.

Waterlogging refers to stagnant flood waters that are unable to recede, primarily affecting the southwest coastal belt across Satkhira, Jessore, and Khulna Districts. Waterlogging can increase at the end of the monsoon period (August/September) creating an even more significant problem. People displaced as a result of waterlogging reside on high ground (roadsides and embankments) while others remain marooned in raised homesteads.

The waterlogging in 2013 was estimated to have left 280,000 in need of assistance.

7.2.3 Operational Constraints and strategy to overcome them

The following is a list of current concerns and constraints that need to be addressed to ensure the suffering of people affected by the crisis are minimized.

Concerns	Action Required
River Flooding	
Difficulties in accessing remote communities, transporting materials (i.e. damaged roads etc.) and accessing materials are obstacles to an effective response.	Ensure coordination of logistic planning among Government, humanitarian/development actors and national military. Identify procedures for the mobilization of air assets.
There is no analysis of availability of key relief items for a major emergency.	Ensure adequate mapping and analysis of prepositioned relief items at country and regional level.
Lack of information on which water sources are most/worst	Agree on procedures to be activated to

impacted by floods and how to detect if a water source has been corrupted.	conduct water analysis and ensure prompt dissemination of results.
Transport and packaging of emergency dry food rations such as <i>chira</i> and <i>gur</i> present problems logistically.	Support the Government for the stockpile and pre-position of supplies of rice, dhal and cooking fuel in regional warehouses prior to the start of the monsoons and utilize these supplies in the event of flooding.
Need for cooking fuel is more important after floods than after cyclones. In response to the immediate needs, flood affected communities report that more emphasis should be given to food items that can be cooked.	
School closure; irregular attendance caused by loss of learning material; students drop out as a direct result of floods.	Ensure that mechanisms are in place for the prompt resumption of educational activities for children.

Concerns	Action Required
Water Logging	
Management of school facilities, when used as flood shelters, to ensure that teaching materials and school assets are safeguarded during times when schools are used as flood shelters.	Advocacy by the Education Cluster.
Accurate information on school closure due to waterlogging (including information on where temporary learning spaces are established and how long they are required for).	Messages and information sheets to be drafted in the preparedness phase and distributed by the Education Cluster.
Lack of information on the damage waterlogging does to school buildings and educational materials and how long this takes to repair/resolve.	Ensure that an assessment methodology is in place to evaluate the damage to school buildings and educational material.
Possible contamination and subsequent illness in children due to lack of hand wash with soap before handling of food and feeding.	WASH cluster to implement practical activities to ensure provision of water and soap as well as hygiene promotion. Health cluster to ensure that 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.).

7.3 Cyclone Contingency Response Plan

7.3.1 Scenario

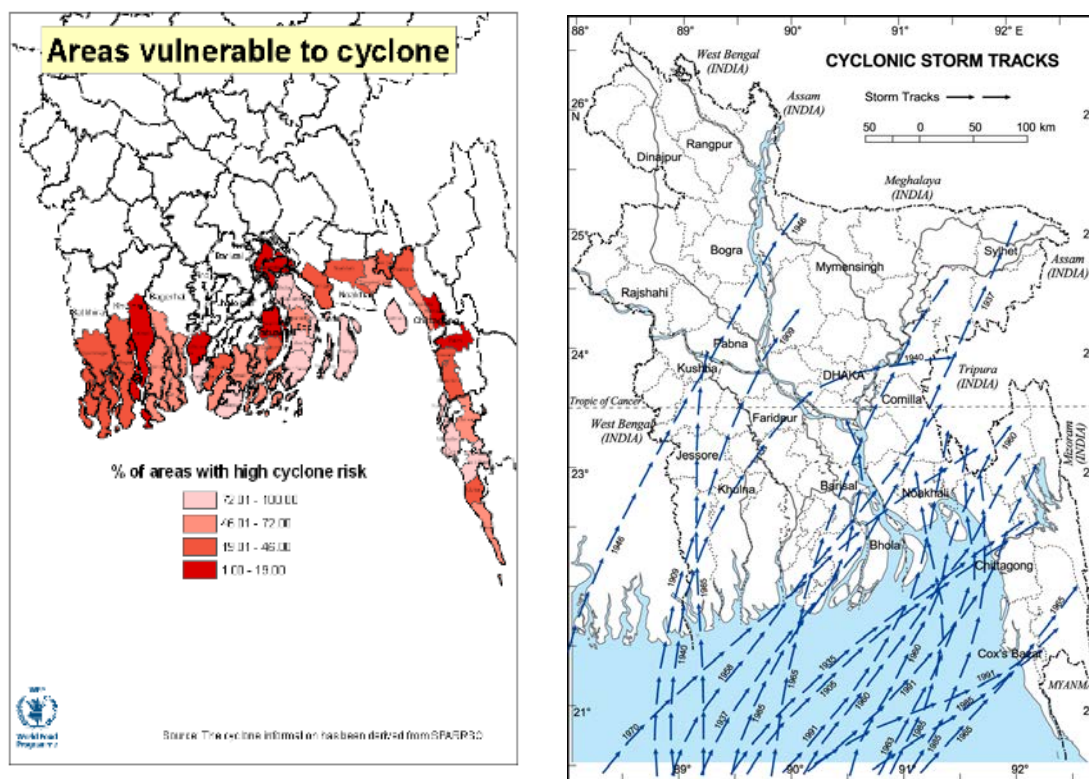


Figure 7. Cyclone vulnerable areas (JNA)

Cyclones cause storm surges which are the difference between the water level under the influence of a disturbance (storm tide) and the normal level that would have been reached in the absence of the meteorological disturbance. Storm surges are the main cause of death during a cyclone related disaster. The height of the surge and the resulting distance of inundation vary according to wind speed and tide height. The scale of inundation depends on the size of the wave. Inundation can render areas uninhabitable as land can take time to drain and causes inland salinity of agricultural land water sources.

7.3.2 Planning Assumptions

SCENARIO: Cyclone		
Impact of Cyclone on Sectors		
SECTOR	IMPACT	HUMANITARIAN CONSEQUENCES
SHELTER	Transitional shelter responses are unable to include landless families. Large number of self-built emergency shelters will not withstand the monsoon. Difficulties in accessing remote communities, transporting materials (i.e. damaged roads etc.) and accessing materials.	Significant gaps in the shelter response; Self-recovery must not be undermined, but rather monitoring and support of repair should be provided; Increase in child marriage and polygamous marriages might be unintended outcomes of a policy of giving all transitional shelter kits to women

		headed households and handing over materials to the woman in the household.
WASH	Flooding of large numbers of water points and contamination of water sources; Latrines destroyed, resulting in an increase in open defecation; Lack of access to required materials, then lack of availability of materials.	People do not have access to safe drinking water ; Decrease in the number of people using tube wells as their main water source; Higher incidences of diarrhea, skin diseases, and stomach diseases.
EDUCATION	Areas most vulnerable to cyclones include the worst performing Upazilas in terms of primary school attendance in Satkhira and parts of Bhola, Noakhali, Cox's Bazaar, and the Char islands of Chittagong. However, there are also best performing Upazilas in Khulna and Pirojpur within the cyclone vulnerable area.	42 per cent of schools with education services disrupted and closed for classes; At least 19 per cent of schools in both flood and cyclone areas experience over four weeks of school closure; Irregular attendance and loss of learning material; at least 3 per cent of the students drop out.
FOOD SECURITY	Disrupted food supply due to market disruption and loss of food stock, especially nutritious food. Negative coping mechanisms (reduction of meals, amount of food or quality of food, sale of productive assets, etc.); Loss of means (equipment and location) to prepare food. Loss of livelihoods (agriculture and non-agriculture based) and reduced purchasing power; Loss of/damage to individual and community assets; Loss of income earning opportunities. Loss of agricultural production across the value chain; Loss of crops and seeds leading to food insecurity in the locality till next harvest; Loss of/damage to agricultural lands and embankments, caused by debris and waterlogging/flooding; Damage to fisheries and pond fisheries / fisheries and shrimp aquaculture sectors; Emerging and re-emerging infectious deceases amongst livestock.	40 per cent of those under the poverty line will require emergency food/cash assistance; 40 per cent of those with livestock or involved in crops, horticulture and aquaculture will require assistance; 100 per cent of those who depend on capture fisheries will require assistance, since this livelihood is sustained amongst the most poor -Displacement and migration of mainly the male population; Price hikes of essential commodities.
NUTRITION	Cyclones 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. Food crops and market are destroyed and/or disrupted resulting in less access to diversified nutritious food leading to inadequate energy and micronutrient intake. 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 is often aggravated soon after an emergency	Lack of shelter and/or water will result in decreased hygiene, often with limited available space where women feel comfortable to continue breastfeeding and/or engage in complementary feeding; In cyclone prone areas, pre-crisis vulnerability in relation to nutrition and the impact on food and livelihoods could impact child feeding practices that could further compromise nutrition; The nutrition situation of pregnant/lactating women and children, who are most vulnerable, should be closely monitored at all times.
HEALTH	The public health needs of the affected population increase as a consequence of people living under	Traumatic injury is the main cause of death in cyclones;

	open sky, a lack of safe drinking water, and damage to sanitary systems. Local health personnel may themselves be injured or be unable to reach health facilities immediately after a disaster.	Post disaster disease outbreaks can be triggered by damaged water and sanitation systems.
LOGISTICS	Failing road network; power supply disrupted in the whole country for one day; embankment-cum-roads destroyed by the tidal surge.	Access problems to provide assistance to the most remote areas.
CWC	Widespread infrastructure damage is very likely to cause loss of access to electronic media (including TV, radio and mobile phone).	Reduced ability of affected communities to obtain accurate and timely information about the situation they are facing and thus reduced ability to respond independently and effectively; and reduced ability to take best advantage of support available from humanitarian responders; Appropriate and operational communication channels need to be used in order to meet information needs of affected population, through provision of accurate, consistent, trusted and practical information.

7.3.3 Operational Constraints and Strategy to overcome them

The following is a list of current concerns and constraints that need to be addressed to ensure the suffering of people affected by the crisis are minimized.

Concerns	Action Required
Population does not move to cyclone shelters. Reasons include: disbelief in the warning; fear of theft (including fear of boat theft which would directly impact livelihoods); lack of cyclone shelters; difficult access to cyclone shelters along roads.	Ensure that a communication campaign with key messages to address the population in the local language are prepared; Ensure that an adequate number of cyclone shelters are in place in the most vulnerable areas and that information about their location is communicated to the population; Map the access road to the cyclone shelters and ensure that infrastructure work is conducted in the preparedness phase to ensure easy access to the shelters by the population.
Cyclone shelters not designed according to a standard universal design and tend to be inaccessible for persons with disabilities.	Ensure alignment of cyclone shelters with internationally agreed standards.
Less than 2 per cent of cyclone shelters have space for livestock.	Ensure that at least 10 per cent of the cyclone shelters have space for livestock.
Management of school facilities, when used as cyclones shelters to ensuring that teaching materials and school assets are safe-guarded during periods when schools are used as cyclone shelters	Advocacy campaign by the Education Cluster.