



Multi-hazard Contingency Plan for Narayanganj City Corporation

October 2018

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FOREWORD

Bangladesh has been experiencing rapid urbanization since its independence in 1971. However, the rapid urbanization in the country is not compatible with the sustainable urban development. Most of the cities and towns are developing without proper planning and guidance. Many development activities are taking place through conversion of agriculture lands, reclamation of wetlands, infilling of drainage channels, cutting of hills, deforestation, etc. As a result, disasters like building collapse, fire, waterlogging, health problem, etc. are increasing in urban areas. Urban centers are also becoming highly vulnerable to Earthquake due to unplanned development and construction of sub-standard building.

Narayanganj is one of the old and historical city of Bangladesh. It has significant contribution to the economy, employment and export earnings of Bangladesh. Its history, natural endowments, and strategic location have made it an important hub for business and industrial establishment. However, the rapid urbanization, industrialization and unplanned development activities making Narayanganj highly vulnerable to both natural and human induced hazards, particularly earthquake, fire, water logging, building collapse etc.

The steady growth of disaster risk in Narayanganj city indicates the need to further strengthen of disaster preparedness for response and ensure that the capacities are in place for effective response and recovery at all levels for making city resilient to disasters. Contingency Plan is a management tool that ensure the adequate and appropriate preparedness in advance so that the adverse impacts of a disaster on lives, properties, infrastructures and services are minimized. That Disaster Management Policy 2015 also indicates to develop Contingency Plan at City-level.

Realizing the emerging disaster risk in Narayanganj City and to comply with the Govt. Policies, this Multi-hazard Contingency Plan has been developed. I strongly believe that the proper execution of this contingency plan will to increase the efficiency and effectiveness of disaster response management in Narayanganj and significantly reduce the impacts.

Through this message, I would like offer my sincere thanks to all the Councilors, Officials of NCC, CCDMC Members, and other stakeholders for their contribution as well as Save the Children International and Asian Disaster Preparedness Center for their financial and technical support to develop this contingency plan.

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Abbreviations

ADPC	Asian Disaster Preparedness Center
AFD	Armed Forces Division
BBS	Bangladesh Bureau of Statistics
BDRCS	Bangladesh Red Crescent Societies
BGB	Border Guard Bangladesh
BIWTC	Bangladesh Inland Water Transport Corporation
BP	Bangladesh Police
BR	Bangladesh Railway
BRTC	Bangladesh Road Transport Corporation
BTCL	Bangladesh Telecommunication Company Ltd.
CBOs	Community Based Organizations
CCDMC	City Corporation Disaster Management Committee
CDMP	Comprehensive Disaster Management Programme
CSOs	Civil Society Organizations
DRRO	District Relief and Rehabilitation Officer
DWASA	Dhaka Water Supply and Sewerage Authority
EOC	Emergency Operation Center
FSCD	Fire Service and Civil Defence
ICS	Incident Command System
INGOs	International Non-Government Organizations
INSARAG	International Search and Rescue Advisory Group
LGED	Local Government Engineering Department
MoDMR	Ministry of Disaster Management And Relief
NGOs	Non-Government Organizations
RAB	Rapid Action Battalion
REB	Rural Electrification Board
RHD	Roads and Highway Department
SFDRR	Sendai Framework for Disaster Risk Reduction
TGCL	Titas Gas Company Ltd.
UNO	Upazila Nirbahi Officer
UVs	Urban Community Volunteers
VDP	Village Defence Party
WDMC	Ward Disaster Management Committee

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Section-01: Introduction

1.1 Background

Over the past decades, urbanization in Bangladesh has been rapidly taking place without proper planning and guidance. As a result, many of the urban centers in the country have developed haphazardly. These urban centers are fast growing and influence the economic developments of the country. A major disaster affecting the urban centers in Bangladesh may result in widespread damage; high numbers of fatalities; destroying buildings, other physical infrastructure and facilities; and may have disastrous consequences for the entire nation. In the aftermath of a catastrophic disaster and subsequent aftershocks there will be a massive requirement of response efforts. The conventional response efforts and available capabilities will be quickly overwhelmed. For an effective response to a severely damaged area, immediate life-saving and life-sustaining measures entailing unique solutions will be required. In these circumstances, a City-level Contingency Plan is needed to ensure better response towards different hazards. Contingency Planning is a management tool that used to analyze the impact of potential crises so that adequate and appropriate arrangements are made in advance to respond in a timely, effective and appropriate way to the need of affected populations.

Realizing this, Save the Children International with the authorization of the Ministry of Disaster Management and Relief (MoDMR) of the People's Republic of Bangladesh, and with the funding support from ECHO and C&A Foundation has taken initiative to reduce the ever increasing disaster risk in Narayanganj City Corporation (NCC) area and minimize the damages and loss of lives through proper preparedness and mitigation measures. Asian Disaster Preparedness Center (ADPC), Thailand has provided technical assistance for development of the Multi-hazard Contingency Plan for Narayanganj City Corporation (NCC) area.

1.2 Need of Contingency Plan for NCC

Narayanganj City Corporation (NCC) is the Headquarter of Narayanganj District located in central Bangladesh close to Dhaka City (**Map-1**). NCC (Extinct Narayanganj Municipality) was a traditional municipality of the subcontinent which was constituted on 8 September 1876 covering an area of 4.5 square miles with a population of 27,876. The Municipality gained fame as a "Model Municipality" in the Bengal Province. On May 05, 2011, the Municipality was upgraded to Narayanganj City Corporation covering an area of total 72.43 sq. km by combining three municipalities- Narayanganj, Siddhirganj and Kadamrasul, and divided into 27 wards. The total population of NCC is 1,65,637 (adjusted in 2016) and annual growth rate is 2.22% (BBS, 2011).

Narayanganj has significant contribution to the economy, employment and export earnings of Bangladesh. Its history, natural endowments, and strategic location have made it an important hub of all major knitwear, garments, textile and jute industries. This profile of Narayanganj reveals that, despite its good business environment and being a destination for foreign and local investment, industrialization has been both a boon and a bane. However, with its rapid economic growth, urbanization and industrialization, Narayanganj is becoming highly vulnerable to both natural and human induced hazards, particularly earthquake, fire, water logging, building collapse etc.



The vulnerability of the city to these urban hazards is compounded by a lack of proper mitigation measures, good governance, strained resources, and awareness. In the generalized tectonic map of Bangladesh, Narayanganj is located in the medium risk zone. The earthquake risk of NCC is increasing due to haphazard urbanization and sub-standard construction of buildings and other infrastructures without any consideration of underlying risk and building construction regulations.

There are many old buildings in NCC area those are highly vulnerable and may collapse any time even without earthquake. Rapid construction of building by filling up of low lands, sub-standard construction materials and violation of building construction regulations are also increasing the vulnerability of building collapse in the city.

Many parts of NCC is highly vulnerable to fire hazard because of high population and haphazard building construction, significant and unplanned industrial establishments, dense development, unplanned narrow roads, storage of flammable substances, violation of fire safety regulations, absence of street hydrants, etc.

Waterlogging during monsoon is a common problem in NCC because of low land, poor or lack of drainage system, insufficient capacity of the existing drainage system, blockage of the drainage system due haphazard disposal of solid waste, and lack maintenance.

Exposure to urban risks creates negative feedback cycles as they impact investment and economic development. Therefore, in order to protect the people, and to prop up the solid economic growth of the country, it is an urgent issue to strengthen the capacity and preparedness. In these circumstances, a Contingency Plan for NCC is needed to ensure better response towards urban hazards.

1.3 Purpose

The Multi-hazard Contingency Plan for NCC establishes a coordinated strategy to ensure that adequate decisions and preparations are made in advance for anticipated major hazards such as earthquake, building collapse and fire. The purpose of the plan is to increase the efficiency and effectiveness of disaster response management in NCC area through the clarification of operational framework, coordination and communication mechanisms, and distribution of roles, responsibilities and actions. It also aims to ensure the participation of all City-level stakeholders and service providers, and maximum utilization of available resources, optimization of efforts by first responder agencies in order to save lives; provide humanitarian assistances; and restore the lifeline facilities to bring normalcy within fastest possible time.

The plan focuses on immediate emergency response activities typically taking place within the first 72 to 96 hours following a major disaster.

1.4 Goals and Objectives

The ultimate goal of this Multi-hazard Contingency Plan is to minimize the adverse effects of a potential hazard in the City Corporation area by establishing and implementing a holistic response framework. The specific objectives of the plan are:

- Strengthen the ability of City-level first responder agencies involved in disaster management to effectively and efficiently prepare, respond, and recover from disasters.
- Develop City-level response framework and establish effective vertical and horizontal coordination and communication mechanisms that are functional both before and after a disaster.
- Promote a culture of community readiness and preparedness through City-level plan advocacy and institutionalization.

1.5 Intended Users of the Plan

The primary users of this Contingency Plan will be the City-level agencies, departments and organizations which are responsible for saving human-lives, providing humanitarian assistance, restoring the lifeline facilities and utility system, protecting properties and preserving the environment. These agencies include but not limited to:

- Narayanganj City Corporation
- Fire Service & Civil Defence, Narayanganj
- DC Office, Narayanganj
- DRRO Office (at DC Office), Narayanganj
- Civil Surgeon Office, Narayanganj
- Bangladesh Power Development Board, Narayanganj
- Bangladesh Telecommunication Company Ltd., Narayanganj
- Titas Gas Transmission and Distribution Company Ltd., Narayanganj
- Water Supply and Sewerage Authority, Dhaka
- Public Works Department, Narayanganj
- Bangladesh Police, Narayanganj
- Rapid Action Battalion (RAB), Narayanganj
- Ansar and VDP, Narayanganj

Other agencies such as NGOs and INGOs working in the area, Electronic and Print Media, Community Based Organizations (CBOs), Civil Society Organizations (CSOs), Academia, Development Partners, Private sectors, Business associations, etc. will also provide support for plan implementation.

The ultimate beneficiaries of this plan would be the communities at risk in NCC area.

Section 02: Plan Development, Implementation and Maintenance

2.1 Legal Provisions, Authority and Planning Responsibility

The **Sendai Framework for Disaster Risk Reduction (2015-2030)**, endorsed by the UN General Assembly in June 2015, is the successor agreement to the Hyogo Framework for Action (2005–2015), which had been the most encompassing international accord to date on disaster risk reduction. It sets four specific priorities for action. Under Priority 4 (Enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation and reconstruction), the SFDRR suggested to prepare or review and periodically update disaster preparedness and contingency policies, plans and programmes at national and local levels with the involvement of the relevant institutions, considering climate change scenarios and their impact on disaster risk, and facilitating, as appropriate, the participation of all sectors and relevant stakeholders as a priority action.

Under the 7th **Five Year Plan** of the Government of Bangladesh, the Ministry of Disaster Management and Relief (MoDMR) has set 4 broad categories of goals and one cross cutting category to make the country more disaster resilient. Among several activities of these goals identified suggested to promote Risk Reduction Action Plan and Contingency Planning across agencies and for all unions/cities/wards and monitor its implementation and practice; and to encourage different hazard based contingency planning.

The **Disaster Management Act 2012** grants the Government of Bangladesh the authority to formulate the National Disaster Management Policy to elaborate the provisions of the Act. Within the **National Disaster Management Policy 2015**, the Ministry of Disaster Management and Relief (MoDMR) is granted the overall responsibility for coordinating disaster management efforts across all agencies. One of the priority activities listed in the National Disaster Management Policy 2015 to Develop Contingency Plan for the City Corporation. With this authority, the Narayanganj City Corporation (NCC) with the involvement of City Corporation Disaster Management Committee (CCDMC) and other relevant stakeholders has developed this Contingency Plan for the City Corporation area.

2.2 Plan Context

The Multi-hazard Contingency Plan for NCC is developed to complement the existing disaster management regulations including the Disaster Management Act 2012; the National Disaster Management Policy 2015; the National Plan for Disaster Management 2016-2020 (draft); the Standing Orders on Disaster 2010; and National Earthquake Contingency Plan 2012 developed under CDMP. The National Earthquake Contingency Plan provides the broader framework to address the response activities during an earthquake emergency in the country, while the Contingency Plan for NCC aims to minimize the adverse effects of potential earthquakes, building collapse, flood and fire by establishing and implementing a holistic response framework at City Corporation level.

2.3 Planning Assumptions

This Contingency Plan for NCC is developed with following assumptions in the background:

- Earthquakes, building collapse and fires are impact type events and provide no warning preventing any pre-event response activities.
- Earthquakes, building collapse and fires within the City Corporation area will cause large numbers of deaths and injuries and extensive damage and destruction of buildings, emergency facilities and infrastructures.
- There is likelihood of secondary effects following an earthquake or aftershocks which may include fire, liquefaction, subsidence, release of hazardous and toxic chemicals, etc.
- Strong aftershocks of earthquake will continue for several days resulting in further damages and losses.
- Large numbers of displaced people will be in need of shelter, welfare, relief assistance, medical care, etc.
- A considerable number of dead bodies will need to be managed properly.
- Access to affected areas will be severely restricted due to debris, road damage, bridges and culverts collapse, etc.
- Many national and international response and humanitarian organizations other than the government institutions will also be involved during response and recovery to earthquake.

2.4 Planning Process

The Multi-hazard Contingency Plan for NCC is developed through a collaborative effort among CCDMC as well as other relevant agencies, departments and organizations. Several formal and informal meetings and consultations were held with the key stakeholders. The Plan contributors include:

- Narayanganj City Corporation
- City Corporation Disaster Management Committee, Narayanganj
- District Relief and Rehabilitation Office (at DC Office), Narayanganj
- Fire Service and Civil Defence, Narayanganj
- Civil Surgeon Office, Narayanganj
- Bangladesh Power Development Board, Narayanganj
- Bangladesh Telecommunication Company Ltd., Narayanganj
- Titas Gas Company Ltd., Narayanganj
- Bangladesh Police, Narayanganj
- Rapid Action Battalion, Narayanganj
- Bangladesh Ansar and VDP, Narayanganj
- Public Works Department, Narayanganj
- Bangladesh Red Crescent Society, Narayanganj
- Representatives from Civil Society Organizations, Narayanganj
- Representative from Private Hospitals/Clinics, Narayanganj
- Representatives from Schools and Colleges, Narayanganj
- Representatives from Business and Commerce Associations, Narayanganj
- Representatives from Media, Narayanganj

- Representatives from NGOs working in Narayanganj

Early in the planning process an Orientation Meeting was organized under the leadership of the City Corporation that plays the key role in disaster risk management. A validation/sensitization workshop was also organized under the leadership of the City Corporation in participation of all CCDMC and other relevant stakeholders to ensure that the plan addresses all emergency activities and issues concerns as well as to sensitize stakeholders about the Contingency Plan activities and facilitate their wider involvement and participation in emergency response. Then the draft plan was revised and finalized by incorporating the feedbacks from sensitization workshop.

2.5 Implementation Strategy

Responsibility

NCC shall undertake the leadership responsibility for implementation of the Contingency Plan. The CCDMC will be the operational arm of NCC for achieving the Plan's goal and objectives. The City-level Emergency Operation Center (EOC), relevant agencies, and clusters (as described in **Section 05**) will also play key roles in plan implementation.

Timeframe

Different portions of the Plan are meant to be implemented at different phases of the disaster management cycle:

- | | |
|-------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Preparation Phase (before a disaster strikes) | <ul style="list-style-type: none"> • Regular updates should take place cyclically according to the Periodic Review and Update Process as described in Section 2.6. • Additionally, the action strategies included in Section 5 should be implemented before a disaster. |
| Immediate Response Phase : (typically the initial 72 to 96 hours after a major disaster) | <ul style="list-style-type: none"> • The Plan will be activated when there is a disaster. At this time the Operational Framework will be activated and the EOC will assume its Response Phase roles as described in Section 5. • First responder agencies and cluster leads will be responsible for implementing the action strategies described in Section 6. • Once the immediate response has stabilized and focus has shifted from the operational priorities as described in Section 7, the City Corporation will deactivate the plan. |
| Later Response and Early Recovery Phases (after 72 hour of a major disaster) | <ul style="list-style-type: none"> • Although the Plan is no longer activated, it should be updated after a major disaster. • Monitoring and evaluation of the plan may also continue into the Recovery Phase. • Additionally, some City-level advocacy and plan institutionalization should be implemented at this time. |

2.6 Monitoring and Evaluation

Regular monitoring and evaluation enables changes in direction, refinement of approaches and elimination of unproductive activities. The City Corporation shall take necessary actions for

monitoring and evaluation of the plan annually as well as after a disaster event for which the plan was activated.

2.7 Periodic Review, Update and Management

The Contingency Plan may need not to be activated, unless the anticipated situation does arise. However, the plan may become outdated due to social, economic, organizational and other changes. Contingency Plan is a living document and should be updated on a regular basis to ensure that the information is current. During rapidly changing situations, plans will need to be updated more frequently; whereas under normal circumstances, less frequent updating will be sufficient.

- The plan should be reviewed and revised, as necessary, on an annual basis to ensure that the information is current.
- Every 5 years the plan should receive a major revision based on disaster risk assessment to reflect the current local situation.
- Plan should also receive an update after a major disaster event for which the plan was activated.
- The City Corporation should initiate the revision/ modification process and will engage CCDMC and other agencies/departments with relevant responsibilities.
- Each revision of the plan should be authorized by the City Corporation and any change or revision to this plan should be shared with relevant responsible agencies/ departments.

Section 03: Multi-hazard Vulnerability Profile

3.1 Multi-hazard Vulnerability in NCC

With its rapid economic development, population growth and unplanned urbanization, Narayanganj is becoming highly vulnerable to natural and human induced hazards. The Disaster Risk Assessment of NCC identified that major natural and human induced hazards in the area are earthquake, building collapse, fire, flood and water logging.

Earthquake vulnerability:

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. Several major active faults, e.g. the Madhupur fault, the plate boundary fault (the northern extension of subduction fault) and the Dauki Fault, are also inferred in Bangladesh. These faults may generate large earthquakes over Ms 8 (CDMP, 2009). In the past, there were several earthquakes that caused severe damages to life and properties in this region. Some of the major earthquakes around the region includes the 1548 earthquake, the 1664 earthquake, the 1762 earthquake, the 1869 Cachin earthquake (Ms 7.5), the 1885 Bengal earthquake (Ms 7.0), the 1897 Great Indian earthquake (Ms 8.4), and the 1918 Srimangal earthquake (Ms 7.6). Although, Bangladesh did not experience with any major earthquake since more than 100 years but the geological settings and the historical evidences of earthquake in the region may mean that Bangladesh has a high risk of major earthquake occurrence in near future (CDMP, 2009).

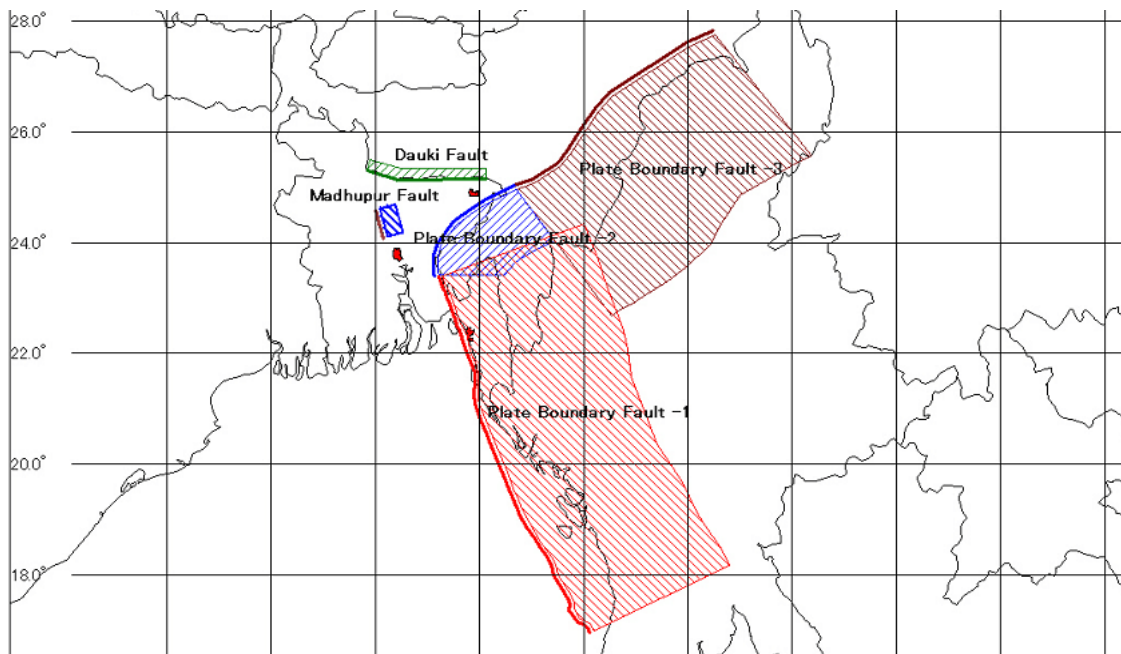


Figure 1: Generalized Tectonic Map of Bangladesh

In the generalized tectonic map of Bangladesh, Narayanganj is located in the medium risk zone. The Multi-hazard Vulnerability Assessment conducted by NCC with assistance of UNDP in 2016 shows

that about 5.92% buildings are very- high to highly vulnerable to earthquake disaster, and about 34.3% building are moderately vulnerable. Among 27 Wards of NCC, Ward-5, 6, 13, and 15 especially the areas such as Chasara, Nitaiganj, Ibrahim Garment area, Kumudini Group Area, ACI Industrial area, Tanbazar, Noyamati, Kalibazar, Dewbhug, Paikpara, Golachipa, Mondarpara, Hirajil, and Painadi are found as the most vulnerable to earthquake. The major causes of high vulnerability of these areas are concentration of old buildings, high-rise building, high population density, faulty construction, construction on filled lands and unplanned urbanization. Following table shows findings of earthquake vulnerability situation in NCC area.

Vulnerability Level	Very Highly Vulnerable	Highly Vulnerable	Moderately Vulnerable	Low Vulnerable	Not Vulnerable	Total
No of Building	1498	4197	33078	57182	286	96241
% of Total Building	1.56	4.36	34.37	59.42	0.30	100
% of NCC Area	3.04	3.36	18.78	23.60	39.89	100

Building Collapse:

Building collapse is an emerging urban disaster in Bangladesh. In last 10 years, there are many buildings in the country are being collapsed even without any earthquake. Major reasons of such building collapse are construction of buildings by filling up of low lands, lack of proper soil compactness, sub-standard construction quality, violation of building construction regulations, lack of proper mitigation measures, good governance, strained resources, and awareness.



There are many old buildings in NCC area those are highly vulnerable and may collapse any time even without earthquake. Many new buildings are also constructing by filling up of low lands and violating the building construction regulations, and increasing the vulnerability to collapse.

Fire hazard vulnerability:

Many parts of NCC is highly vulnerable to fire hazard because of high population and haphazard building construction, significant and unplanned industrial establishments, mixed of residential, commercial, warehouse and godown, storage of flammable substances, construction of buildings without adherence to proper planning and fire safety regulations, absence of sufficient setbacks, buildings close to electric transformers and unsecured gas connections, lack of fire-fighting equipment, absence of street hydrants, . Some areas are also characterized by an unplanned narrow road network which in many cases obstructs the entrance, movement and operation of fire service vehicles and ambulances during a

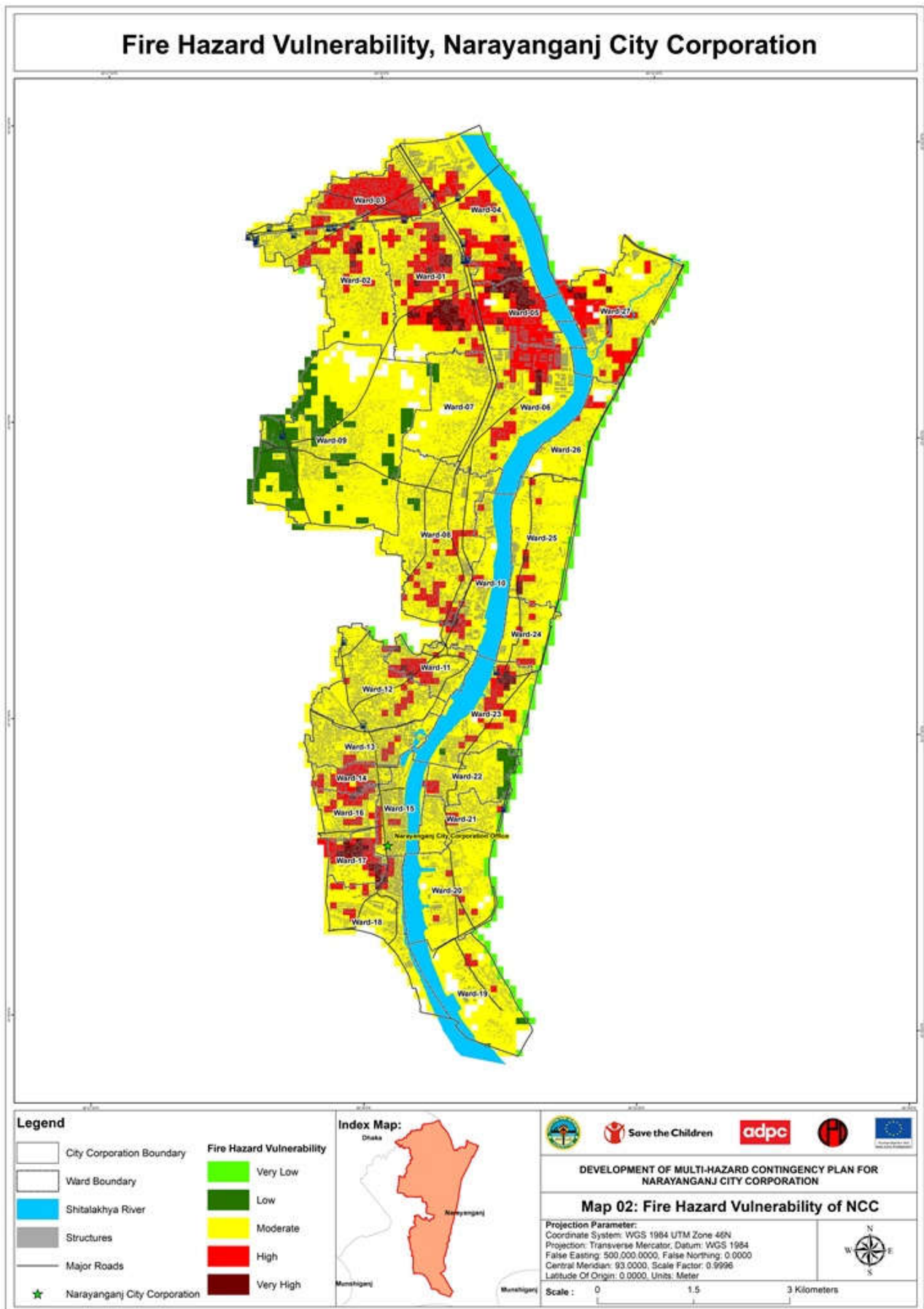


fire or other emergency. It is found that Wrad-5 10, 15 18, 23, 25 and 27 are vulnerable ward to fire hazard.

The occurrence of fires with huge damages and losses is very frequent in the City Corporation area. According to the record of FSCD Narayanganj, a total of 1,351 fire incidents occurred during 2013 to 2017 that caused a loss of total of almost Tk. 44.5 crore. Following table shows the major fire incidents in last five years in NCC area.

Date of occurrence	Location	Damage		Losses	
		Property	Monetary	Injuries	Death
13.03.2015	Siddhirganj, Narayanganj	8 houses, 8 Shops	50 Lacs	0	0
13.03.2015	Dhamgar, Bandar, Narayanganj	Cotton, Raw materials	3 Lacs	0	0
20.03.2015	Shimrail, Siddhirganj	4 shops	4 Lacs	0	0
20.03.2015	Sadar, Narayanganj	9 houses	NA	0	0
21.03.2015	Fatullah, Narayanganj	N/A	NA	0	1
23.03.2015	Siddhirganj, Narayanganj	1 shop	7 Lacs	0	0
24.03.2015	Sonargaon	30 houses	NA	0	0
03.07.2015	Fatullah	50 Slum houses	NA	5	
10.08.2016	DIT Market	1 Shop	NA	0	0
26.02.2017	Kachpur	RMG factory	1 Lac	0	0
28.02.2017	Bandar	N/A	NA	5	0
02.03.2017	Araihazar	1 Cotton Godown	1 Crore	0	0
10.12.2017	City Corporation market, Tanbazar, Narayanganj	UCB Bank	N/A	0	1
07.03.2018	Sadar	1 Jute warehouse	1 Crore	0	0
05.04.2018	Fatullah	N/A	N/A	3	0
09.04.2018	Fatullah	14 Godwon, 60 semi structured houses	N/A	0	0
28.04.2018	Nitaiganj	16 Shops	8 Lac	0	0

Map-02 shows the fire risk in different locations of NCC.



Waterlogging:

Waterlogging during monsoon is a common problem in NCC and many areas gets waterlogged because of moderate to heavy rain. Ward- 1, 2, 7, 8, 9, 11, 12, 19, 20, 23 and 24 are found as the most vulnerable wards to waterlogging. The major waterlogged areas in the City Corporation area are listed in the following table:

Name of the waterlogged area	Ward No.	Duration of water logging	Depth of water (ft.)	Reason
Full area of DND and Baten Para of Painodi	1	2-3 months	2	Blockage of drainage
South area of Mijmiji	1	2 months	1.5-2	Blockage of drainage
Sabeh Para	1	1.5 months	1.5-2	Blockage of drainage
South area of Mijmiji	2	2 months	1.5-2	Blockage of drainage
Sabeh Para	2	1.5 months	1.5-2	Blockage of drainage
Ajibpur and Ati	4	2-3 days	0.5	Low land
West Kolabag (Part)	5	5-7 days	2	Low land
East Kolabag (Part)	5	4-5 days	1	Damaged drainage network
East-West Moonlight	6	7 days	1	Low land
Adamji Nagar	7	12 months	1	Blockage of drainage
College road	7	6 days	1	Blockage of drainage
Kadamtali road	7	7 days	1	Blockage of drainage
Middle area of Kadamtali	7	7 days	1	Blockage of drainage
DND road	7	25 days	2	Blockage of drainage
Tatmana	8	7 days	1	Low land
Kenel road	8	2 days	1	Damaged drainage network
Lucky Bazar	8	2 days	1	Damaged drainage network
Dhonkunda	8	2	1	Damaged drainage network
Boroitola	9	5 days	1	Blockage of drainage
Kenel road	9	7 days	1	Blockage of drainage
Godanail	10	1 day	1	Low land
Rasulbag	10	1 day	0.5	Low land
Hajiganj	11	1 day	1	Damaged drainage network
Rail line	11	1 day	1	Damaged drainage network
Esdail	12	5 days	1	Low land
Rail line road	12	1 days	0.5	Damaged drainage network
Manpur Bank Colony	12	2 hours	0.5	Blockage of drainage
Masdair Bazar	13	2-3 days	0.5-1.5	No drainage
Nowab Shirazuddoula Road	13	12 months	1	Blockage of drainage
Nandipara	14	1 hour	1	Low land
Reli Bagan	15	2-4 hours	1	Low land
S. S. Saleh Road	15	2-3 hours	1.5	Blockage of drainage
West Jimkhana	15	5-6 hours	1.5	Low land
Behind of Bapery Para Primary	20	All time	4-5	Drainage blockage

Name of the waterlogged area	Ward No.	Duration of water logging	Depth of water (ft.)	Reason
School				
In front of Enaeyat Nagor Sanowar House	20	All time	1-1.5	Low land
Baroi Para Road	21	3-4 days	1.5-2	No drainage
From Solper Chor to Pachar Bandh	23	All Time	2-3	Drain blockage
From Bagh Bari to Chan Badsha Bandh	23	All Time	1-1.5	Drain blockage
Railway Area	25	All Time	5	Damaged drainage network
Railway Area	26	12 months	1.5	Damaged drainage network
Behind of Kuti Para Jahir Sab Pagla Majar	27	1 month	2	Damaged drainage network
East part of Chapatoli Sareng Shah Majar	27	1 month	4	Damaged drainage network
South & West side of Darji Bari	27	1 month	4	Damaged drainage network
From Kuri Para Vangti pul to West side of Bage Jannat Agricultural land	27	All Time	5	Damaged drainage network

During moderate to heavy rainfall, these areas get inundated from 1 day to all over the year with 0.5ft to 5ft of water. The major causes of waterlogging in these areas are low land, poor or lack of drainage system, insufficient capacity of the existing drainage system, blockage of the drainage system due haphazard disposal of solid waste, and lack maintenance.



Map-03 shows the waterlogging risk in different locations of NCC.



Section 04: Available Resources and Capacities

The available resources and capacities to be used for response towards an earthquake, building collapse, flood, fire or any other major disaster in NCC area are discussed below:

4.1 Search and Rescue

There will be a huge requirements of specialized teams to search and rescue of likely trapped (both injured and dead) population inside the collapsed or fire affected buildings.

The specialized search and rescue capacity mainly exists with the Fire Services and Civil Defense (FSCD), Armed Forces Division (AFD), and Bangladesh Red Crescent Societies (BDRCS). Currently, there are 4 FSCD stations within NCC area (Mondolpara, Hajiganj, Bandar and Nodi) which will primarily be responsible for conducting specialized search and rescue operation in NCC area. The BDRCS in Narayanganj, and nearby FSCD and AFD in Dhaka will support local FSCD during an emergency depending on their resource availability and operational priorities. The available manpower in 4 FSCD within NCC and their available emergency response equipment are given in **Table 1& Table 2 in Annex-A**.

The Urban Community Volunteer trained by FSCD for Narayanganj City along with the volunteers trained by Save the Children in Ward no. 15 & 16 will provide all support to the specialized team for search and rescue operation and other cluster during an emergency situation. List of these volunteers with detailed information is given in **Table 3, 4&5 in Annex-A**. The location of FSCD and other key emergency first responder agencies within NCC are shown in **Map 4 in Annex-B**.

4.2 Immediate Evacuation Spaces

The likely displaced population due to earthquake, building collapse or fire incident will need to be evacuated immediately to the nearest open spaces. There are good number of open spaces in NCC area (considering @ 1 sq. m. /person as standard) to accommodate the likely displaced people for immediate evacuation purpose (assembly after the earthquake, building collapse and fire).

The open spaces available in NCC include smaller areas ranging from hundreds to thousands sq. m. The smaller spaces are appropriate only for immediate evacuation purposes, whereas only bigger ones (larger than 1,000 sq. m. which can accommodate more than 20 families) are considered as appropriate for temporary shelter purpose. Currently, there is about 51,240 sq. m. of open spaces within NCC area that can be used for immediate evacuation purpose. The lists of these open spaces and their population holding capacities are given in **Table 6 in Annex-A** and their locations are shown in **Map 5 in Annex-B**.

4.3 Evacuation Routes

The list of proposed evacuation routes that can be used for safe evacuation of the population from different areas are given in **Table 7 in Annex-A** and shown in **Map 6 in Annex-B**. Only the roads of 20ft and above width are usually considered for safe evacuation, because other smaller urban roads inside the City Corporation will likely to have higher possibilities of blockage due to road damage itself or due to falling debris from damaged buildings.

4.4 Fire Control

An earthquake or building collapse may result in multiple conflagrations immediately that can burn out of control due to insufficient capacity of FSCD, delay of fire-fighting agency and/or limited access to the affected areas, and lack of water sources. The locations of water supply sources within NCC are shown in **Map 7** in **Annex-B**.

4.5 Health Facilities

Currently, there are 33 major hospitals, clinics and diagnostic centers within City Corporation area with total of 1,070 hospital beds available for use. The list of hospitals, clinics and other medical facilities and their capacities are given in **Table 8, 9 & 10** in **Annex-A** and locations are shown in **Map 8** in **Annex-B**. An earthquake will likely cause moderate to severe damage to many hospital buildings that may not be available for use on the first day of the earthquake. The total beds will also not actually be available for disaster victims, because some of these will be pre-occupied by regular patients. Assuming 50% will be already occupied by regular patients; actual available number of beds for earthquake victims will be 535. A good number of big hospitals are also located nearby the NCC area that will provide health services during a major disaster depending on their capacity and priority. A list of big hospitals nearby the NCC is given in **Table 11** in **Annex-A**. Besides, as Narayanganj City is located very close to Dhaka City, the major hospitals in Dhaka will provide significant support of health services to the injured depending on the resource availability.

4.6 Emergency Shelters

All the displaced population due to earthquake or other disasters may not require shelters to be provided by government and relief organizations. Part of them will take shelter at their relatives' and friends' houses, or may rent out spaces in remaining buildings (undamaged or partially damaged). It is assumed that approximately 50% of the displaced population will manage their shelters by their own. Remaining 50% population will require shelters provided by the City Corporation and other organizations.

After an earthquake, open spaces such as parks, playgrounds, recreational centers etc. are potential shelter areas for the homeless population. Only bigger open spaces are proposed for emergency temporary shelter purpose. The list of these proposed shelter sites and their capacities are given in **Table 12** in **Annex-A** and locations are shown in **Map 9** in **Annex-B**.

Existing educational buildings (e.g. school, college, universities, etc.) and communal buildings (e.g. community centers, auditorium, etc.) can also be used as temporary shelter purpose depending on the season as well as their level of functionality after the earthquake. The detailed information of education building in NCC area that can be used for shelter purpose is given in **Table 13** in **Annex-A** and their locations are shown in **Map 10** in **Annex-B**.

4.7 Relief Services (food, nutrition and other relief)

Currently there are three private godowns within NCC that store food. The list of these godowns including their location and capacity is given in the **Table 14** in **Annex-A**.

The requirements of food and other relief items for the people living in shelter camps in different locations of NCC have been calculated for daily and monthly requirement using the SPHERE standards for emergencies and given in **Table 15** in **Annex-A**. Based on current production in Bangladesh, four types of food items such as flour, rice, lentil, vegetable oil and salt are taken as the most common foods. These are also appropriate food for storage and distribution during an emergency.

4.7 Water Supply, Sanitation and Hygiene

Average water use for drinking, cooking and personal hygiene in any household is at least 15 liters per person per day. Likewise, for excreta disposal purpose, one toilet is required for a maximum of 20 people. Assuming this as a minimum requirement, the total quantity of water and total number of toilets required in different shelter camps is calculated and given in **Table 16** in **Annex-A**.

4.8 Transportation

One of the immediate actions related to road transportation network, after an earthquake or a fire incident, is to open some key roads facilitating search and rescue operation. Search and rescue equipment are needed to be transported to different locations for the effective rescue of the trapped population. Injured people are also needed to be transported to different health facilities. Currently there are 16 ambulances with different hospitals and clinics within NCC area that will provide the primary support to transport the injured. The direct damage to the road network and the heavy damage to the buildings indicate that most of the roads get either directly damaged or get blocked due to debris.

It is assumed that significant quantity of debris will likely to be generated from a high magnitude earthquake which will require a huge number of truckloads. Usually, 25 tons per truck is considered for removal of the debris. Currently there are 1065 licensed trucks in Narayanganj City. The locations of fuel re-filling stations within the City Corporation that can be used for vehicle re-fueling purpose are shown in **Map 11** in **Annex-B**.

4.9 Security and Welfare

General security to the affected area including crowd management as well as the management of emergency shelter camps is also needed to be provided according to the national standards and the capacity of the police, RAB, BGB and Ansar & VDP in the City Corporation area.

It is assumed that during a damaging earthquake at night-time or devastating disaster, a considerable number of people will likely to be killed immediately in the City Corporation. These dead bodies need to be managed properly at proper locations and as per the proper cultural and religious norms.

Section 05: Operational Framework

5.1 Overview of Operational Framework

The disaster response operation in the City Corporation will be carried out through a City-level response framework to standardize the activities of first responder agencies. The basis of this response framework will be the establishment of a multi-tiered Emergency Operation Center (EOC) and functional response cluster system.

Establishment and Activation of EOC:

An EOC will be established and activated to support and coordinate the emergency response activities.

Box 5.1: Requirements for establishment of an EOC

- An EOC is a physical location where disaster response and recovery activities are authorized, coordinated and monitored, and information are disseminated during and after a disaster event.
- A dedicated office space in the City Corporation building is the best suitable place for EOC.
- The EOC should be equipped with uninterrupted communication facilities, including VHF, HF, mobile telephone, satellite telephone, landline telephone, fax facilities, internet connection, computers, and GIS capability as well as response kits and personal protective equipment.
- It will function for 24 hours a day and establish a staff roster system to ensure adequate personnel are available at all times.

The major functions of the EOC are:

- Ensure effective management, coordination and communication of all elements involved in emergency response operation.
- Establish communications with National EOC, first responder agencies, other government agencies, hospitals and clinics, private sector agencies, national and international NGOs, and donor agencies and disseminate information to support response operations with required physical and financial resources.
- Act as a focal point for the receipt, timely collection, analysis and dissemination of vital information concerning the event.
- Monitor and assess the progress of on-going response and recovery activities to provide a more complete operational picture to National EOC, concerned government agencies, non-government organizations and media.

Functional Response Cluster System:

In the immediate aftermath of a major disaster and its impact in the City Corporation area, there will be huge tasks related to emergency response, such as damage and need assessment, search, rescue and evacuation of trapped population, treatment of injured, providing shelters and relief supplies to displaced people, restoration of critical facilities, public security and welfare, etc. Experience shows that many of these response activities are complex and need to be implemented by a number of

different agencies. All these stakeholders need to work together in a systematic and coordinated manner so that their capacities and resources are best utilized for optimum and efficient response.

Because of this, the disaster response and recovery activities that are being implemented at EOC will be organized in accordance to the functional cluster system. This system is used to assign leadership, strengthen partnerships, and ensure more predictability and accountability in disaster response by clarifying the division of labour among agencies and better defining their roles and responsibilities within the key sectors of the response. The functional clusters include:

- Command and Coordination
- Search, Rescue and Evacuation
- Healthcare Services
- Logistics Support
- Relief Services (Food and Non-food, Nutrition, and Other Relief)
- Shelter (Including camp management)
- Water Supply, Sanitation and Hygiene
- Transportation
- Security and Welfare
- Immediate Recovery - Restoration of Urban Services

5.2 Phases of EOC Operations

The capacity of the City-level EOC will fluctuate throughout the different disaster phases. During the non-emergency phase (preparation phase) the EOC will have limited permanent staff who will be responsible for maintaining the physical EOC space and equipment. The permanent staff will also be responsible for organizing drills and simulations for first responder agencies so that they are familiar with the EOC structure and prepared to relocate operations there at the on-set of a disaster. Once there is an emergency, the capacity of the EOC will expand and representatives from first responder agencies will move to the EOC to manage their agencies' and relevant cluster's response activities. During the recovery phase as response activities taper off, the EOC will again resize and different personnel may be stationed there to lead recovery activities.

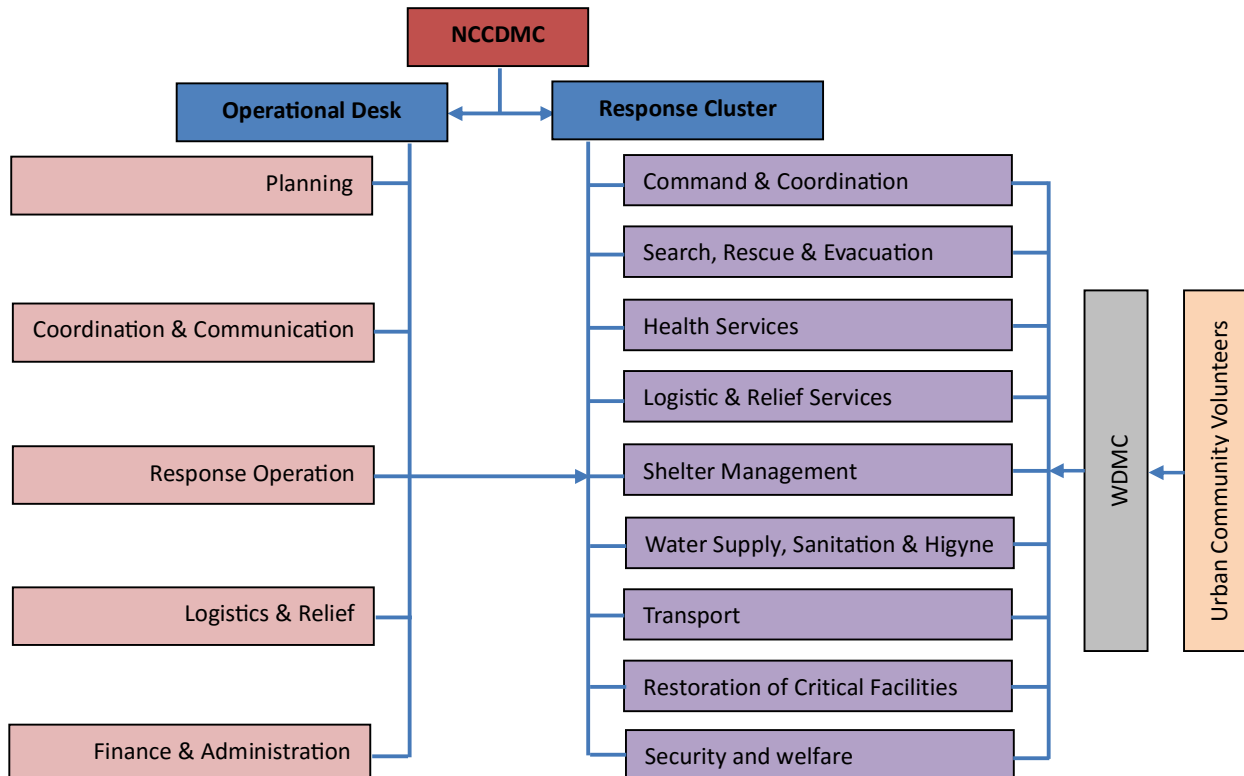
The priorities of the EOC personnel during the different disaster phases include:

Disaster Phases	Priority Activities
Pre-disaster Phase	<ul style="list-style-type: none"> • Maintaining the physical EOC space and equipment • Monitoring and evaluation for ensuring readiness among first responder agencies through a readiness reporting system • Capacity building of agencies, community volunteers and individuals • Resource mobilization and distribution to cope up with the resource constraints of first responder agencies • Managing the plan for EOC expansion in a disaster situation • Maintaining a database of manpower, resources, equipment, etc. for use in emergency situations • Resource mapping and capacity assessment • Maintenance of web-based emergency response plan updating system
	<ul style="list-style-type: none"> • Emergency coordination, command, and response management • Providing technical assistance to first responder agencies and cluster leads

During Disaster Phase	<p>to ensure an efficient recovery mechanism</p> <ul style="list-style-type: none"> • Conducting damage assessment and need analyses • Keeping records (on damages, losses, and response needs) in order to meet the needs of the affected and provide necessary information for assistance (including cash appeals) to external agencies • Coordinating and implementing disaster response activities • Reviewing and monitoring of progress of disaster response activities and reporting to Government authorities
Post-disaster Phase	<ul style="list-style-type: none"> • Developing a plan for phasing out response activities when no longer necessary and then phasing out response activities when appropriate • Implementing a plan for phasing out response activities undertaken by first responder agencies • Undertaking priority actions in coordination and partnership with service agencies (such as gas, electricity, water, telecom, etc.) for the restoration of critical facilities and urban services • Preparing to hand over functional responsibilities in relation to coordination, command, and management to agencies responsible for recovery activities • Developing a structure for handing over management to permanent recovery planning agencies • Reviewing and monitoring the progress of response activities • Carrying out an evaluation of response management so that shortcomings can be integrated in the review process of the National Earthquake Contingency Plan

5.3 Leadership and Operational Structure of City-level EOC

Following diagram presents the Operational Structure of City-level EOC:



The City-level EOC will be operated under the leadership of the City Corporation with the full support and active participation of CCDMC as stated in the Standing Order on Disaster.

The EOC will be led by the City Mayor as the EOC Chief and assisted by the Coordinator, Operation Officer, Panel of Technical Experts and Administrative System.

The operational function of the EOC will be organized under the responsibility of following desks:

Desk	Responsibilities
Planning	<ul style="list-style-type: none"> The Planning Desk is primarily involved in evaluating the disaster situation, providing overall strategic and policy directions, establishing unified actions across the City Corporation, deciding which resources should be used to achieve disaster response in the most efficient and cost-effective manner, and liaison with CCDMC, NCC, National EOC, Emergency Service Providers, National and International Humanitarian Agencies, etc.
Coordination and Communication	<ul style="list-style-type: none"> The Coordination Desk is responsible for acting as a focal point for receiving all incoming information, including reports of damages, casualties, and requirements from the affected areas, processing and analyzing the information, and disseminating to the public and media.
Operation	<ul style="list-style-type: none"> The Operation Desk is responsible for conducting tactical field operation to carry out response activities as per the plan, including the overall coordination among field-level technical response clusters, and ensuring operational continuity.
Logistic	<ul style="list-style-type: none"> The Logistic Desk provides support to supply resources and all other logistic services needed to meet the incident needs. It is also responsible for coordinating and making request for additional support from National Authorities, first responder agencies, other government agencies, and private sector agencies as needed from field-level technical response teams.
Finance and Administration	<ul style="list-style-type: none"> This desk monitors the costs related to incident management. It provides accounting, procurement, time recording, and cost analyses.

These desks and the EOC administrative system are responsible for maintaining the coordination, cooperation and operations of the EOC and sustaining an environment which enables the clusters to implement the response and recovery activities. The EOC will provide situational information to the clusters as it becomes available. It will also exchange information with National EOC on a regular basis.

During emergency, the EOC will house a number of technical teams as per the functional response clusters. Each team will be led by a first responder agency with relevant mandates, and consisting of selected members (trained and experienced in respective fields of response or support activities) from support agencies/departments as well as urban community volunteers. Cluster leadership and membership has been designated and actions are outlined in **Section 5**.

5.4 Role and Organization of Urban Community Volunteers

Fire Service and Civil Defence (FSCD) is one of the lead government agencies which remain alert for 24 hours a day to manage any disaster in Bangladesh. However, the current total manpower of FSCD is not adequate in respect of necessity. FSCD has initiated to train the community volunteers on disaster management especially on earthquake and fire so that they can serve the people in case of any disaster before the arrival of professionals even they can assist the professionals after their arrival. In NCC area there are about 427 trained volunteers to provide immediate assistance to carry out light search and rescue operation and fast aid support to injured persons. These volunteers are mainly trained by and associated with FSCD, BDRCS and NCC Ward no. 15 & 16. As a local resource, this volunteer group will be used in a number of support roles to augment emergency operations. Detailed information of urban community volunteers to work for response activities in NCC is given in the **Table 2, 3 & 4** in **Annex-A**.

5.5 Coordination with Internal Agencies

During an emergency, in the interest of speed and simplicity in disaster response management, coordination should be carried out at the lowest possible level of the government organization, with minimum reorganization of Ward Disaster Management Committees. Hence, to decentralize the responsibilities during an emergency, coordination among City-level government organizations will be carried out as per the structure of City Corporation Disaster Response Coordination Group (CCDRCG) as placed in the Standing Order on Disaster (SOD).

While not physically present at the EOC, supporting agencies play a critical role in disaster management at the City-level. They are cluster members and work with the first responder agencies who serve as cluster leaders to implement response and recovery activities. Close coordination within the clusters (vertically among leadership and members and horizontally among members) is imperative to prevent both gaps in service and redundancy. Relationships between cluster members should be fostered during the preparation phase and continued throughout response and recovery phases. Each cluster should form its own system of communication and meeting structure which should be tailored to the level of coordination needed. Some supporting agencies may be responsible for a variety of tasks which necessitate membership in more than one cluster. These agencies will be obligated to meet the requirements of cluster membership for each and should designate staff to participate accordingly.

In addition to the activities undertaken by cluster-specific lead and support agencies, private sector plays a critical role in emergency management. These roles may include being an impacted organization, a response resource, a partner in preparedness, and/or a component of the economy. There should be communication and coordination with the private sector to provide support through public-private partnerships, associations, and contractual agreements in responding to and recovering from a major earthquake and fire hazard.

5.6 Coordination with External Agencies

The City-level EOC will notify the National EOC of any shortfall of resources and support needed. The National EOC will direct resources available at national and other City/town-level to assist the affected City Corporation.

Section 06: Action Strategies

Cluster-wise action strategies comprising detailed activities before, during and after a major earthquake, building collapse and fire hazard in NCC area and responsible lead and support agencies are described below:

CLUSTER 1: COMMAND AND COORDINATION

Lead Agency	Narayanganj City Corporation Disaster Management Committee (NCCDMC)	
Support Agencies	DC Office, FSCD, DRRO, AFD, Civil Surgeon Office, BP, RAB, Ansar & VDP, BGB, Media, CSO, PDB, BTCL, TGCL, PWD, RHD, DWASA, NGO	
Primary Objectives	<ul style="list-style-type: none"> To prepare a framework for integrated response efforts by formulating a well-coordinated system for reduction of impacts of potential earthquake events 	
	Activities	Support Agencies
Pre-Disaster Phase	Development of Standard Operation Procedure (SOP)	FSCD, AFD, BP, Ansar & VDP, RAB, BGB
	Establishment of City level 24/7 Emergency Operation Centre and participate in EOC operations and reporting of readiness	FSCD, AFD
	Setting up earthquake Incident Command Systems (ICS) in place (establishment, training and capacity building) where appropriate	FSCD, BP, Ansar & VDP, RAB, BGB
	Organizing ICS training and nominate representatives to participate in ICS established at various levels	FSCD, BP, Ansar & VDP, BGB
	Development of a disaster event response reporting system by stakeholder agencies (impacts, resource needs, actions by them for reducing the impact, difficulties, opportunities etc.) during earthquake	DC Office, BP, Ansar & VDP, RAB, BGB
	Promotion of informal education on earthquake Contingency Plan operations at all levels and conduct simulations	Media, WDMC, NGO, UCVs XX
	Development of guidelines for media agencies on reporting disaster events, procedures for public information dissemination related to emergency declaration, announcements and warnings on aftershocks, and disseminate public awareness and advocacy material to support Contingency Planning and implementation	DC Office, National and Local Electronic and Print Media
Emergency Response Phase	Facilitating mobilization of earthquake incident command system where necessary under the command of AFD and networking with organizations under ICS	DC Office, FSCD, AFD, DRRO, Office of Civil Surgeon, BP, BR, BPDB, BTCL, TGCL, DWASA
	Executing operation surveillance continuously covering all the earthquake affected areas	DC Office, FSCD, AFD, DRRO, Office of Civil Surgeon BP, BR, BPDB, BTCL, TGCL
	Mobilization of ICS teams at lower level command structure	DC Office, FSCD, AFD, DRRO, Office of Civil Surgeon BP, BR, BPDB, BTCL, TGCL, Local Newspapers
	Facilitating coordination of logistic supply management	DC Office, FSCD, AFD, DRRO, Office of Civil Surgeon BP, BR, BPDB, BTCL, TGCL, DWASA

	Assisting authorities for communications with media in relation to information dissemination on welfare of victims, missing and found, results on damage assessment surveys, results on need assessment surveys and facilitate media coverage by media agencies on reporting earthquake event	DC Office, DRRO, National and Local Electronic and Print Media
	Facilitating public information dissemination related to emergency declaration, announcements and warnings on aftershocks and repeat of occurrences of other collateral hazards due to aftershocks	DC Office, DRRO, National and Local Electronic and Print Media
Early Recovery Phase	Coordinating Operation Surveillance to reduce impacts due to aftershocks	AFD, FSCD, DRRO, Office of Civil Surgeon, BPDB, DC Office
	Facilitating coordination of logistic supply management and deployment of resources to affected areas, IDP camps etc.	DC Office, FSCD, AFD, DRRO, Office of Civil Surgeon BP, BR, BPDB, BTCL, TGCL, DWASA
	Conducting Post disaster Evaluation of performance of <ul style="list-style-type: none"> • earthquake incident command system and recommend improvements • performance of National EOC and improvement where necessary 	DC Office, FSCD, AFD, DRRO, Office of Civil Surgeon BP, BR, BPDB, BTCL, TGCL, DWASA
	Facilitating continuation of EOC operations and periodic reporting during early recovery period to EOC on involvement of all first responder organizations in earthquake event management and for necessary assistance	DC Office, FSCD, AFD, DRRO, Office of Civil Surgeon BP, BR, BPDB, BTCL, TGCL, DWASA
	Facilitating media coverage by media agencies on reporting of post-earthquake disaster event situation analysis and facilitate public information dissemination related to emergency declaration, announcements and warnings on aftershocks and possible impacts due to collateral hazards	Local electronic and print media
	Assisting authorities for communications with media in relation to information dissemination on welfare of victims, Missing and found, results on damage assessment surveys, results on need assessment surveys	DC Office, DRRO, Local Electronic and Print media
	Review of the Contingency Plans under the Cluster - Emergency Operations- Overall Command and Coordination and revise the same to include suitable modifications to improve the performance	DC Office, FSCD, AFD, DRRO, Office of Civil Surgeon BP, BR, BPDB, BTCL, TGCL, DWASA

CLUSTER 2: SEARCH, RESCUE AND EVACUATION

Lead Agency		Fire Service and Civil Defence (FSCD), Narayanganj
Support Agencies		NCCDMC, DC Office, AFD, DRRO, BP, RAB, Ansar& VDP, BGB, Media, CSO, PDB, BTCL, TGCL, PWD, RHD, BR, BDRCS
Primary Objectives		<ul style="list-style-type: none"> To prepare effective plan for emergency services (search, rescue, evacuation, first aid, fire safety etc.) by ensuring inter-agency coordination at city level To build capacity of concerned agencies and urban community volunteers, and develop guidelines in the light of national and international practice
Activities		Support Agencies
Pre-disaster Phase	Developing guidelines for urban search and rescue	AFD, BDRCS, BP, DC Office
	Cataloguing/procurement of equipment for special search & rescue, and develop procedure for ensuring access	AFD, Office of Civil Surgeon, BDRCS
	Capacity building for creating special units for urban search and rescue from collapsed buildings, infrastructure, medical first response	AFD, Office of Civil Surgeon, BDRCS
	Capacity building of community first responder groups in search and rescue operations, medical first response	AFD, Office of Civil Surgeon, BDRCS
	Developing medico-legal procedure for identification and tagging of dead bodies with health group	AFD, Office of Civil Surgeon, BDRCS, NGOs
	Ensuring fire safety preparations (through pre-positioning of fire hydrants, fire stations, developing data base of sources of water, storage of material etc.)	DC Office, PDB, BTCL, TGCL, DWASA
	Pre-positioning of tools , equipment and accessories, get the civil authorities to develop inventories of such equipment available for use during earthquakes	AFD, DC Office, RHD, BR, BPDB, BTCL, TGCL, DWAS
	Preparing resource inventory (equipment, tools, accessories and manpower etc.) and Procurement of necessary tools and equipment for urban search and rescue operations to fill the agency level gaps	AFD, CS Office, DRRO, BP, Ansar & VDP, BR, PDB, BTCL, TGCL, DWASA
	Preparing guidelines for logistic supply management and deployment of resources	AFD, CS Office, DRRO, BP, Ansar & VDP, BR, PDB, BTCL, TGCL, DWASA
	Capability assessment of agencies who could be involved in search and rescue operations	AFD, Office of Civil Surgeon, BDRCS, BP
	Organize time to time drills on emergency preparedness in key institutions, markets, educational institutions, etc. and review the status	NCCDMC, AFD, BDRCS, DRRO

	Design and implement an awareness program to improve the understanding of mass people on earthquake and fire safety, rescue operation, safe evacuation and first aid	NCCDMC, AFD, BDRCS, DRRO, media, NGOs
	Develop and manage urban community volunteers. Train them regularly in coordination with DDM and NCC	NCCDMC, AFD, BDRCS, DRRO
Emergency Response Phase	Carry out the inter-agency coordination to optimize the efforts of search and rescue teams by providing necessary guidance and inputs.	AFD, BP, Ansar & VDP, BDRCS
	Coordination with national and international teams engaged in search and rescue and coordination of information supply and feedback	AFD, Office of Civil Surgeon, BDRCS, DC Office
	Mobilizing special teams of search and rescue from collapsed buildings and infrastructure	AFD, CS Office, BDRCS, DC Office
	Mobilizing necessary additional manpower, tools and equipment for search and rescue operation from other stations located outside the affected area	AFD, Office of Civil Surgeon, BDRCS, BP
	Mobilizing community based social volunteer networks and trained first responders from unaffected areas to support the search and rescue parties	Ansar & VDP
	Make arrangements to obtain resource inventory and data base for search and rescue operations and provide information based on the spatial data on rapid loss estimation	AFD, Office of Civil Surgeon, BP, DRRO
Early Recovery Phase	Networking with organizations and mobilize support for search and rescue operations in areas which are difficult to reach	AFD, CS Office, BP, DRRO, NGOs
	Mobilizing community based social volunteer networks and trained community first responder groups to assist special units mobilized for search and rescue from collapsed buildings and infrastructure	BP, BDRCS, Ansar & VDP, Office of Civil Surgeon
	Make arrangements to access resource inventory items for search and rescue operations and mobilize support of external groups for search and rescue operations	AFD, DRRO, NGOs, CS Office
	Monitoring and evaluation of <ul style="list-style-type: none"> Post disaster performance evaluation of special units mobilized for search and rescue from collapsed buildings and infrastructure Inter-agency coordination functions All relevant emergency services in operation in earthquake affected areas aiming at reducing the human casualties 	AFD, Office of Civil Surgeon, DRRO, BP, Ansar & VDP
	Review of the Contingency Plan under the Cluster - Search Rescue and Evacuation and revise the same to include suitable modifications to improve the performance	AFD, Office of Civil Surgeon, DRRO, BP, Ansar & VDP

CLUSTER 3: HEALTH SERVICES

Lead Agency	Office of the Civil Surgeon, Narayanganj	
Support Agencies	NCCDMC, FSCD, AFD, DRRO, BP, BDRCS, Hospital and Clinic Authorities, CSOs, Media, NGOs	
Primary Objectives	<ul style="list-style-type: none"> To minimize human casualties by establishing an efficient medical first response system in areas with high disaster risk To enhance the hospital emergency medical care through development of hospital preparedness plans To build capacity for setting up a well-organized mass casualty management system To develop epidemic surveillance system to prevent outbreak of epidemics during post-disaster period 	
	Activities	Support Agencies
Pre-disaster Phase	Hospital preparedness planning and training on Hospital Preparedness for emergency operations	NCCDMC, BDRCS, NGOs
	Methodology development for handling of dead and missing during earthquakes and fire emergencies	AFD, BDRCS, NCCDMC
	Developing networks with private hospitals and clinics within the area and in the neighborhood for support during the emergencies	NCCDMC, Hospitals and Clinics
	Developing alert system for hospital staff including doctors to report for work during emergencies such as earthquakes	NCCDMC, AFD, Hospitals and Clinics
	Setting up of 24/7 State of the art ambulance services	AFD, FSCD, NCCDMC, Hospitals and Clinics
	Identifying needs for pre-positioning of medicine, temporary hospitals etc. and obtain the necessary resources	AFD, FSCD, NCCDMC, NGOs
	Methodology development for epidemic surveillance and control	AFD, FSCD, BDRCS
	Conduct operation surveillance training for all First Responder Organization for quick mobilization in earthquake events	
	Impart training to community medical first responders within the City Corporation and develop a database	AFD, FSCD, BDRCS
	Methodology development for estimation of casualty and human injury	AFD, FSCD, NCCDMC
	Methodology development for estimation of livestock, number of injured people and casualty	AFD, FSCD, NCCDMC
Emergency Response Phase	Organize drills on emergency health services regularly and review the status	AFD, FSCD, BDRCS, NCCDMC
	Mobilizing health teams for providing emergency medical care to displaced persons.	AFD, FSCD, DRRO, NGOs
	Activating the alert system for hospital staff and voluntary groups to report to hospitals and medical centers as planned	Hospital and Clinic authorities
	Mobilizing health teams to provide first aid to displaced and injured when and where necessary	FSCD, NGOs, BDRCS
	Mobilizing health teams for setting up of temporary hospitals in suitable locations, when and where necessary to treat injured and sick after the disaster event	AFD, NCCDMC

	Mobilizing pre-positioned medical facilities , Mobile Hospitals etc. to treat injured and sick	AFD, FSCD, NCCDMC
	Mobilizing support from other hospitals (Private hospitals, hospitals located elsewhere etc) when and as needed and coordinate with private and International Medical Teams to optimize their contributions to national efforts in saving lives and treatment of critically injured.	Hospital and Clinic authorities, FSCD, NGOs
	Mobilizing medical first responders within the City Corporation to assist field medical teams, Hospitals and Medical Clinic authorities	Hospital and Clinic authorities, AFD, FSCD, CCDMC
	Mobilizing trained Triage teams to affected City Corporation and control points, transportation of injured to hospitals	Hospital and Clinic Authorities, NCCDMC
	Mobilizing ambulance services to transport sick and injured	Hospital and Clinic authorities, AFD, FSCD, NCCDMC
	Mobilize health teams for tagging of dead bodies and locating missing during the disaster event	AFD, BP, FSCD
	Get assistance from qualified professionals to conduct rapid damage assessment of all health infrastructure within the City Corporation and identify suitability for usage for treatment of injured and sick	AFD, FSCD, NCCDMC
	Establishing counseling centers	CCDMC, NGOs
Early Recovery Phase	Continue providing emergency medical care to displaced persons.	AFD, DRRO, NCCDMC
	Conduct the M&E and performance evaluation of Health cluster activities and introduce necessary modifications to improve the performance	AFD, FSCD, DRRO, BDRCS, NGOs
	Conducting evaluation of performance of medical first responder groups and improve the methodology for training and simulations	NGOs, Media
	Conducting the evaluation of ambulance services to transport sick and injured during emergencies and introduce modifications to improve the services	NGOs, Hospital and clinic authorities
	Continue assistance to authorities in mortuary services(such as identifying dead & missing, issue of death certificates for disposed and inventorying and maintenance of records etc)	AFD, FSCD, DRRO, NGOs, BDRCS
	Follow medico-legal procedure for identification and tagging of bodies, disposal of dead bodies	BP, AFD, FSCD, NCCDMC, NGOs
	Conducting evaluations of the level of preparedness & performance during emergency by all hospital and medical institutions	AFD, Media, CSOs
	Conducting review of the Contingency Plan for the Health Cluster agencies and revise to integrate the improvements	AFD, FSCD, DRRO, NCCDMC

CLUSTER 4: LOGISTICS SUPPORT AND RELIEF SERVICES (FOOD, NUTRITION AND OTHER RELIEF)

Lead Agency	Narayanganj City Corporation Disaster Management Committee (NCCDMC)	
Support Agencies	DC Office, DRRO, AFD, District Food Office, BP, Ansar & VDP, BGB, BDRCS, FSCD, NGOs, INGOs	
Primary Objectives	<ul style="list-style-type: none"> To conduct survey for assessing and analyzing damages and estimating needs To ensure provision of necessary essential facilities for the affected population after emergencies To ensure provision of food and nutrition, logistic supply to the affected population based on need assessment To coordinate with international and local NGOs, donor agencies to supplement the government welfare assistance to IDPs 	
Activities		Support Agencies
Pre-disaster Phase	Networking with various stakeholders and development of system for reporting the stocks of supplies and resources (funding agencies, NGOs & INGOs for identification of resources, improved coordination relief material distribution) and maintain a database	DRRO, District Food Office, BDRCS, Trade and Commerce Associations
	Developing guidelines, data formats and carry out capacity building for damage analysis and need assessment	DC Office, AFD
	Developing guidelines and disseminate information on <ul style="list-style-type: none"> Logistic supply management and deployment of resources Maintaining of temporary or permanent emergency shelters Distribution of welfare items and food Quality assurance for food and nutrition Setting up welfare camps by all agencies 	DC Office, DRRO, NCCDMC, AFD, BDRCS
	Developing guidelines for community mobilization to increase the community participation in relief distribution and camp management	DRRO, FSCD, AFD, BDRCS, Ansar& VDP
	Establishing warehouses for store of government supplies of welfare items food and supplementary items	DC Office, AFD, DRRO
	Ensuring government resources for buying additional welfare items food and supplementary items	DC Office, DRRO
	Developing guidelines for rehabilitation of physically handicapped disabled and vulnerable groups	DRRO, NGOs
	Developing inventory of agencies within the City Corporation who possess stocks of welfare items, food and nutrition, temporary shelter and camps, water purification plants, generators, cooking facilities etc. to be used in case of emergencies	DC Office, DRRO, AFD, BDRCS
Emergency	Preparation of necessary documentation for preparation of flash appeals in collaboration with National EOC	AFD, DRRO, BDRCS
	Conducting damage analysis and need assessment survey in affected areas and preparation of estimates of items and other urgent needs for obtaining donor support for external contributions. Networking with	DC Office, DRRO, AFD, FSCD, NGOs

	various stakeholders (funding agencies, NGOs & INGOs for mobilization of contributions, improved coordination of relief material distribution)	
	Setting up temporary camps to house IDPs and provide other essential items (such as Food, Nutrition and other Relief), Mobilize support from NGOs, INGOs for providing assistance to IDPs	DC Office, DRRO, AFD, BDRCS, NGOs
	Mobilization of community social volunteer groups through Local Governments, CBOs and NGOs to assist setting up of camps for IDPs ,maintenance of camps etc.	AFD, DRRO, Ansar & VDP, BDRCS
	Networking with ministries, departments, district authorities, donor agencies, NGOs and INGOs for mobilization of support for supply and distribution of relief material and welfare items. Supply of food and supplementary items through UNO, government departments, other district authorities for distribution to victims. Conduct surveys for quality assurance for food and distribution	DC Office, AFD, DRRO, Ansar & VDP, BGB
	Liaise with relevant govt. agencies, line departments, district authorities, civil society agencies to ensure welfare of other victims(those who are living in their own, those who are with friends and relatives etc.) and food supply	DC Office, AFD, Ansar & VDP
	Assisting other stakeholder agencies such as NGOs and INGOs for supply of food and supplementary items to displaced when and where necessary through assistance in national level procurement, import of items, custom clearance, transportation to affected areas etc.	AFD, DC Office
Early Recovery Phase	Evaluating of overall performance of Cluster - Relief Services (Food, Nutrition and other Relief)	AFD, DRRO, BP
	Networking with ministries, departments, district authorities, donor agencies ,NGOs & INGOs and assistance for efficient coordination for distribution of relief material welfare items	DRRO, DC Office, AFD
	Conducting routine surveys for quality assurance for food and nutrition distributions carried out by government and non-government agencies	DRRO, DC Office, AFD
	Periodic Stock taking of central Godowns to carry out qualitative and quantitative assessment of food items and facilitate efficient distribution	DC Office, DRRO, District Food Office, NGOs, INGOs
	Periodic visits to welfare camps and monitoring and evaluation of compliance of guidelines for maintenance of welfare camps by all agencies	DRRO, DC Office, AFD
	Providing necessary assistance in documentation, tax payment if applicable and custom clearance etc. to other stakeholder agencies such as NGOs and INGOs for continues supply of food and supplementary items to displaced located in camps for IDPs	DRRO, DC Office, AFD
	Assisting all agencies providing welfare , food and nutrition support for transportation and distribution of supplies to victims when and where necessary	DRRO, AFD, INGOs
	Reviewing Contingency Plan for the Cluster - Relief Services (Food, Nutrition and other Relief) and revise if necessary to introduce measures to improve performance	DRRO, AFD, NGOs, INGOs, BDRCS

CLUSTER 5: SHELTER

Lead Agency	Narayanganj City Corporation Disaster Management Committee (NCCDMC)	
Support Agencies	DC Office, AFD, DRRO, District Food Office, BP, Ansar & VDP, RAB, BGB, PWD, Department of Social Welfare (DSW), NGOs	
Primary Objectives	<ul style="list-style-type: none"> To ensure temporary shelter for displaced after disaster events such as Earthquakes and provision of basic facilities to the same 	
Activities		Support Agencies
Pre-disaster Phase	Preparing plan for temporary shelter provision and management	DRRO, AFD, DC Office, BP
	Identification of potential open air sites appropriate for temporary shelters for displaced population and conduct capacity assessment of these open air sites	DRRO, AFD, DC Office, BP
	Identification of earthquake-resistant educational buildings (school, college, universities, etc.) and communal buildings (community centers, auditorium) that can be used as temporary shelters, and conducting capacity assessment of these buildings	PWD, DRRO, AFD, DC Office
	Determining the ownership of these sites and buildings and enter into pre-agreements if relevant	PWD, DRRO, AFD, DC Office
	Assessing the need for pre-positioned family tents, communal kitchen materials and utility services (water supply, electricity, toilet facilities, etc.) for identified temporary shelters, and maintain stocks of standby emergency shelter items/equipment for quick mobilization during establishment of temporary shelter	DRRO, AFD, DC Office, BP
	Determination of special need and maintain the provision for most vulnerable group (gender, children, disable and elderly people).	DRRO, AFD, DC Office, BP, DSW
	Preparing security plan for temporary shelter camps	BP, DRRO, AFD, DC Office
Emergency Response Phase	Activating the plan for temporary shelter provision and management	BP, DRRO, AFD, DC Office
	Estimating the number of homeless due to earthquake, according to all available sources who need temporary shelters.	DRRO, AFD, DC Office, BP
	Determining immediate needs in terms of shelters to include: open air sites, educational and communal buildings and other specific needs according to season.	DRRO, AFD, DC Office, BP
	Assessing the condition of identified shelter sites and buildings after earthquake that can be used for temporary shelters.	PWD, DRRO, AFD, DC Office, BP
	Setting up and manage tented camps / community shelters and ensure the distribution of temporary shelter stock to the people of greatest need.	DRRO, AFD, DC Office, BP, NGOs
	Estimating the needs in terms of essential household items, fuel for cooking, relief items, water supply, sanitation and hygiene and ensure the supply according to the need	DRRO, AFD, DC Office, BP, NGOs
	Ensuring the special needs for most vulnerable group (gender, children, disable and elderly people).	DRRO, AFD, DC Office, BP, DSW
	Implementing the shelter security plan	BP, RAB, Ansar and VDP, BGB

	Liaise with camp management team, to meet the needs on an on-going basis and obtain periodic situation reports and review the progress on shelter management	DRRO, AFD, DC Office, BP
Early Recovery Phase	Conducting survey of temporary shelter set up for IDPs for qualitative improvement	DRRO, AFD, DC Office, BP
	Review of on-going shelter requirements for medium and long term (number of homeless, state of buildings, coping strategies of beneficiaries, specific needs according to time of the year, etc.)	DRRO, AFD, DC Office, BP
	Establishing plan for medium/ long term needs including time frame and transition strategy	DRRO, AFD, DC Office, BP
	Developing early recovery Plans for setting up new Settlement programs and rehabilitation of partially damage settlement and housing for supply of permanent shelter for affected.	DRRO, AFD, DC Office, BP
	Reviewing performance of Cluster - Shelter and introduce modifications to the Contingency Plan for better performance in future.	DRRO, AFD, DC Office, BP

CLUSTER 6: WATER SUPPLY, SANITATION AND HYGIENE

Lead Agency	Narayanganj City Corporation (Water Supply and Conservancy Department)	
Support Agencies	DPHE, DWASA, AFD, FSCD, DRRO, DC Office, Office of Civil Surgeon, NGOs, INGOs	
Primary Objectives	<ul style="list-style-type: none"> To provide safe drinking water, sanitation facilities and hygiene services during an emergency. To restore the water supply system immediately after earthquake disaster. To control epidemics and provide immunization. 	
	Activities	Support Agencies
Pre-disaster Phase	Developing procedure for vulnerability assessment of water supply and sanitation system and other infrastructure facilities, sewerage, drainage and solid waste management systems by respective managers	DPHE, DWASA
	Developing Contingency Plans for water and sanitation sector, waste management systems at all levels covering earthquake prone agencies by respective managers	DPHE, DWASA
	Identification of water sources and other infrastructure elements most likely to survive earthquake	DPHE, DWASA
	Pre-positioning of water supply deep wells and water treatment facilities (water purification tablets, solutions, etc.), sanitation materials and hygiene kits to be used during emergencies	DPHE, DWASA
	Developing minimum standards for drinking water supply and issue guidelines to public, NGOs, INGOs and other civil society organizations	DPHE, DWASA
	Developing guidelines for close surveillance in epidemic outbreak and conduct of preparedness measures such as immunization programs, awareness programs to prevent epidemic outbreaks	Office of Civil Surgeon, AFD, FSCD
	Developing guidelines with water and sanitation group for minimum sanitation levels to be maintained in	DPHE, DWASA

	temporary shelter set up for IDPs	
	Facilitating alternate systems for emergency water supplies such as transportation by container trucks, bowzers, WASA services, etc.	DPHE, DWASA, FSCD
	Promoting household level long term water conservation methods such as rain water harvesting, water softening and SODIS techniques for water purification	DPHE, DWASA
	Organizing training and capacity building programs for hygiene promotion	DPHE, DWASA
Emergency Response Phase	Activating the Contingency Plans for water and sanitation sector at all levels covering earthquake affected areas	DPHE, DWASA, AFD, FSCD
	Observe the emergency water supply needs and communicate to relevant stakeholders	DPHE, DWASA, AFD, FSCD
	Conducting close surveillance in epidemic outbreak in affected areas due to problems connected with water and sanitation and make remedial actions	DRRO, AFD, FSCD, Civil Surgeon Office
	Conducting rapid damage assessment of water supply, sewerage & drainage system and initiate actions for restoration	DPHE, DWASA, DRRO, AFD, FSCD
	Assisting authorities to maintain water supply and sanitation facilities within welfare camps set up for victims	DPHE, DWASA, DRRO, AFD, FSCD
	Implementing sanitation management system in the temporary shelter for the benefit of victims in affected areas	DPHE, DWASA, DRRO, AFD, FSCD
	Arrangements for quality check of water sources, bottled water and disposable water containers	AFD, DPHE, DWASA, NGOs, INGOs
Early Recovery Phase	Carrying out performance evaluation of response actions under Cluster -Water Supply, Sanitation and Hygiene and introduce suitable modifications to Contingency Plan to improve the performance	Office of Civil Surgeon, DRRO, DPHE, DWASA
	Observing and facilitating the emergency water supply needs and communicate to relevant stakeholders	DPHE, DWASA, DC Office
	Conducting close surveillance in epidemic outbreak in affected areas due to problems connected with water and sanitation and make remedial actions	Office of Civil Surgeon, DPHE
	Conducting Damage Assessment survey for water supply facilities and develop plans to restore and rehabilitate the facilities at all levels covering earthquake affected areas	DPHE, DWASA
	Conduct periodic quality check of water sources, portable water containers and disposal of waste	DPHE, DWASA

CLUSTER 7: RESTORATION OF CRITICAL FACILITIES AND UTILITY SERVICES

Lead Agency	Narayanganj City Corporation Disaster Management Committee (NCCDMC)	
Support Agencies	NCC, PWD, PDB, BTCL, TGCL, DC Office, DRRO, AFD, FSCD, Office of Civil Surgeon, NGOs, Private Sectors	
Primary Objectives	<ul style="list-style-type: none"> • To identify the critical urban services and facilities vulnerable to earthquakes and fire and strengthening the same to a higher safety level • To ensure efficient restoration of utilities and services after a disaster event such as supply of water, telecommunication facilities, electricity, gas and, waste disposal etc. • To ensure provision of basic facilities to the temporary shelters for displaced population after a disaster events • To prevent outbreak of fire due to malfunctioning of utilities such as gas, electricity supply etc. • To ensure prevention of environmental disorder due to release of hazardous waste and material 	
	Activities	Support Agencies
Pre-disaster Phase	Conducting scenario based need assessment survey for emergency services in earthquake and fire prone urban areas and report to authorities	DRRO, PWD, Office of Civil Surgeon, PDB, BTCL, TGCL, DPHE, NCC, DWASA
	Developing methodology for vulnerability assessment of buildings and infrastructures and loss estimation to identify high risk areas	DRRO, PWD, Office of Civil Surgeon, PDB, BTCL, TGCL, DPHE, NCC, DWASA
	Developing procedure for restricting or preventing entry into damaged buildings	BP, Ansar& VDP, RAB, BGB
	Conducting vulnerability assessment of important government buildings , critical facilities, infrastructures and utility systems	DRRO, PWD, Office of Civil Surgeon, PDB, BTCL, TGCL, DPHE, NCC, DWASA
	Preparing location maps and collect other information related to pre-positioned essential facilities to be used during earthquakes	DRRO, PWD, Office of Civil Surgeon, PDB, BTCL, TGCL, DPHE, NCC, DWASA
	Developing guidelines for spatial planning & land use control (for emergency evacuation and provision of temporary shelters both in developed & undeveloped areas) and revise land use Plans to create/preserve open spaces within urban areas, create more parks, recreational areas , green areas suitable for emergency evacuations, create essential facilities such as water , electricity, telecommunication, gas, etc.	PWD, LGED, DC Office, DRRO
	Developing guidelines for recovery planning at various levels based on sector needs and special vulnerable groups (gender, elder persons, children, etc.) through integration of earthquake and fire risk management principles	DRRO, PWD, Office of Civil Surgeon, PDB, BTCL, TGCL, , DPHE, NGOs
	Identification of evacuation routes in high risk areas and take actions to improve access to inaccessible areas for search and rescue actions	FSCD, AFD, BP
	Conducting meetings with utilities sub-committee for enhanced preparedness measures to be undertaken by utility agencies to minimize impacts and to prevent malfunctioning of services during emergencies	PDB, BTCL, TGCL, DPHE, NCC, DWASA

	Maintenance of stocks of most essential spare parts and service personnel for attending to large scale emergencies such as earthquakes	PDB, BTCL, TGCL, DPHE, NCC, DWASA
	Developing guidelines for vulnerability assessment of utilities and conduct training for utility sector staff for undertaking vulnerability assessments	PDB, BTCL, TGCL, DPHE, NCC, DWASA
	Capacity building of utility sector for Contingency Planning and planning for restoration of facilities and implement Response Capacity Assessment programs for reduction of impacts on utility sector and develop efficient response capacity	PDB, BTCL, TGCL, DPHE, NCC, DWASA
	Designing and implementing projects for pre-positioning of emergency water, electricity, gas supply, and telecommunication services for critical areas	PDB, BTCL, TGCL, DPHE, NCC, DWASA
	Developing procedure for post-disaster damage assessment of all essential utilities within the City Corporation	PDB, BTCL, TGCL, DPHE, NCC, DWASA
	Provisions of utility services for buildings identified as temporary shelters, and maintain stocks of standby emergency shelter items/equipment for quick mobilization during establishment of temporary shelter(stand-by generators, temporary camps etc.)	PDB, BTCL, TGCL, DPHE, NCC, DWASA XXX
	Identification of all possible sources of hazardous waste/hazardous material release during emergencies and conduct awareness programs to prevent environmental and societal impacts due to release of hazardous substance during emergencies	Relevant Industries, Business enterprises
	Holding discussion with Private sectors (Business sector, Industries, etc.) to create awareness on Contingency Planning to reduce losses and casualties in work places and provide necessary technical assistance and conducting mock drill etc. for Contingency Planning	Relevant Industries, Business enterprises
Emergency Response Phase	Immediately activating the plan for shut off of all supplies of gas, electricity, waste disposal etc. at all shut off points.	PDB, BTCL, TGCL, DPHE
	Mobilizing pre-positioned/stand by essential emergency support units and facilities (boreholes for emergency water supply, search and rescue stores at community level, stand-by generators, mobile kitchens, water supply and purification units, mobile hospitals, etc.)	PDB, BTCL, TGCL, DPHE, Office of Civil Surgeon, AFD, FSCD, BP, Ansar & VDP
	Carrying out rapid damage assessment of critical facilities like City Corporation buildings and suitability check for using as temporary offices	PWD, AFD, FSCD
	Facilitating provision of basic facilities to temporary camps set up for IDPs	PDB, BTCL, TGCL, DPHE
	Mobilizing teams for rapid damage assessment of housing units and dwellings and issue certificate for occupation after earthquake and fire incident	PWD, DC Office, DRRO
	Providing assistance for rapid damage assessment of buildings belong to first responder agencies such as FSCD, Hospitals, Critical Government Buildings to prevent occupation of unsafe buildings	PWD, DC Office, DRRO

	Liaise with private sectors (Business sector, Industries etc.) for activating the Contingency Plans to conduct rapid damage assessments to work places and provide necessary technical assistance	Relevant Industries, Business enterprises
	Undertaking restoration work and actions by utility agencies to re-establish supply of power, gas, etc. to critical agencies(hospitals, AFD, Police, evacuation camps so on)	PDB, BTCL, TGCL, DPHE,AFD, FSCD, School, College, Universities, DRRO
	Conducting rapid damage assessment survey of utility supply systems and restoration of supply to critical facilities (such as hospitals, police, AFD, FSCD, etc.) Organize project teams to conduct rapid damage assessment of all essential utilities within the City Corporation by utility managers	PDB, BTCL, TGCL, DPHE,AFD, FSCD, Universities, DRRO
	Mobilizing pre-positioned emergency utility supply services for critical areas	PDB, BTCL, TGCL, DPHE,AFD, FSCD, DRRO, NGOs
	Obtaining periodic situation reports and review the progress on activation of Contingency Plans and restoration of services by utility agencies	PDB, BTCL, TGCL, DPHE
Early Recovery Phase	Conducting survey of temporary shelter set up for IDPs for qualitative improvement of shelter for IDPs	DRRO, AFD
	Developing early recovery Plans for setting up new settlement programs and rehabilitation of partially damaged settlement and housing for supply of permanent shelter for affected.	DRRO, PWD, DC Office
	Conducting damage assessment survey of all utilities and prepare plans to restore and rehabilitate supply of power, water, gas, to affected areas	PDB, BTCL, TGCL, DPHE, Universities
	Integrating mitigation and preparedness programs in recovery planning by utility agencies for reduction of future earthquake and fire impacts during restoration of facilities	PDB, BTCL, TGCL, DPHE
	Assisting restoration of all essential utilities and services within the city by utility managers	PDB, BTCL, TGCL, DPHE
	Providing periodic situation reports on the status of restoration of services and review the progress	PDB, BTCL, TGCL, DPHE
	Reviewing of the Performance of Cluster – Restoration of critical facilities and utility services and introduce modifications to the Contingency Plan for better performance in future.	DRRO, PWD, PDB, BTCL, TGCL, DPHE
	Phase by phase restoration of disrupted electricity, gas, water supply and telecommunication through assessment of degree of damage	PDB, BTCL, TGCL, DPHE
	Conducting rapid damage assessment survey and issue of certificates to house owners and owners of other buildings (business enterprises, shops, commercial centers, industries, garment factories, hotels, etc.) for ensuring suitability for occupation after the disaster event	PWD, DC Office
	Carrying out planning operations for systematic cleaning, removal and transportation of debris, identify dump sites	Private Sectors
	Conducting a review of performance of the Cluster - Restoration of critical facilities and utility service and revise the Contingency Plan accordingly	Universities

CLUSTER 8: TRANSPORTATION

Lead Agency	Narayanganj City Corporation Disaster Management Committee (NCCDMC)	
Support Agencies	NCC, RHD, LGED, BRTC, BIWTC, DRRO, FSCD, AFD, BP, Office of the Civil Surgeon	
Primary Objectives	<ul style="list-style-type: none"> To identify vulnerabilities of transportation infrastructures to earthquakes and strengthening the same to a higher safety level To restore the transport system immediately after earthquake events for mobilization of resources to the affected areas 	
Activities		Support Agencies
Pre-disaster Phase	Developing guidelines for vulnerability assessment of transport systems and conduct vulnerability assessment and strengthen transportation system and transport infrastructure	RHD, LGED, BRTC, BIWTC
	Developing emergency teams for restoration of facilities	RHD, LGED, BRTC, BIWTC
	Studying alternate transport arrangements in case of earthquakes and develop route map	RHD, LGED, BRTC, BIWTC
	Developing coordination arrangements between different transport authorities(road, air, sea) to function during emergencies	RHD, LGED, BRTC, BIWTC
	Developing Contingency Plans for town-level transportation systems to avoid high risk areas	RHD, LGED, BRTC, BIWTC, BP
	Making arrangements for storage of essential spare parts	RHD, LGED, BRTC, BIWTC, BR
	Making arrangements to fabricate temporary bridges	AFD, RHD, LGED
Emergency Response Phase	Taking action by transport authorities to restore the transportation systems to reach critical areas for search and rescue teams and supply of relief	RHD, LGED, BRTC, BIWTC, DRRO, FSCD, AFD, BP, Office of the Civil Surgeon
	Conducting rapid damage assessment survey and reporting by transport authorities for obtaining cooperation of other agencies for restoration of transportation systems.	RHD, LGED, BRTC, BIWTC, DRRO
	Mobilization of resources for activation of alternate transport arrangements	RHD, LGED, BRTC, BIWTC, DRRO, BP, Ansar& VDP
	Notification of accessible routes after the earthquake event based on the rapid assessment and issue of updates regularly after restoration of additional routes	RHD, LGED, BRTC, BIWTC, DRRO, BP, Ansar& VDP
Early Recovery Phase	Conducting damage assessment survey of transport systems due to impact of occurrence of earthquake and collateral hazards and develop Plans for restoration of transport systems to higher seismic safety.	RHD, LGED, BRTC, BIWTC, DRRO
	Assisting actions by transport authorities to identify alternate routes for transportation of essential relief supplies, food stocks, welfare items etc.	RHD, LGED, BRTC, BIWTC, DRRO, AFD
	Commencing rehabilitation of damaged transport infrastructure and facilities, roads, main roads, river ports	RHD, LGED, BRTC, BIWTC
	Reviewing of the performance of Cluster - Transportation during the emergency response period and revise the Contingency Plan to improve the performance	RHD, LGED, BRTC, BIWTC, DRRO

CLUSTER 9: SECURITY AND WELFARE

Lead Agency		Bangladesh Police, Narayanganj
Support Agencies		DC Office, DSW, AFD, FSCD, Ansar& VDP, RAB, BGB, NCC
Primary Objectives		<ul style="list-style-type: none"> • To maintain the law and order situation during earthquake and fire emergencies • To arrange security during emergencies to ensure safety of citizens and protection of properties • To control the movement of population and traffic during emergencies
Activities		Support Agencies
Pre-disaster Phase	Developing a comprehensive plan for security arrangements for citizens and protection of properties, business and industries as well as for maintenance of law and order to be adopted during earthquake emergencies	AFD, Ansar& VDP, RAB, BGB, NCC
	Developing a comprehensive plan for traffic control during emergencies	Ansar& VDP, RAB, BGB, NCC
	Developing guidelines for control of entrance into damaged buildings, and restrict access to affected areas by unauthorized persons	FSCD, Ansar& VDP, RAB, BGB, NCC
	Developing guidelines for evaluation of security planning and operations for maintenance of law and order during emergencies	DC Office, FSCD, Ansar& VDP, RAB, BGB, NCC
	Assisting development of procedures for handling of destitute and orphans	DC Office, NCC, NGOs, DSW
	Assisting in promotion of social security systems (insurance Schemes, micro credit, etc.)	DC Office, DSW, NGOs, Life Insurance companies
	Developing guidelines for integrating fire hazard management as a component of earthquake and fire response and early recovery actions especially concerning temporary shelter, government buildings, private buildings, business enterprises, and utilities services	NCC, AFD, DRRO, NGOs
	Developing procedures for management and maintenance of information on dead and missing	NCC, DC Office, DSW, AFD, FSCD, Office of Civil Surgeon
	Developing procedures for burial of dead, funeral rights, mortuary services etc.	NCC, DC Office, DSW, AFD, FSCD, Office of Civil Surgeon, Ansar& VDP, RAB, BGB
Emergency Response	Activating the security plan for citizens and protection of properties, business and industries as well as for maintenance of law and order	AFD, Ansar& VDP, RAB, BGB, NCC
	Activating the Plan for traffic control during emergencies	Ansar& VDP, RAB, BGB, NCC
	Exercise control of entrance into damaged buildings, and restrict access to affected areas by unauthorized persons	FSCD, Ansar& VDP, RAB, BGB, NCC
	Conducting periodic monitoring and evaluation of security operations for maintenance of law and order	DC Office, AFD, FSCD, Ansar& VDP, RAB,

	during emergencies	BGB, NCC
	Activating the Plan for handling of destitute and orphans	DC Office, NCC, DSW, NGOs
	Assisting in documentation and fulfillment of other needs to benefit the beneficiaries of social security systems such as insurance Schemes, micro credit, etc.	DC Office, DSW, NGOs, Life Insurance companies
	Carrying out the Plans for prevention and control of fire hazard due to main shock and aftershocks in temporary shelters, government buildings, private buildings, business enterprises, utilities & Services	NCC, AFD, DRRO, NGOs
	Carrying out the plan for management and maintenance of information on dead and missing	NCC, DC Office, AFD, FSCD, Office of Civil Surgeon
	Carrying out the procedures for burial of dead, funeral rights, mortuary services etc.	NCC, DC Office, AFD, FSCD, Office of Civil Surgeon, Ansar& VDP, RAB, BGB
Early Recovery Phase	Reviewing the performance of implementation of Security Plan and arrangements during earthquake emergency for safety of citizens and protection of Government & Private Property, Business and Industries as well as for maintenance of law and order to be adopted during emergencies	AFD, Ansar& VDP, RAB, BGB, NCC
	Reviewing the performance of implementation of plan for traffic control during emergencies	Ansar& VDP, RAB, BGB, NCC
	Carrying out evaluation of security planning and operations for maintenance of law and order during an emergency	DC Office, AFD, FSCD, Ansar& VDP, RAB, BGB, NCC
	Conducting review of the Contingency Plan under Cluster – Security and Welfare and introduce suitable modifications in revising the Plan to improve the performance	DC Office, AFD, FSCD, Ansar & VDP, RAB, BGB, NCC

Section 07: Operational Priorities

7.1 Initial Response Goals and Objectives (First 72 hours)

The primary response goal is to save maximum number of lives in case of an emergency and stabilize the event within first 72 hours. The priority objectives are,

- Conducting rapid damage and loss assessment.
- Delivering immediate search and rescue services and evacuate people to safe locations.
- Providing immediate medical assistance and life-saving and life-sustaining medical services to the victims.
- Providing dead body management services and returning deceased to their loved ones.
- Stabilizing or eliminating damaged buildings and infrastructures to minimize health and safety threats and stabilizing and restoring the essential infrastructures to functional condition.
- Ensuring temporary shelters, including provision of adequate food and non-food items, water and sanitation facilities to the affected population.
- Ensuring protection of children, women and other vulnerable groups such as persons with disability, etc.
- Providing overall safety and security and maintaining law and order.

7.2 Priority Actions by Timeframe

a. Priority actions at the Initial Response Phase (First 4 and 8 hours)

First 4 hours	Respond to the immediate known effects of the earthquake
Responsible Clusters	Priority Actions
Command and Coordination	<ul style="list-style-type: none">• Activate EOC and hold coordination meeting of NCCDMC
	<ul style="list-style-type: none">• Identify potential sites for evacuation centers to accommodate displaced population while emergency shelters are being opened.
	<ul style="list-style-type: none">• Identify at-risk populations, notify them and begin to evacuate if warranted.
	<ul style="list-style-type: none">• Assess the condition and status of critical facilities such as City Corporation office, DC office, office, FSCD offices, hospitals and clinics, police stations and other public buildings and service provider buildings.
	<ul style="list-style-type: none">• Identify vulnerable buildings or infrastructures that are threatening to impacted area and nearby community that may be affected by cascading effects and secondary hazard and take initiative to stabilize or eliminate immediately.
	<ul style="list-style-type: none">• Assess the condition of emergency communication system.
	<ul style="list-style-type: none">• Begin public information dissemination regarding personal protection actions, safe congregation points, and community assistance needed.
	<ul style="list-style-type: none">• Complete an initial damage assessment of the city, identify affected areas, major incidents, and operational status of critical services.

	<ul style="list-style-type: none"> Create consolidated situation assessment and declare a state of emergency.
Search Rescue and Evacuation	<ul style="list-style-type: none"> Mobilize specialized search and rescue team including urban community volunteer and assist immediate life-saving rescue operations. Direct and suppression of existing fires and anticipated fire spread based on conditions.
Health Services	<ul style="list-style-type: none"> Deploy emergency medical services to major incidents. Arrange special emergency medical services children and women Establish casualty collection points and field medical camps for on-scene treatment Identify and triage people who have critical injury that require acute medical care and limit the on-scene treatment to non-acute care.
Security and Welfare	<ul style="list-style-type: none"> Deploy law enforcement resources to support response and maintain law and order. Provide overall security and access control for the affected area and security for search and rescue operation. Ensure special security for children and women

First 12 hours	Assemble resources for sustained response and for providing basic services to the community
Responsible Clusters	Priority Actions
Command and Coordination	<ul style="list-style-type: none"> Assess critical resource shortfalls and begin requesting support through National EOC. Open evacuation centers/ spaces. Initiate a regular status reporting and resource requesting process between local EOC, major incident commands, and National EOC. Monitor and address challenges regarding patient load balancing between hospitals and the related patient transport system.
Shelter	<ul style="list-style-type: none"> Assess conditions at designated emergency shelter sites and estimate the number of displaced population who need emergency shelters. Set up tented camps and ensure the distribution of emergency shelter stock to the people of greatest need. Assess conditions of educational and communal buildings that can be used for emergency shelter purpose based on the requirements and season.
Relief, Food and Nutrition, Water Supply and Sanitation	<ul style="list-style-type: none"> Begin to supply beds, food, water and sanitation, medical support, cooking facilities, etc. electricity and telecommunication facilities in emergency shelters.
Restoration of Utility Services	<ul style="list-style-type: none"> Arrange and supply alternative electricity and telecommunication facilities in emergency shelters.

Transportation	<ul style="list-style-type: none"> Assess condition of transportation system and identify alternatives for moving critical resources into the city.
	<ul style="list-style-type: none"> Designate primary evacuation routes, implement debris clearance and recover routes.
Security and Welfare	<ul style="list-style-type: none"> Establish perimeter control around unsafe areas and security at critical facilities.
	<ul style="list-style-type: none"> Implement an access permit system to prioritize and the limit the access and traffic control system.
	<ul style="list-style-type: none"> Identify people with special support requirements (people with disability, children, aged people, female, etc.) and ensure that their needs are met.
	<ul style="list-style-type: none"> Determine if a curfew should be established.

b. Priority actions at the Intermediate Response Phase (Through 24, 48 and 72 hours)

Through 24 hours	Consolidate system for sustaining emergency response operations
Responsible Clusters	Priority Actions
Command and Coordination	<ul style="list-style-type: none"> Conduct rapid assessment of loss, damage and needs of the city and take required steps quickly.
	<ul style="list-style-type: none"> Commit resources to support public safety by assisting incoming employees and gathering/distributing convergent resources from less-affected parts and national resources.
	<ul style="list-style-type: none"> Conduct outreach for situation status and resource needs for affected facilities needing support including ancillary medical institutions, educational institutes, commercial buildings, and sites of historic/cultural significance.
	<ul style="list-style-type: none"> Initiate regular news briefings to inform residents on response operations, steps that can be taken, services available to them, ongoing rumor control efforts, and ways in which the community can help.
Shelter	<ul style="list-style-type: none"> Designate staging areas and begin planning to accommodate support personnel.
Transport	<ul style="list-style-type: none"> Ensure that an adequate system is in place to fuel and maintain generators for providing power to critical facilities.
Security and Welfare	<ul style="list-style-type: none"> Establish temporary morgues and begin process of collecting remains.
	<ul style="list-style-type: none"> Establish Family Assistant Centers and provide guidance and public messaging about the Family Assistance Centers and dead body collection points.
	<ul style="list-style-type: none"> Provide media briefing on findings of the disaster situation.

Through 48 hours		Stabilize support for affected areas and secure unaffected areas for resumption of services
Responsible Clusters	Priority Actions	
Command and Coordination	<ul style="list-style-type: none"> Coordinate the support for affected areas and secure unaffected areas for resumption of services 	
	<ul style="list-style-type: none"> Process ongoing logistical resource requests for emergency services needs to support incident management. 	
	<ul style="list-style-type: none"> Make arrangements for the EOC to assume responsibility for supporting incoming aid and convergent resources, relieving field-level public safety workers to focus on providing sustained rescue, firefighting, paramedic, and law enforcement services. 	
	<ul style="list-style-type: none"> Anticipate and support initial damage assessment visits by National officials wanting to confirm the immediate and long-term recovery needs of the city for their out-of-area resources. 	
Relief, Food and Nutrition, Water Supply, Sanitation and Hygiene	<ul style="list-style-type: none"> Establish a distribution network for drinking water, sanitation facilities and food for persons who are not residing in mass care facilities but are without basic services. 	
Water Supply, Sanitation and Hygiene	<ul style="list-style-type: none"> Implement the emergency drinking water and sanitation facilities plan. 	

Through 72 hours		Begin transition from immediate emergency response efforts to sustained operations.
Responsible Clusters	Priority Actions	
Command and Coordination	<ul style="list-style-type: none"> Re-evaluate mass care needs in light of any ongoing aftershocks and subsequent damage. 	
	<ul style="list-style-type: none"> Establish the Donations Management Branch and the Human Resources Branch in the logistics section of the EOC to facilitate the handling of volunteers and donations. 	
	<ul style="list-style-type: none"> Participate in discussions with DDM and MoDMR on assessing services that residents will require to recover from the disaster. 	
	<ul style="list-style-type: none"> Review incident status reports to prioritize incident commands that can begin suspending emergency response operations and transition to sustained response and recovery operations. 	
Health Services	<ul style="list-style-type: none"> Support hospital and other medical facility re-supply efforts. 	
Shelter	<ul style="list-style-type: none"> Establish shelter support coordinator teams and evaluate the shelter sites to identify site damage, site security, critical support requirements including shelter management personnel, adequacy of feeding and medical care arrangements, shelter demographics (gender, children, medical needs, language barriers, disability needs). 	
Security and Welfare	<ul style="list-style-type: none"> Establish plans for how to provide care for people with special support requirements that cannot be met in congregate care shelters. 	
	<ul style="list-style-type: none"> Review and enhance security plans to maintain public order. 	

c. Priorities actions at the Initial Recovery Phase (After 72 hours but before end of first week)

Days 3 through 7 at the initial recover phase, EOC will perform following activities outlined below. Some of these actions may occur immediately or in phases; actions must be identified and prioritized based on overall need and resources available to respond.

- Establish plan and begin widespread safety/damage assessment of public infrastructure, such as roads and sidewalks, bridges, tunnels and retaining walls.
- Establish teams to visit shelters to identify people that require special support that need to be relocated into other types of care facilities and to identify site modifications that should be made to better accommodate residents with sight, hearing, mobility or other limitations.
- Begin locating and opening relief supply and food distribution points other than the evacuation centers/shelters.
- Establish and implement mental health counseling for people whose relatives have been killed and homes have been damaged.
- Establish portable toilet sanitation stations around the city and related cleaning and pumping program.
- Coordinate with the business community regarding the time of their business resumption activities.
- Begin widespread safety/damage inspections of homes and businesses.
- Produce, regularly update, and distribute a disaster “Fact Sheet” to the media, people in shelters, field response personnel, and residents.
- Ensure that air quality, hazardous materials spills, and other environmental situations are monitored and risks are addressed.
- Evaluate the need to designate specific routes into the city for critical relief supplies.
- Ensure that all the food at emergency shelter/evacuation centers, feeding sites, and disaster kitchens are safe and hygienic.
- Begin planning for the relocation of displaced population.
- Implement a process to allow limited entry (where safe) for recovery of personal items.

7.3 Sustained Operations

As the third 24-hour period concludes, the EOC should be supporting three primary areas of operation:

- Ongoing rescue operations and other emergency measures.
- Transitioning near-complete response efforts to sustained emergency operations, typically addressing remaining earthquake effects that do not require public safety technical skills.
- Preparing for ongoing major recovery efforts focusing on restoration of services.

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Annex-A: Available Resources and Capacities

Table 1: Available manpower of FSCD in Narayanganj

Sl. No.	Staff Designation	No. available
1	Deputy Assistant Director	FSCD (Mondolpara), Narayanganj
2	Senior Station Officer	FSCD (Mondolpara), Narayanganj
3	Senior Station Officer	FSCD (Hajiganj), Narayanganj
4	Warehouse Inspector	FSCD (Mondolpara), Narayanganj
5	Warehouse Inspector	FSCD (Mondolpara), Narayanganj
6	Warehouse Inspector	FSCD (Mondolpara), Narayanganj
7	Warehouse Inspector	FSCD (Mondolpara), Narayanganj
8	Warehouse Inspector	FSCD (Mondolpara), Narayanganj
9	Warehouse Inspector	FSCD (Mondolpara), Narayanganj
10	Warehouse Inspector	FSCD (Mondolpara), Narayanganj
11	Warehouse Inspector	FSCD (Mondolpara), Narayanganj
12	Warehouse Inspector	FSCD (Mondolpara), Narayanganj
13	Staff Officer	FSCD (Mondolpara), Narayanganj
14	Station Officer	FSCD (Mondolpara), Narayanganj
15	Station Officer	FSCD (Hajiganj), Narayanganj
16	Warehouse Inspector	FSCD (Bandar), Narayanganj
17	Station Officer	FSCD (Nodi), Narayanganj

Table 2: Available and required vehicles, tools and equipment of 4 FSCD in Narayanganj

Sl.	Vehicles/Tools	Purpose	Available Number	Additional Need
1	Water Tender	All	3	0
2	Tana Gari	All	3	0
3	Ambulance	All	1	0
4	Two Wheeler	All	4	0
5	Hosepipe pipe	Fire	116	0
6	Succession Hosepipe	Fire	23	0
7	Succession range/key	Fire	20	10
8	Portable Generator	All	8	9
9	Smoke ejector	All	2	2
10	Breathing apparatus	All	7	8
11	Face mask	All	7	0
12	Lock cutter	Rescue	7	0
13	Brunch pipe	Fire	15	0
14	Foam making brunch pipe	Fire	6	0
15	Spreader	Rescue	2	1
16	Ram jack	Rescue	2	2
17	Air lifting bag	Rescue	1	2

Sl.	Vehicles/Tools	Purpose	Available Number	Additional Need
18	Rotary rescue saw	Rescue	3	4
19	Rotary hammer drill	Rescue	4	0
20	Ladder	Rescue	3	0
21	Portable pump	All	6	0
22	Foam trolley	Fire	1	0
23	Strainer	Fire	15	0
24	Fireman exe	All	55	0
25	Fireman suit	Fire	54	0
26	Hit protective suit	Fire	2	0
27	Gum boot	All	62	0
28	Helmet	All	61	0
29	Extinguisher	Fire	14	0
30	Search light	All	22	0
31	Breathing air compressor	All	0	1
32	Gas detector	Fire	0	1
33	Thermal imaging camera	Fire	0	1
34	Hydro vision search camera	Rescue	0	1
35	Official computer	All	0	1
36	Vehicle	All	0	1
37	Chain saw	Rescue	0	3
38	Digital telephone set	All	0	2
39	Succession range	All	0	10
40	Mask	All	0	10
	Total		529	69

Table 3: List of Urban Community Volunteer associated with FSCD in Narayanganj

Sl.	Name of the Volunteer	Ward No	Contact no. 1	Contact no. 2
1	Anik Shaha		0167711145	
2	MD. Mizanur Rahman		01818971550	01832435081
3	Anik Shaha		01722740063	01813610191
4	Morsheda Akter		01681068938	01761741583
5	Rokeya Begum		01924553086	01682313234
6	MD. Tasfikur Rahman		01199408096	01711195020
7	MD. Shakil	18	01199196367	01674992610
8	MD. Shifat Hossen	18	01676923002	01912971301
9	MD. Faysal Molla		01933588611	01190056100
10	MD. Abul Kashem	18	01913839436	01740984188
11	Mitu Akter	2	01920143404	01681919298
12	Mariyam Akter	4	01922750591	01922750573
13	Sabina Yasmin	4	01815086287	01920627764
14	Ashia Akter	13	01724430819	01829483506
15	Hafiza Akter	2	01920143404	01681919298

Sl.	Name of the Volunteer	Ward No	Contact no. 1	Contact no. 2
16	MD. Emdad Hossen		01916123158	01735667180
17	MD. Asaduzzaman		01916541070	01710557049
18	MD. Shanto Hossen		01759219615	01915866237
19	MD. Samsul Huda		01714605987	01840812464
20	MD. Rafiur Rahman		01680533368	01716502846
21	MD. Shahidul Islam		01676567121	01927717725
22	Ringku Shaha		01715891482	01721812745
23	Masuma Akter		01674026999	01939758183
24	Morzina Akter		01927441543	01683099681
25	Raj Kumar Sarkar		01680011916	01758302010
26	Pranto Shaha		01673960821	01719183592
27	Jesmin Akter		01812123516	01759835231
28	Nargis Akter		01921235634	01937135648
29	MD. Farid Uddin		01738481241	01913855390
30	MD. Sayid Islam		01916831715	01911061452
31	Dipa Banik		01689430134	01918520132
32	Sharmin Akter		01929204513	01936510158
33	MD. Naya Mia		01674882894	01913979420
34	Adus Sattar		01913115399	01816076107
35	Kanta Rani Das		01935189349	01680525775
36	Emon Chaklader		01676552941	01916589098
37	MD. Nazmul Hasan		01672397807	01680942534
38	Kazi Maksudul Alam		01677587633	01672397807
39	MD. Basar Ahmed		01557448341	01677587633
40	Nurul huda Al Masum		01924569946	01670948058
41	Mukta Sarkar		01753441441	01914610211
42	Nazmin Sultana		01676093341	01191383853
43	Imtiaz Uddin Ahmed		01937046527	01714375456
44	MD. Sajjad Hossen		01737076713	01710391601
45	MD. Sabbir Rahman		01670943154	01911533899
46	Zahirul Islam	12	01914355307	01675578311
47	MD. Faruk Hossen		01915588184	01814930694
48	MD. Nazmul Hossen		01914060845	01674066203
49	Umme Rumana Haque		01732186541	01922537494
50	Pradip Kumar Das		01815428358	01715131981
51	Sharif MD. Arif Mihir		01711789164	01611789164
52	Mahmuda Akter		01816822338	01828177811
53	MD. Oliullah		01919977007	01677076861
54	MD. Mahbubur Rahman		01711935837	01674121300
55	Lavli Yasmin		01928762339	01817105863
56	Ashis Candra Roy		01714451194	01681488939
57	Irin Akter		01675666098	01673479981
58	MD. Muzafar Islam		01673479981	01935940108

Sl.	Name of the Volunteer	Ward No	Contact no. 1	Contact no. 2
59	MD. Amin Ullah		01911617207	01913035590
60	MD. Shahidul Islam		01840689504	01817693191
61	Chawdhury Rajes Khanna		01912456734	01716089245
62	MD. Nazmul Mia	21	01751163925	01913471795
63	Nasrin Ali Rima		01920469603	01815151110
64	Sathi Akter		01912350802	01912350806
65	Rumana Akter		1923308586	01929791655
66	Monira Akter	23	01557127717	01815456210
67	MD. Touhid Ahmed		01682042373	01949009146
68	MD. Mehedi Hasan		01928008424	01680293480
69	Karima Jannat	15	01712024060	01716432004
70	Mariyam Akter		01715711052	01711112379
71	MD. Solzar Amin		01675388953	01191383853
72	MD. Shahadat Islam		01680533027	01921142027
73	MD. Shifat Rabbi		01677706308	01674480966
74	Jibon Nesa		01199408092	01683316146
75	Tanvir Ahmed		01823131405	01712303419
76	MD. Ataur Rahman		01676762687	01911635056
77	Jannatul Ferdous		01911683583	01675024176
78	Mahmuda Akter		01745495964	01712526816
79	MD. Rafikul Islam		01927339339	01912155585
80	MD. Mahmudul Hasan		01825064359	01681114494
81	MD. Riazul Islam		01670803974	01911309891
82	A. U. Ahmed Arman		01921356828	01937947968
83	MD. Mosharaf Hossen		01921228256	01915688332
84	Shuvo Das		01677225939	
85	Bijan Sarkar		01730696016	
86	MD. Abdulla Ahad		01673268312	01815584469
87	Nur Ajmin		01672306687	01913461811
88	Majna Khanom	15	01857147183	01913583917
89	Umme Salma		01820548353	01913296470
90	Fahima Khatun		01914750696	01820524215
91	Sabrina Yasmin		01819746363	01534867554
92	Sabikun Nahar		01915687306	01684473709
93	Sraboni Akter		01681396887	01684319458
94	Sharmin Akter	15	01676684329	01947188190
95	Sharmin Akter		01915822105	
96	Yasmin Chawdhury		01944538792	01684231860
97	Upama Binte Rashid		01718181264	
98	MD. Al Amin		01937055066	01710191663
99	MD. Nazmul Islam		01675423758	
100	Topon Chandra Voumik		01845994697	01916038114
101	MD. Oliullah Abedin		01680392702	01915695733

Sl.	Name of the Volunteer	Ward No	Contact no. 1	Contact no. 2
102	MD. Saddam Islam		01918487909	
103	MD. Taizul Islam		01677398968	
104	MD. Zahid Hasan		01687310968	01534865526
105	MD. Arafat Hossen Ador		01676109992	01671500506
106	Utpal Sarkar		01912208538	
107	Tonmay Das		01924740046	
108	Utpal Vattacharjo			
109	MD. Rad Sarar		01928205046	
110	Mrinal Kanti		01670036303	01916900737
111	MD. Mahadi Hasan		01937072408	01829012110
112	MD. Didarul Islam		01942759453	01521325364
113	Kazi Naif Mehedi		01689826993	
114	MD. Sha-Jalal Hossen		01680011560	
115	MD. Jahirul Islam		01817071967	
116	Maruf Hossen		01751715973	01621305272
117	MD. Eusuf		01812153659	01945744039
118	MD. Eusuf Sarkar	15	01687310999	01989897347
119	MD. Munna		01911484109	01681647784
120	MD. Al amin Newaj		01673088718	01913456467
121	Mahabub Hossen		01680606636	01912051350
122	MD. Solayman		01819472174	01777586158
123	MD. Sabbir Khan		01934950249	01923228404
124	MD Rasel			
125	MD. Rakib Hossen		01675600517	
126	MD. Sabbir Hossen			
127	Tahshin Ahmed Rahad		01670500498	01912229687
128	MD. Saiful Islam		01775459722	01534135439
129	Sri Tapos Kumar		01754120711	01915581961
130	MD. Shaokat Osman		01744483225	
131	Mirazul Islam		01915687306	
132	Tanbir Ahmed Asif		01720945857	01715255807
133	Jagonnath De		01756940967	
134	Shanto Shaha		01712294942	01681911342
135	MD. Sabbir Hossen		01829012414	
136	MD. Faysal Ahmed		01715330271	01670173020
137	Saddam Hossen		01676033840	01198173017
138	MD. Nurul Afsar		01681068978	01789887874
139	Maniksutra Dhar		01688199378	01720280572
140	Turzo Ghoss		016819704459	
141	MD. Nazim Hossen		01677320646	01719278020
142	MD. Saifur Rahman Shovon		01682814291	01534725232
143	Rizon Chakma	18	01554849619	01931076413
144	MD. Zahid Hossen		01718427028	

Sl.	Name of the Volunteer	Ward No	Contact no. 1	Contact no. 2
145	Tutul Mallik	4	01923081668	01918159385
146	MD. Hasnat Ahmed		01988286987	01913470841
147	Shopna Akter		01953457480	01912799088
148	Tanjina Akter		01965215827	01672478210
149	Sumaia Akter		01951698270	01913470841
150	Shohana Akter	18	01916965501	01937084608
151	Nasir Ahmed Robin		01933250046	01682488674
152	Emon Islam	18	01959442787	01732277431
153	Shihab Sumon		01682814498	01721553370
154	MD. Abu Siam		01850347858	01812175893
155	Syed Ahmed	18	01676438620	01914615851
156	Tisa		01679615099	01689609127
157	Lima Akter		01688142679	
158	Marjina Akter Nadi		01687137704	01689779300
159	Mou Rani Das		01857192915	01817546831
160	Sharmin Akter		01689068184	01986364479
161	Mitu Akter		01684783567	01824541326
162	Zesmen Akter		01620845980	01985436122
163	Zebunesa		01950285752	01917472805
164	Sumi Akter		01952369510	01917520953
165	Sumaia Akter		01680716162	01913369042
166	Moni Akter		01920143404	01989678443
167	MD. Matiur Rahman		01716612542	01824848594
168	Mahabubul Alam		01671492270	01916198093
169	MD. Shanewaj Islam		01926050376	01814433351
170	Rozot Shaha	18	01833607339	01912558588
171	Zubayer Ahmed		0197110426	01766078171
172	MD. Ramzan Ali		01673952217	
173	Lakkhan Kumar Ray		01756117282	
174	Zobayer		01915984278	01716305494
175	Alauddin Ahmed	18	01911623413	01680781201
176	Asit Chandra Das	18	01922234785	01677493281
177	MD. Juyel Islam	18	01925943770	01712575697
178	Amit Das		01679073011	01855731615
179	Shumit Chandra Das		01948257762	01620409733
180	Zahidul Islam		01687310622	01935880012
181	MD. Hridoy		01684233152	01813016555
182	MD. Sabuj Mia		01682814337	01681492664
183	Umme Salma Eti		01832435081	01818971550
184	Mariyam Akter Nipa		01818971550	01817020035
185	Jannatul Ferdous		01686908443	01679471800
186	Anjunan Ara Surovi		01767702836	01713959173
187	Tasnin Ferdous		01679471800	

Sl.	Name of the Volunteer	Ward No	Contact no. 1	Contact no. 2
188	Israt Jahan		01933489645	01816301470
189	Rita Rani Banik		01687601441	01923120549
190	MD. Arif Hossen		01911781483	01710764243
191	Rubel Ahmed		01675933660	01834090957
192	MD. Shariful Islam Khan		01760575857	01553688828
193	Shampa Reza		01812074168	01673334327
194	MD. Arifur Rahman		01683082885	019120575857
195	Sangkar Kumar Mallik		01918159385	01923081668
196	MD. Kamal Uddin		01670945985	01919945984
197	Shima Akter		01914227771	01716718804
198	Asma akter		01680716161	01716718804
199	MD. Shahid (Vulu)		01671520876	01678010285
200	Ferdous Hossain Shohug		01952788526	01961925580
201	MD. Atikur Rahman		01761311330	01919501821
202	MD. Shohel Hossen		01676474862	01191286086
203	Ema Datta		01913002344	01688198990
204	MD. Monir hessen Babu		01673459414	
205	MD. Sagor Badsha		01839053453	01839053453
206	MD. Shahadat Hossen		01920483005	01684754960
207	MD. Motaleb Sarkar		01773709462	01966509137
208	Kazi Rayhan		01970600584	01680894291
209	MD. Farid Hossen		01919142113	01919157408
210	MD. Saddam Hossen		01936738006	01919143113
211	MD. Ershad Ali		01672952330	01914610337
212	Naged Billal Sani		01676174252	01686831825
213	MD. Mohibur Rahman	4	01921493673	01676174352
214	MD. Nazmul Islam		01759317459	
215	MD. Selim		01688994038	01785776766
215	MD. Yasin Ahmed		01673927111	01921617008
216	MD. Roni Mia		01917498094	01676564361
217	Nikhil Chandra Voumik		01818928774	01921735317
218	MD. Azmal Hossen		01753854502	01712739535
219	Biraj Pal Chawdhury		01711457355	01766078171
220	Tanmoy Ghoss		01712085496	01828476941
221	MD. Anisur Rahman		01720678066	01731960378
222	MD. Al Amin Chawdhury		01778840168	01733895420
223	MD. Mahabub Morshed Ibne Rob		01913931993	01551727785
224	MD. Jahanggir		017298386720	01917306179
225	MD. Habibur Rahman		01812915743	01686588058
226	S B Toni		01755033029	01745517419
227	MD. Dalim Hossen		01677716096	01953688300
228	MD. Tofazzal Hossen		01947560734	01947560734
229	MD. Mahabubur Rahman		01815656754	01674058459

Sl.	Name of the Volunteer	Ward No	Contact no. 1	Contact no. 2
230	MD. Rabu Mallik		01845479600	01955114663
231	MD. Mizanur Rahman		01912101091	01612101091
232	Dipa Banik		01918520132	01689430134

Table 4: List of Urban Community Volunteer in Ward no. 15 of NCC

Sl.	Name	Ward No	Contact no 1	Contact no. 2
1	Jahirul Islam	15	01727205369	
2	Nargis Akter	15	01713482509	
3	Jannatul Ferdous	15	01675024176	
4	Moni Akter	15	01677110402	
5	Tahamina Akter	15	01956952502	
6	Mrs. MinuBegum	15	01949894471	
7	Ruma Akter	15		
8	Md. Sany Khan	15	01914185578	
9	Shathi	15	01827617697	
10	Juthi	15	01938600791	
11	NasrenAkter	15	01913892832	
12	MahamudaAkter	15	01941445488	
13	Sharmin Akter	15	01629205165	
14	Md. Solaiman	15	01676119460	
15	Md. Younus Sardar	15	01952978699	
16	Mitu Akter	15	01982664519	
17	Pinky Akther	15	01950857532	
18	Shahid Alamin Robin	15	01920077293	
19	Rumel Das Rubel	15	01865016750	
20	Popy Akter	15	01716230752	
21	AyashaAkter	15	01926813904	
22	Md. Fujlol Hoque Khandakar	15	01860490049	
23	Shayma Khandaker Toma	15	01673016827	
24	Anita Rani Das	15	01611899031	
25	Laily Yeasmin	15	01827617696	
26	Sheuly Begum	15	01838788516	
27	Pinky Akter	15	01950857532	
28	RubenaAkther	15	01931106900	
29	Munni Akter	15	01985714535	
30	Most. Morsheda Begum	15	01787339189	
31	Hosain Howllather Hemal	15	01678381304	
32	Md. Moinul Islam	15	01913910393	
33	Md. Sabuz Hossain	15	01815765698	
34	Md. Shahin	15	01798835670	
35	Md. Abul Kalam	15	01943029081	
36	Osit Baran Biswas	15	01818458789	
37	Md.Alauddin sarder	15	01950718902	1759902371

Sl.	Name	Ward No	Contact no 1	Contact no. 2
38	Poly Akter	15	01991397617	
39	Suborna Akter	15	01941431529	1993876735
40	Saiful Islam	15	01966653996	
41	Delip Kumar Dey	15	01732823584	1674103773
42	Aminul Islam	15	01670942572	1913484492
43	Sanjida Akter	15	01830607859	1749506369
44	Ma.Kalam Mollah	15	01831384888	
45	Shirmen Akter	15	01917000000	1950857532
46	Jannatul Ferdous	15	01689972814	1953533547
47	Ruma Akter	15	01685744641	1922018068
48	Salma Akter	15	01791014043	1754067462
49	Antora Akter	15	01830285568	
50	Md. Rihan Kabir	15	01821636150	1924414552
51	Kanchan Seen	15	01919403507	1772712463
52	Sharmin Rinve	15	01934528434	
53	Lakhi Akther	15	01916750212	
54	Runa Faruqe	15	01683657620	01934328080
55	Sabana	15	01969141999	
56	Beauty Akter	15	01984531501	
57	Md. Sohag	15	01776723303	0172486008
58	Md. Ismail Hossan	15	01868080587	01937686900
59	Md. Sohan Hossin	15	01955880512	
60	Md.Milon	15	01674046535	01670535019
61	Md.Marfut	15	01913991435	
62	Md. GolamMostafa	15	01912053176	01783941353
63	Nusrat Rafiza	15	01672656955	01720542960
64	Md.Mostafizur Rahman	15	01720553604	01970553604
65	Kazi Anamul Kabir	15	01712354915	01913601231
66	Mohammad Abul hossain	15	01915920335	01756548175
67	Md. Hasanul Islam	15	01720025599	
68	Md.Abdulla al Noman	15	01820161018	
69	Sanjida Khanam	15	01939033716	
70	Md.Masud Rana	15	01798860023	
71	Shilpe Das	15	01798860023	
72	Khandoker Hayat Mahmud	15	01816510214	
73	Emon Saha	15	01624946922	
74	Rohit Podder	15	01623295212	
75	Joy San	15	01953545272	
76	Md.Shariar Ahmed	15	01944608291	01920077293
77	Afsana Akter	15	01960309547	
78	Fatema Akter	15	01710878311	
79	Md.AsifJobaer	15	01852248888	
80	Rubel Sheikh(Okul)	15	01961035409	

Sl.	Name	Ward No	Contact no 1	Contact no. 2
81	Jibon Krishna Sarker	15	0171637453	
82	Sumon Chandra Debnath	15	01718666287	
83	A.S.M Mosiur Rahman	15	01814353156	
84	Imtiaz Uddin Ahmed Julu	15	01937046527	
85	Mosharaf Hossain	15	01932617738	
86	Md. Saddam Hosain	15	01743935084	
87	Most. Morsheda Begum	15	01787339189	
88	Hosain Howlather Hemal	15	01678381304	
89	Md. Moinul Islam	15	01913910393	
90	Md. Rasel	15	01930978129	
91	Md. Shahin	15	01798835670	
92	Md. Abul Kalam	15	01943029081	
93	Rubena Akther	15	01931106900	
94	Munni Akter	15	01985714535	
95	Md. AlaminHossainKhandakar	15	016800108810	

Table 5: List of Urban Community Volunteer in Ward no. 16 of NCC

Sl.	Name	Ward No.	Contact no. 1
1	Md. Rahmat Ullah	16	01865886205
2	Md. Jakaria Mahmud	16	01937949537
3	Md. Masud Hossain	16	01638669927
4	Md. Masud Rana	16	01915-807435
5	Nayan Chan	16	01711042642
6	Riyad Prodhan	16	01983842560
7	Mehadi Hasan	16	01636226586
8	Tanbir Ahmed Rupok	16	01943406572
9	Tuhid Alam	16	01927239739
10	Sumon Chan	16	01923151799
11	Md. Sajib	16	01884626636
12	Md. Tuhin	16	01942927564
13	Al Shababa Mundal	16	01928209544
14	Shihab Uddin Alif	16	01621772624
15	Ananna Khanom Lamiya	16	01913450419
16	Suhana Akter	16	01964678472
17	Rani Begum	16	01800083183
18	Jarna Moni	16	01996524323
19	Mithila aktar	16	0198802750
20	Nethor Akter Robbena	16	01621755225
21	Abu Sayem	16	01626464596
22	Tanbvir Islam	16	01859362378
23	Md. Yasin Mia	16	01941727234
24	Raksha Akter Sompā	16	01952742172
25	Monika Akter	16	01968102432

Sl.	Name	Ward No.	Contact no. 1
26	Anita Akter Misu	16	01685857306
27	Lamiya Akter Tanni	16	01832681541
28	Nusrat Jahan Sunam	16	01973106640
29	Sumia Akter Khadiza	16	01921879056
30	Munia Aktar	16	01631408857
31	Farjana Akter	16	01636430057
32	Sabatani Akter	16	01623671296
33	Liza Akter Mim	16	019949354727
34	Monik Akter	16	01942927564
35	Fatema Akter Ratna	16	01984722577
36	Labonno Akter	16	01710321270
37	Hosnaara Akter Shule	16	01968102432
38	Sujon	16	01991916717
39	Md. Sabbir hossain	16	01935978207
40	Md. Biplop Hossain	16	01923802878
41	Turag Hossain	16	01911359234
42	Sonjoy Chan	16	01954910023
43	Md. Anas Uddin Al-amin	16	01746585206
44	Sajid Ahmed	16	01621095559
45	Emon Chan Mango	16	01638669445
46	Mohammad Sadibur Rahman	16	01670940209
47	Md. Sakil Hosen	16	01731-996599
48	Md. Saidur Rahman	16	01911042641
49	Md. Masud Rana	16	01718-167910
50	Md. Esahaq Hossain Bappy	16	01990280382
51	Narayan	16	01843-442389
52	Subrata Das	16	01950-811500
53	Robi Das	16	01672-282061
54	Bipasa rani	16	01942998547
55	Jerin tammin	16	01676801647
56	Sumi rani	16	01672282061
57	Khadijatul Kubra	16	01952810999
58	Kanij Fatema	16	01982749204
59	Rahima Akter	16	01715392687
60	Hafej Aslam	16	01799090029
61	Gazi Md. Tamim	16	01765649085
62	Khadija Akter	16	01852434232
63	Meher abja mishu	16	01852434232
64	Md. Ibrahim Siddiki	16	01882983606
65	Farjana	16	
66	Khalid Bin Pallab	16	01710-406995
67	Fatema Akter	16	1680943238
68	Meheraj Uddin	16	01868718320

Sl.	Name	Ward No.	Contact no. 1
69	Iftekhar Jahan Antor	16	01748603614
70	Md. Akas Khan	16	01684266978
71	Most. Dola Akter	16	01999-291372
72	Anika Khanom Sanjid	16	01913-450419
73	Sanjida Akter	16	01686588169
74	Md. Mizanur Rahman Pradhan	16	01639-023282
75	S. M. Shakil	16	01672-599626
76	Razia Sultana	16	01685-456263
77	Md. Suman	16	016858-57306
78	Md Tuhin Sarder Ibrahim	16	01681-113504
79	kishore das	16	01986995133
80	Fatema Akter (Champa)	16	01993-966318
81	Any	16	01632-289463
82	Md. Javed Mia	16	01944-709561
83	Rotna akter	16	01874098932
84	Tarok Ghosh	16	01670-941512
85	Nodi Akter	16	01626427908
86	Mahmuda Akter	16	01531-7809073
87	Md. Nahid	16	01682-426525
88	Moriam Islam (Ria)	16	01860-132222
89	Romana	16	
90	Sharmin Akter	16	01676-656532
91	Laiju Akter	16	01798-873373
92	Yamin Hossain Emon	16	01682-042463
93	Md. Samir Hossain Khan	16	01817-053878
94	Sumaiya	16	1634492615
95	Nadia Hasan	16	
96	Md. Samsuddoha Sagor	16	01617-770181
97	Antara Akter	16	01625-639200
98	Al Ekra	16	1999291372
99	Binda rani	16	01672282061
100	Binu di	16	01672282061

Table 6: Available open spaces within NCCto be used for immediate evacuation

Sl.	Name of Open Space	Type of Open Space	Location (Ward No.)	Ownership	Area (Sq.m.)	Population holding capacity (@1 sq. m./ person)
1	Mijmiji west para play ground	Play ground	2	Private	110	110
2	Eidgah field	Play ground	2	Govt.	130	130
3	Sanarpar school play ground	Play ground	3	Private	170	170
4	Eastern Ideal College play ground	Play ground	4	Private	220	220

Sl.	Name of Open Space	Type of Open Space	Location (Ward No.)	Ownership	Area (Sq.m.)	Population holding capacity (@1 sq. m./ person)
5	Shonamia Stadium	Play ground	4	Govt.	550	550
6	D N D School play ground	Play ground	4	Govt.	450	450
7	Shimrail Eidgah field	Eidgah	4	Govt.	450	450
8	Biddyut unnayan board high school field	Play ground	5	Govt.	330	330
9	Eidgah (power house) field	Khas land	5	Govt.	110	110
10	Eidgah (Kolabag west sailroad)	Khas land	5	Govt.	110	110
11	Sofura Khatun Pailot Girls High School field	Play ground	6	Govt.	900	900
12	Eidgah field	Khas land	6	Govt.	330	330
13	Sustori field	Khas land	6	Govt.	110	110
14	Nur Madina Dakhil Madrasa field	Play ground	6	Govt.	110	110
15	MW Math (M W B High School field)	Play ground	7	Govt.	110	110
16	Dhonkunda Field	Play ground	8	Govt.	390	390
17	Popular High School, Dhonkunda field	Play ground	8	Private	160	160
18	Jalkuri School play ground	Play ground	9	Govt.	550	550
19	Maispara Eidgah field	Play ground	9	Govt.	2225	2225
20	Godanail field	Play ground	10	Govt.	170	170
21	Godanail School Field	Play ground	10	Private	550	550
22	Cotton Mills Balur field	Play ground	10	Private	1670	1670
23	Lakshmi Narayan School field	Play ground	10	Private	1110	1110
24	Play field adjacent to Khanpur Branch Road	Play ground	11	Private	330	330
25	Hajiganj Kella field	Barren land	11	Govt.	330	330
26	Newhajiganj IET school field	Play ground	11	Govt.	2225	2225
27	Borofkol field	Play ground	11	Govt.	1670	1670
28	Bar academy school math	Play ground	12	Govt.	775	775
29	Khanpur children park	Play ground	12	Govt.	775	775
30	Matrisadan shishu play field	Play ground	12	Govt.	550	550
31	Mohabbat hajir field	Play ground	12	Govt.	275	275
32	Bag-e-jannat moshjid balur field	Play ground	12	Private	225	225
33	Jora tanki field	Play ground	12	Private	550	550
34	Esdail stadium	Play ground	12	Govt.	9670	9670
35	Narayanganj Central Eidgah	Park	13	Govt.	550	550
36	Shahid Minar	Park	13	Govt.	330	330
37	Water Tanki School Ground	Play ground	14	Govt.	275	275
38	Ali Uddin Khan Stadium	Play ground	15	Govt.	1775	1775
39	Dan Bidda School Ground	Play ground	15	Private	225	225
40	22,23 no. school field	Play ground	16	Govt.	110	110

Sl.	Name of Open Space	Type of Open Space	Location (Ward No.)	Ownership	Area (Sq.m.)	Population holding capacity (@1 sq. m./ person)
41	20,21 no. school field	Play ground	16	Govt.	550	550
42	Beparipara khelar field	Barren land	16	Private	1110	1110
43	Nolua islamia fieldniya madrasa field	Barren land	18	Private	1110	1110
44	Nolua road balur field	Play ground	18	Govt.	170	170
45	Ali ahmed Chunka stadium	Play ground	18	Govt.	275	275
46	Chaya bundo abasik elaka, shahid nagar field	Barren land	18	Private	110	110
47	Jabanul khelar field	Barren land	18	Private	110	110
48	Shona Kanda City Stadium	Play ground	20	Govt.	890	890
49	Shona Kanda Hat field	Khas Land	20	Govt.	2670	2670
50	Shona Kanda Killa ground	Play ground	21	Govt.	550	550
51	E. F. M. ground	Play ground	21	Govt.	225	225
52	Shirazoddoula Club field	Play ground	22	Govt.	890	890
53	B. S. School Ground	Play ground	22	Private	330	330
54	Girls' School ground	Play ground	22	Private	225	225
55	Degree College Ground	Play ground	23	Govt.	550	550
56	Islambag Play Ground	Play ground	24	Govt.	775	775
57	South Lokkhon Khola Paurasava field	Play ground	25	Govt.	110	110
58	Choura Para BIWTC field	Play ground	25	Govt.	45	45
59	South side of Kuri Para High School field	Play ground	27	Govt.	5560	5560
60	Gokul Daser Bag (Chourasta) field	Play ground	27	Govt.	3330	3330
	Total				51,240	51,240

Table 7: List of proposed evacuation routes that can be used for safe evacuation

Sl.	Road Name	Road Type	Road Width (M)
1	Dhaka-Narayanganj Highway	Pucca	16
2	Dhaka-Chittagong Highway	Pucca	15
3	DND-Demra Road	Pucca	15
4	Demra-Narayanganj Road	Pucca	14
5	Jalkuri-Siddhirganj Road	Pucca	14
6	Nawab Salimullah Road	Pucca	18
7	Shahid Sohrowardi Road	Pucca	13
8	Bangabondhu Road	Pucca	23
9	Upazila Road	Pucca	7
10	Bhuigar-Mouchak Road	Pucca	6
11	Moyala Road	Pucca	13
12	Pirgonj-Modongonj Road	Pucca	17
13	T Hossain Road	Pucca	10
14	Willson Road	Pucca	29
15	Madaninagar Madrasa Road	Pucca	8
16	Chasara-Hajiganj Railline Road	Pucca	10
17	P.M Road	Pucca	9
18	Fokira Road	Pucca	8

Table 8: List of major hospitals/clinics within NCC area and their capacities

Sl.	Name of Hospital	Address	Location (Ward no.)	Capacity and Resources								Emergency contact number
				No. of Beds	Doctors	Nurses	Paramedics Staff	Other Staff	Other Available Facilities	No. of Ambulance	Availability of Contingency Plan	
1	Sugandha Hospital	Halima shopping tower, Chittagong road	1	10	14	11	1	0	OT, X-ray, Pathological lab, Generator, IPS	0	No	01747233644
2	Maa Hospital	3rd floor of Dutch Bangla Bank, Chittagong road	1	10	15	11	0	0	OT, X-ray, Pathological lab, IPS	0	No	01818852494
3	Pro-active Medical College and Hospital	Siddhirganj	2	250	20	50	30	120	OT, X-ray, ICU, Pathological lab, Generator, IPS	2	Yes	01861236268
4	Shajeda Hospital	150, Shimrail, Shiddhirganj	4	50	30	15	20	29	OT, X-ray, Pathological lab, Generator	4	No	01777772570
5	Sufiya General Hospital	Siddhirganj	6	10	2	13	0	14	OT, X-ray, Pathological lab, Generator	0	No	01913256162
6	Alif General Hospital	Siddhirganj	6	30	2	6	2	17	OT, X-ray, Pathological lab, Generator, IPS	1	No	01872603751
7	M. Hossain General Hospital	Siddhirganj	7	18	6	7	3	15	OT, X-ray, Pathological lab, Generator	0	No	1819664287
8	Alif Doctors Chamber and Diagnostic Center	Siddhirganj	8	10	16	10	0	5	OT, X-ray, CT scan, Pathological lab, IPS	1	Yes	01754558454
9	Medicure General Hospital & Diagnostic Center	Siddhirganj	9	10	12	4	2	5	OT, Pathological lab, Generator	0	No	01715156779

Sl.	Name of Hospital	Address	Location (Ward no.)	Capacity and Resources								Emergency contact number
				No. of Beds	Doctors	Nurses	Paramedics Staff	Other Staff	Other Available Facilities	No. of Ambulance	Availability of Contingency Plan	
10	Narayanganj 300 Bed Hospital	Manpur, 17/1 Shakharaj Manpur	12	300	50	141	7	190	OT, X-ray, Pathological lab, Blood bank, Generator	4	No	7630521
11	Ashshifa Diagnostic and General Hospital	147/2 Mojid Khanpur	12	10	5	6	1	3	OT, X-ray, Pathological lab, Generator, IPS	0	No	01930089011
12	Matri Seba General Hospital	85/1 Khanpur Main Road	12	10	1	6	1	4	OT, Generator	0	No	01713375281
13	Jahan Clinic and Pathology	85/2 Khanpur Main Road	12	10	5	6	1	18	OT, Pathological lab, Generator, IPS	0	No	01778087442
14	Shahin General Hospital	68 no. Mojid, Khanpur	12	20	2	15	4	11	OT, Generator	0	No	7644381
15	Central General Hospital	7 Nawab Salimullah Road, Khanpur	12	10	2	6	2	12	OT, Generator, IPS	1	No	01711033900
14	Somrat Genral Hospital	2/A Nawab Salimullah Road	12	15	2	7	3	8	OT, Generator	0	No	01753420328
15	Selina Memorial Hospital	117/1 Donchembar	12	17	2	6	2	10	OT, Pathological lab, Generator	1	No	0171807789
16	Care General Hospital	208 B.B. Road, Cashara	12	40	3	23	8	19	OT, X-ray, Pathological lab, Generator, IPS	0	No	01628674519
17	City Life Hospital	B.B. Road	13	20	5	25	3	10	OT, Generator, IPS	0	No	01798833233
18	Mukti General Hospital	150 no. B.B. Road	13	20	7	14	3	8	OT, Generator, IPS	1	No	01680902288

Sl.	Name of Hospital	Address	Location (Ward no.)	Capacity and Resources								Emergency contact number
				No. of Beds	Doctors	Nurses	Paramedics Staff	Other Staff	Other Available Facilities	No. of Ambulance	Availability of Contingency Plan	
19	Islam Heart Center	207 no. Vasha Soinik Road	13	30	10	12	6	15	X-ray, ICU, Pathological lab, Generator, IPS	0	No	01922110728
20	Mother & Child Welfare Center		15	10	2	2	5	5	OT, Generator	1	No	02-7648609
21	Narayanganj General Hospital	15 no. Old Bangabandhu Road	15	100	34	107	7	34	OT, X-ray, Pathological lab, Blood bank, generator	1	No	01730224784
22	Nagor Martisodon Hospital	95/1, Shahi Mashjid Road, Narayanganj	21	20	7	4	4	38	OT, Pathological lab, Generator	1	No	1714509965
23	Chayanur General Hospital & Medical Center	Soyad Plaza, 351/1 Uilson Road; Bandor Bazar	22	13	5	5	3	10	OT, Generator	0	No	1902524486

Table 9: List of Urban Health Care Center/Community Clinics within NCC area and their capacities

Sl.	Name of Hospital	Address	Location (Ward no.)	Capacity and Resources								Emergency contact number
				No. of Beds	Doctors	Nurses	Paramedics Staff	Other Staff	Other Available Facilities	No. of Ambulance	Availability of Contingency Plan	
1	Sumilpara Union Health & Family Welfare Center	Sumilpara	6	3	1	0	0	4	OT	0	No	01723462841
2	Nagar Sastho kendro-2	Chowdhury Bari Mor, Godanail, Rasulbag	10	0	1	5	2	4	OT, Generator	0	No	01768464026
3	Nagar Sastho kendra-3	228/3 Poshchim Deovog Ali Ahmed Chunka Sarak	16	4	1	0	4	11	Pathological lab	1	No	1923621780
4	Urban Health Center	South Lokkhon Khola	25	0	1	1	3	11	OT, Pathological lab	0	Yes	1941645355

Table 10: List of major diagnostic centers within NCC area and their capacities

Sl.	Name of Hospital	Address	Location (Ward no.)	Capacity and Resources								Emergency contact number
				No. of Beds	Doctors	Nurses	Paramedics Staff	Other Staff	Other Available Facilities	No. of Ambulance	Availability of Contingency Plan	
1	Bangladesh Childhood Cander Home	Omorpur, Siddhirganj	5	20	1	1	0	4	No facilities	1	No	1785283393
2	Lab aid Diagnostic Center	56 Vasha Sainik Road, Chashara	12	0	70	0	0	115	X-ray, CT scan, MRI, Generator	1	No	01766660505
3	Korotoa Medical Services	B.B. Road	13	0	10	0	0	15	X-ray, Pathological lab, Generator, IPS	0	No	01795759500
4	Mordern Diagnostic Center	207 no. B. B. Road	13	0	40	0	0	65	X-ray, CT scan, Pathological lab, Generator, IPS	0	No	02-7647241

Table 11: List of big hospital/ clinic nearby the NCC area

Sl. No.	Name of Hospital/ Clinic	Location/ Address
1	Sufia General Hospital	Rayerbag Rd, Dhaka
2	M. H. Chowdhury General Hospital and Diagnostic Center	Zia Sarani Rd, Dhaka
3	Medinova Hospital and Digilab	Dhaka-Chittagong Highway
4	Health Care Adhunik Hospital & Diagnostic Center	Rahim Market, Kandapara, Mizmizi
5	Sajida Hospital	150 Chittagong Road Simrail, Shidhhirganj

Table 12: List of proposed shelter sites and their capacities

Sl.	Name of the open spaces	Location (Ward No.)	Area (sq. m.)	No. of Family holding capacity (@45 sq. m./ family)
1	Sofura Khatun Pilot Girls High School Play Ground	6	900	20
2	Maispara Eidgah	9	2,225	50
3	Cotton Mills Balur Math	10	1,670	38
4	Lakshmi Narayan School Math	10	1,110	25
5	Newhajiganj IET School Math	11	2,225	50
6	Borofkol Math	11	1,670	38
7	Esdail Stadium	12	9,670	215
8	Ali Uddin Khan Stadium	15	1,775	40
9	Beparipara khelar Math	16	1,110	25
10	Nolua Islamia Sunniya Madrasa Math	18	1,110	25
11	Shona Kanda Hat	20	2,670	60
12	South Side of Kuri Para High School	27	5,560	125
13	Gokul Daser Bag (Chourasta)	27	3,330	75
Total			35,025	786

Table 13: List of educational buildings that can be used for shelter purpose

Ward no.	Name of educational institute	No. of building	Type of the building	No. of floor	Structural condition	Area (Sq. M)
1	Giashuddin Islami Model School and College	3	Pucca	3	Good	2521.02
			Semi-pucca	1	Moderate	
			Semi-pucca	1	Moderate	
	Mijmiji Painodi Reqmot Ali High school	3	Pucca	3	Good	312.69
			Pucca	3	Good	
			Pucca	3	Good	
	Hazi Samsuddin High School	1	Semi-pucca	1	Moderate	379.77
	Al-balag Ideal Cadet Academy	1	Pucca	2	Good	170.49
	Batanpara Govt. Primary School	2	Pucca	2	Good	167.46
			Pucca	2	Good	
	98 no. Painodi Govt. Primary School	1	Pucca	1	Good	310.78
	Mijmiji Painodi Fazil Degree Madrasa	3	Pucca	3	Good	571.96
			Pucca	4	Good	
			Pucca	4	Good	
	Mniknagar Madrasa	1	Pucca	3	Good	1069.7
2	Andankola Primary and High School	2	Pucca	5	Good	482.39
			Pucca	1	Good	
	Mijmiji west para primary and high school	3	Pucca	2	Good	1159.05
			Pucca	3	Good	
			Pucca	2	Good	
	Mijmiji Hazi Abdus-samad Islamia Alim Madrasa	3	Pucca	3	Good	492.28
			Pucca	4	Good	
			Pucca	5	Good	
3	Capital Model School	1	Pucca	3	Good	210.45
	Bodrunnesa Ideal School	1	Pucca	2	Good	242.07
	Rashulbag Model High School	1	Semi-pucca	1	Good	144.55
	Mahmud Ferdous Model School	2	Pucca	1	Good	164.29
			Semi-pucca	1	Moderate	
	Sanarpara Primary, High School & College	3	Pucca	2	Good	483.96
			Pucca	4	Good	
			Pucca	6	Good	
	Golden Child School	2	Pucca	2	Good	265.78
			Pucca	3	Good	
	Madani Nagar Madrasa	5	Pucca	7	Good	1903.6
			Pucca	7	Good	
			Pucca	6	Good	
			Pucca	4	Good	
			Pucca	5	Good	
4	Hazi Fazlul Haque Model High School	2	Tin-shed	1	Moderate	361.21
			Tin-shed	1	Moderate	
	Estarn Ideal College	1	Pucca	1	Good	340.46

Ward no.	Name of educational institute	No. of building	Type of the building	No. of floor	Structural condition	Area (Sq. M)
	97 no. Siddhirganj North Govt. Primary School	2	Pucca	2	Good	451.34
			Pucca	2	Good	
	Otigram Ideal High School	2	Tin-shed	1	Bad	207.14
			Tin-shed	1	Bad	
	Water Development Board High School	2	Pucca	1	Moderate	103.04
			Tin-shed	1	Moderate	
	D N D Project Primary School	2	Semi-pucca	1	Bad	242.7
			Tin-shed	1	Bad	
	Tanjimul Ummah Hifoz Madrasa	2	Pucca	6	Good	698.78
			Pucca	6	Good	
	Khairul Ummah Pre-cadet Madrasa	1	Pucca	1	Good	505.29
	102 no. Shimrail Govt. Primary School	3	Pucca	1	Good	461.104
			Pucca	1	Moderate	
			Semi-pucca	1	Moderate	
	Shishu Kanan Pre-cadet & High School	3	Pucca	2	Good	278
			Semi-pucca	1	Good	
			Semi-pucca	1	Good	
5	Khadijatul Kubra (RS) Madrasa	2	Semi-pucca	1	Moderate	529.05
			Semi-pucca	1	Moderate	
	Siddhirganj Rebti Mohan Pailot School & College	3	Pucca	4	Good	382.86
			Pucca	4	Good	
			Pucca	4	Good	
	Pachtara Junior High School	2	Pucca	2	Good	91.707
			Semi-pucca	1	Moderate	
	98 no. Siddhirganj South Govt. Primary School	2	Pucca	1	Good	330.82
			Pucca	1	Moderate	
	Mohiuddin Adarsha Kindergarten	4	Semi-pucca	1	Moderate	273
			Semi-pucca	1	Moderate	
			Semi-pucca	1	Moderate	
			Semi-pucca	1	Moderate	
	Electricity Development Board High School	2	Pucca	3	Good	653
			Pucca	1	Bad	
	Siddhirganj Darussalam Islamia Alim Madrasa	4	Pucca	2	Good	474.404
			Pucca	3	Moderate	
			Pucca	2	Good	
			Pucca	1	Bad	
6	Safura Khatun Pailot Girls High School	3	Pucca	2	Moderate	487.54
			Semi-pucca	2	Good	
			Pucca	1	Bad	
	Godnaiyl Bagpara Alim Madrasa	5	Pucca	2	Moderate	759.16
			Pucca	3	Good	
			Pucca	2	Moderate	

Ward no.	Name of educational institute	No. of building	Type of the building	No. of floor	Structural condition	Area (Sq. M)
			Pucca	2	Moderate	
			Pucca	1	Bad	
	Sunrise Model School	2	Semi-pucca	1	Moderate	185.84
			Semi-pucca	1	Moderate	
	Active Model High School	2	Semi-pucca	1	Good	289.88
			Semi-pucca	1	Good	
	Nure Madina Dakhil Madrasa	3	Semi-pucca	1	Moderate	366.56
			Semi-pucca	1	Moderate	
			Semi-pucca	1	Bad	
	94 no. Chorsumil Para Govt. Primary School	2	Pucca	1	Moderate	197.168
			Pucca	2	Good	
	Adamji Ummul Koran School	3	Semi-pucca	1	Moderate	421.22
			Semi-pucca	1	Moderate	
			Tin-shed	1	Bad	
	Adamji Active High School	2	Semi-pucca	1	Good	603.11
			Semi-pucca	1	Good	
	93 no. Sumil Para Govt. Primary School	1	Pucca	2	Moderate	164.95
7	95 no. Adamji Nagar Govt. Primary School	2	Pucca	2	Bad	446.5
			Pucca	1	Good	
	M. W. High School	5	Pucca	2	Good	980.106
			Pucca	2	Good	
			Pucca	3	Good	
			Pucca	2	Good	
			Pucca	2	Good	
	Govt. Adamji Nagar M. W. College	2	Pucca	3	Good	1131.79
			Pucca	3	Good	
8	89 no. Tatkhana Govt. Primary School	3	Pucca	2	Good	539.59
			Pucca	3	Moderate	
			Tin-shed	1	Bad	
9	91 no. Jalkuri West Govt. Primary School	2	Pucca	2	Good	131.55
			Pucca	4	Good	
			Pucca			
	Jalkuri High School & College	2	Pucca	6	Good	717.69
			Pucca	4	Good	
	92 no. Jalkuri Govt. Primary School	2	Pucca	1	Good	370.42
			Pucca	1	Very bad	
	Thirot Ali Ideal School	3	Semi-pucca	1	Moderate	554.98
			Tin-shed	1	Moderate	
			Tin-shed	1	Moderate	
10	86 North Godanail Govt. boys primary school	1	Pucca	2	Bad	170.29
	87 North Godanail Girls Primary	1	Pucca	2	Good	79.68

Ward no.	Name of educational institute	No. of building	Type of the building	No. of floor	Structural condition	Area (Sq. M)
	school					
	Godanail High School	5	Pucca	2	Good	1221.76
				1	Moderate	
				2	Good	
				2	Good	
				2	Good	
	Chittaranjan Cotton Mills High School	5	Pucca	2	Good	155.31
			Pucca	1	Good	
			Pucca	2	Good	
			Tinshed	1	Bad	
			Semi Pucca	1	Bad	
	Lakshmi Narayan Cotton Mills High school	6	Pucca	1	Good	1339.9
			Pucca	2	Good	
			Pucca	2	Good	
			Tinshed	1	Bad	
			Tinshed	1	Bad	
			Tinshed	1	Moderate	
	88 Godanail South Hajaribag Govt. Primary School	3	Pucca	3	Good	340.77
			Pucca	1	Moderate	
			Tinshed	1	Moderate	
11	44 Khanpur N.K. boys primary school	1	Pucca	2	Bad	75.74
	Bibi moriyom girls school	5	Pucca	4	Good	970.4
			Pucca	3	Good	
			Pucca	2	Moderate	
			Pucca	2	Moderate	
			Pucca	2	Good	
	Drager Junior high school	1	Pucca	2	Moderate	431.73
	IET govt. high school	4	Pucca	1	Bad	1218.71
			Pucca	3	Good	
			Pucca	3	Good	
			Pucca	1	Good	
	48 Tolla boys primary school	2	Pucca	2	Very Bad	99.53
			Pucca	2	Good	
12	ABC international school	3	Pucca	6	Good	415.13
			Pucca	5	Good	
			Pucca	3	Good	
	Narayanganj commerce college	1	Pucca	4	Good	120.19
	Bondhusriti govt. primary school	1	Pucca	3	Good	121.71
	Narayanganj Bar Academy	4	Pucca	2	Good	1352.42
			Pucca	2	Good	
			Pucca	2	Good	

Ward no.	Name of educational institute	No. of building	Type of the building	No. of floor	Structural condition	Area (Sq. M)
			Pucca	2	Good	
	Khanpur adorsho kindergarten	1	Pucca	3	Good	66.68
	Isdai rabeya hossain high school	3	Pucca	2	Good	481
			Pucca	4	Good	
			Pucca	2	Good	
	72 esdai govt. primary schhol	2	Pucca	2	Good	372.35
			Pucca	3	Good	
	Heritage school	1	Pucca	11	Good	511.58
	Neuclias school	1	Pucca	6	Good	199.63
13	Narayanganj Priperaty School	2	Pucca	2	Moderate	1293.12
			Pucca	3	Good	
	42/43 Chasara Ideal Primary School	2	Pucca	2	Good	367.52
			Pucca	2	Good	
	Narayanganj Govt. Girls' College	5	Pucca	3	Good	2117
			Pucca	3	Good	
			Pucca	3	Good	
			Pucca	5	Good	
			Pucca	2	Good	
	Bagum Rokya Khandokar Poura High School	3	Pucca	3	Good	598
			Pucca	2	Good	
			Tinshed	1	Good	
	105 no. Begum Rokya Khandokar Govt. Primary School	2	Pucca	1	Good	310
			Pucca	1	Good	
	Al- Jamiatul Ashrafia Rahmatulla Madrasa	4	Pucca	4	Good	789
			Pucca	4	Good	
			Pucca	4	Good	
			Pucca	4	Good	
	Narayanganj Ideal School	1	Pucca	5	Good	1317.65
	35/36 no Golachipa Govt. Primary School	2	Pucca	1	Good	302.3453
			Tinshed	1	Bad	
	Narayanganj Girls' High School	4	pucca	3	Good	655
			pucca	2	Good	
			pucca	2	Good	
			pucca	2	Good	
14	30 no. Shere Bangla Primary School	1	Pucca	1	Good	195.28
	26/27 no. Iokkhi Narayan Govt. Girls' Primary School	1	Pucca	2	Bad	156.24
	Bidda-Niketon High School	3	Pucca	4	Good	76.18
			Pucca	4	Good	
			Pucca	3	Under Construction	
15	Gono Bidda Niketon High School	3	pucca	3	Good	681
			pucca	4	Good	

Ward no.	Name of educational institute	No. of building	Type of the building	No. of floor	Structural condition	Area (Sq. M)
	Narayanganj College & University	4	pucca	2	Good	949
			pucca	5	Good	
			pucca	5	Good	
			pucca	4	Good	
			pucca	7	Good	
	Narayanganj High School & College	5	Pucca	3	Good	2063.83
			Pucca	3	Good	
			Pucca	3	Good	
			Pucca	3	Good	
			Pucca	2	Good	
	31/32 Noyamati Primary School	1	Pucca	3	Moderate	196.6
	33 no. City Colony Govt. Primary School	1	Pucca	4	Bad	61.64
16	Morgan girls high school and college	4	Pucca	4	Good	2374.31
			Pucca	3	Good	
			Pucca	2	Good	
			Pucca	4	Good	
	22,23 deovog adarsha govt. primary school	2	Pucca	1	Bad	424.46
			Pucca	2	Moderate	
	20,21 govt. primary school	1	Pucca	3	Moderate	161.93
17	Joygobinda high school	5	Pucca	2	Good	965.4
			Pucca	2	Good	
			Pucca	2	Moderate	
			Pucca	2	Moderate	
			Pucca	2	Moderate	
	14,15 no. govt. primary school	1	Pucca	2	Bad	1331.63
	Bangabandhu govt. primary school	2	Pucca	1	Moderate	444.48
			Pucca	3	Good	
	Annur academy	2	Pucca	1	Good	195.53
			Pucca	2	Good	
	17 no. noyapara govt. primary school	1	Pucca	3	Moderate	182.64
18	Ronoda Prosad saha university	2	Pucca	1	Good	748.1
			Pucca	6	Good	
	13 no. Noluta govt. primary school	1	Pucca	2	Bad	92.26
	Shitalakhya govt. primary school	1	Pucca	3	Good	224.35
	Haji samsunnahar ideal schhol	1	Pucca	4	Good	216.5
	Noluta Islamia Sunniya Madrasa	2	Pucca	1	Good	153.14
			Pucca	3	Good	
	Adorsho girls school and college	2	Pucca	5	Good	618.88
			Pucca	3	Good	
19	Santinagor Govt. Primary School	1	Pucca	1	Good	202.37
	54 No. Keramotia Govt. Primary	1	Pucca	2	Moderate	166.35

Ward no.	Name of educational institute	No. of building	Type of the building	No. of floor	Structural condition	Area (Sq. M)
	School	3				402.41
	Modonganj Model Govt. Primary School		Pucca	1	Moderate	
			Pucca	2	Moderate	
20	Shona Kanda, BeparyPara Govt. Primary School	2	Pucca	1	Moderate	214.51
			Pucca	2	Good	
	1 No. Faraji Kanda Govt. Primary School	3	Tin-Shed	1	Very Bad	172.53
			Pucca	1	Moderate	
			Pucca	1	Bad	
21	B.S.E.C. Dokyard High School	4	Pucca	5	good	655.85
			Pucca	5	good	
			Pucca	5	good	
			Pucca	5	good	
	9 No. Bandor Colony Primary School	2	pucca	2	Good	113.87
			pucca	4	Good	
	Banor Islamia Fazil Madrasa	2	Pucca	3	Good	419.82
			Pucca	3	Good	
	Sikandar A. Malek High School	3	Pucca	1	Good	415.89
			Pucca	3	Moderate	
			Pucca	2	Moderate	
	Shalehnagor Toyab Hossain Private Primary School	1	Tin-shed	1	Bad	95.38
	50 No. Shona Kanda Boy's Govt. Primary School	2	Pucca	2	Good	379.33
			Pucca	1	Good	
22	B.M. Union School & College	4	Pucca	4	Good	1262.89
			pucca	3	Good	
			pucca	3	Good	
			pucca	3	Good	
	Bandor Girls' School & College	4	pucca	3	Good	1122.23
			pucca	5	Good	
			pucca	3	Good	
			pucca	5	Good	
	49 No. Bandor Boys' Govt. Primary School	2	Pucca	2	Very Bad	215.65
			Pucca	1	Moderate	
23	West Bandor Govt. Primary School	2	Pucca	2	Good	318.68
			Pucca	1	Very Bad	
	48 No. Ekrapur Govt. Primary School	3	pucca	2	Very Bad	576.72
			pucca	2	Very Bad	
			pucca	2	Good	
	Kodom Rasul College	3	pucca	2	Very Bad	97.54938
			pucca	4	Good	
pucca			4	Good		

Ward no.	Name of educational institute	No. of building	Type of the building	No. of floor	Structural condition	Area (Sq. M)
	Nabiganj Girls' School	3	pucca	2	Moderate	650.85
			pucca	2	Moderate	
			pucca	3	Very Bad	
	Hazi Shiraj Uddin Memorial High School	2	pucca	3	Good	703.15
			pucca	1	Good	
	47 No. Lalmia Govt. Primary School	2	pucca	2	Moderate	371.82
			pucca	1	Moderate	
24	45 No. Nabiganj Govt. Primary School	2	Pucca	2	Very Bad	339.75
			Pucca	1	Moderate	
	Noyaddakaita Khali Govt. Primary School	1	Pucca	1	Very Bad	110.45
	44 No. Amirabad Govt. Primary School	2	Pucca	2	Very Bad	335.28
			Pucca	1	Good	
	Kabi Nazrul Govt. Primary School	2	Pucca	2	Good	336.93
			Pucca	1	Good	
25	46 No. Kadam Sharif Govt. Primary School	1	Pucca	2	Good	125.59
			Pucca	2	Good	
	42 No. South Lokkhon Khola Govt. Primary School	2	Pucca	1	Bad	432.34
			Pucca	2	Good	
	South Lokkhon Khola Girls' School	2	Pucca	2	Good	185.34
			Pucca	2	Good	
26	Lokkhon Khola Al-Haz Fazlur Rahman High School	1	Pucca	2	Good	293.16
			Pucca	2	Good	
	Ram Nagar Govt. Primary School	2	Semi-pucca	1	Bad	156.93
			Pucca	1	Good	
	Dhakeshori Mills' School & College	2	Pucca	3	Good	1231.62
			Pucca	1	Good	
27	Kuri Para High School	4	Pucca	1	Good	825.02
			Pucca	2	Good	
			Pucca	2	Good	
			Pucca	2	Good	
	21 No. Kuri Para Govt. Primary School	2	Pucca	1	Good	667.44
			Pucca	1	Good	
	13 No. Chapatoli Govt. Primary School	1	Pucca	2	Good	241.92
	31 No. Fulhor Govt. Primary School	1	Pucca	2	Good	188.82

Table 14: List of godowns within NCC and their capacities

Sl. No.	Name of Godown	Location	Capacity (Metric Ton)
1	SILO	silo road,siddhirganj	50,000
2	CSD	Bandar	25,100
3	Karjokor		11,700

Table 15: Food Requirements in Different Shelter Camps

Name of shelter sites	Population holding capacity	Tentative Daily Food Requirement (most common food items) in KG				Tentative Monthly Food Requirement (most common food items) in Metric Tons			
		Wheat Flour (@100gms)	Rice (@250gms)	Lentils (@150ms)	Vegetable Oil (@35gms)	Wheat Flour	Rice	Lentils	Vegetable Oil
Sofura Khatun Pailot Girls High School	900	90	225	135	31.5	2.7	6.75	4.05	0.94
Maispara Eidgah	2,225	222.5	556.25	333.75	77.875	6.67	16.68	10.00	2.33
Cotton Mills Balur Math	1,670	167	417.5	250.5	58.45	5.00	12.52	7.50	1.75
Lakshmi Narayan School Math	1,110	111	277.5	166.5	38.85	3.33	8.32	5.00	1.16
Newhajiganj IET school math	2,225	222.5	556.25	333.75	77.875	6.67	16.687	10.00	2.33
Borofkol math	1,670	167	417.5	250.5	58.45	5.00	12.52	7.50	1.75
Esdail stadium	9,670	967	2417.5	1450.5	338.45	29.00	72.52	43.50	10.15
Ali Uddin Khan Stadium	1,775	177.5	443.75	266.25	62.125	5.32	13.312	7.98	1.86
Beparipara khelar math	1,110	111	277.5	166.5	38.85	3.33	8.32	5.00	1.16
Nolua islamia sunniya madrasa math	1,110	111	277.5	166.5	38.85	3.33	8.32	5.00	1.16
Shona Kanda Hat	2,670	267	667.5	400.5	93.45	8.00	20.02	12.00	2.80
South side of Kuri Para High School	5,560	556	1390	834	194.6	16.68	41.70	25.00	5.83
Gokul Daser Bag (Chourasta)	3,330	333	832.5	499.5	116.55	9.99	24.97	14.98	3.49
Total	35,025	3502.5	8756.25	5253.75	1225.87	105.07	262.68	157.61	36.77

Table 16: Water and Toilet Requirements in Different Shelter Camps

Name of Shelter Sites	Population holding capacity	Water Requirement in the Shelter Camp in Cubic Meters (@15 Lt. per capita per day)		No. of Toilets (max 20 person per toilet)
		Daily	For 3 days	
Sofura Khatun Pilot Girls High School	900	13.5	40.5	45
Maispara Eidgah	2,225	33.38	100.10	112
Cotton Mills Balur Math	1,670	25.00	75.00	84
Lakshmi Narayan School Math	1,110	16.65	49.95	56
Newhajiganj IET school math	2,225	33.38	100.13	112
Borofkol math	1,670	25.00	75.15	84
Esdail stadium	9,670	145.00	435.15	484
Ali Uddin Khan Stadium	1,775	26.63	79.88	89
Beparipara khelar math	1,110	16.65	49.95	56
Nolua islamia sunniya madrasa math	1,110	16.65	49.95	56
Shona Kanda Hat	2,670	40.00	120.15	134
South side of Kuri Para High School	5,560	83.40	250.20	278
Gokul Daser Bag (Chourasta)	3,330	49.95	149.85	167
Total	35,025	525.38	1576.00	1757

Annex-B: Contingency Plan Maps

Map 4: Location of key emergency agencies in Narayanganj

Map 5: Location of proposed immediate evacuation spaces

Map 6: Proposed evacuation routes

Map 7: Location of water supply sources

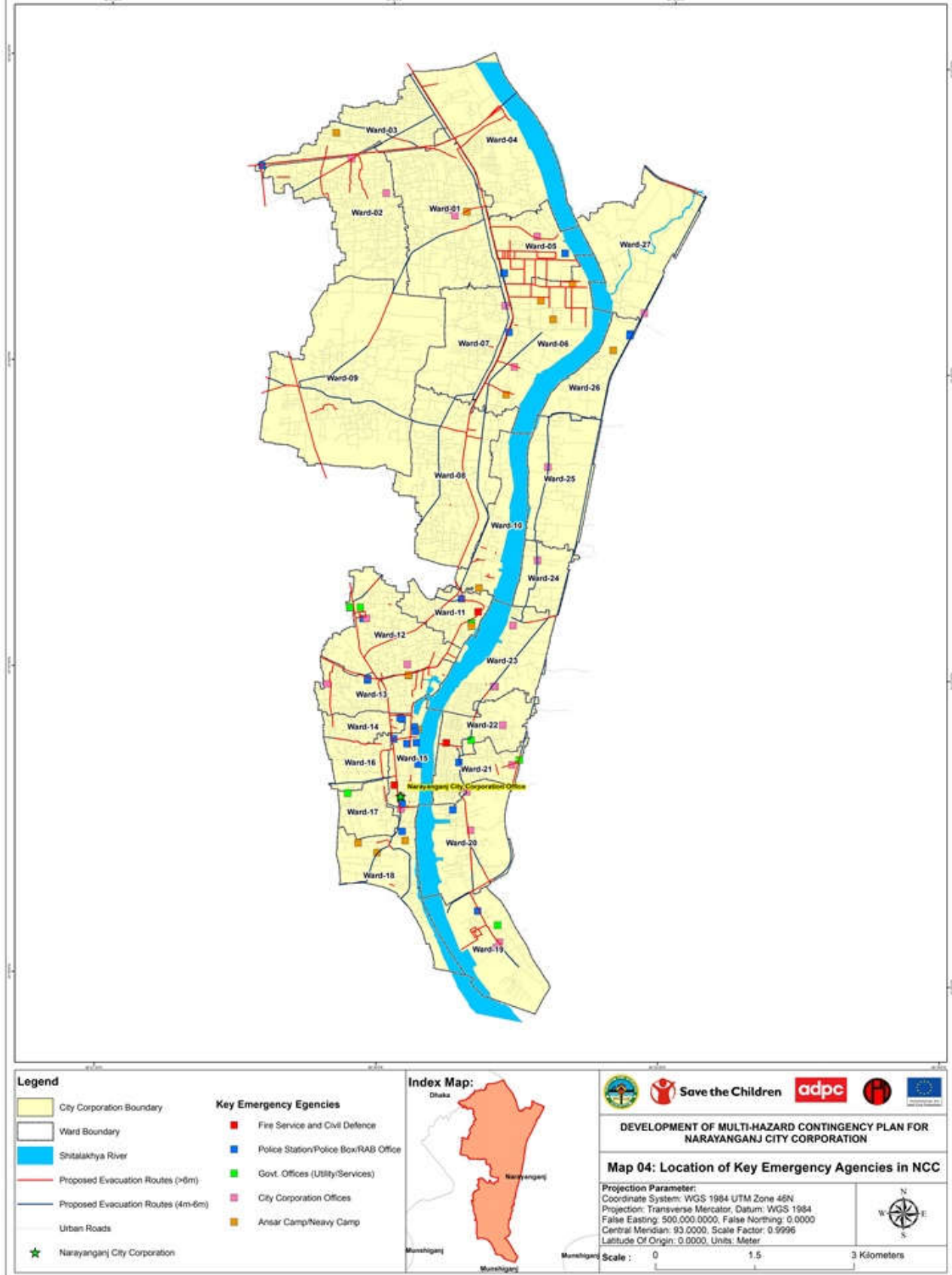
Map 8: Location of major hospitals and clinics

Map 9: Location of proposed shelter camps (open spaces)

Map 10: Locations of available educational and communal buildings

Map 11: Location of fuel re-filling stations

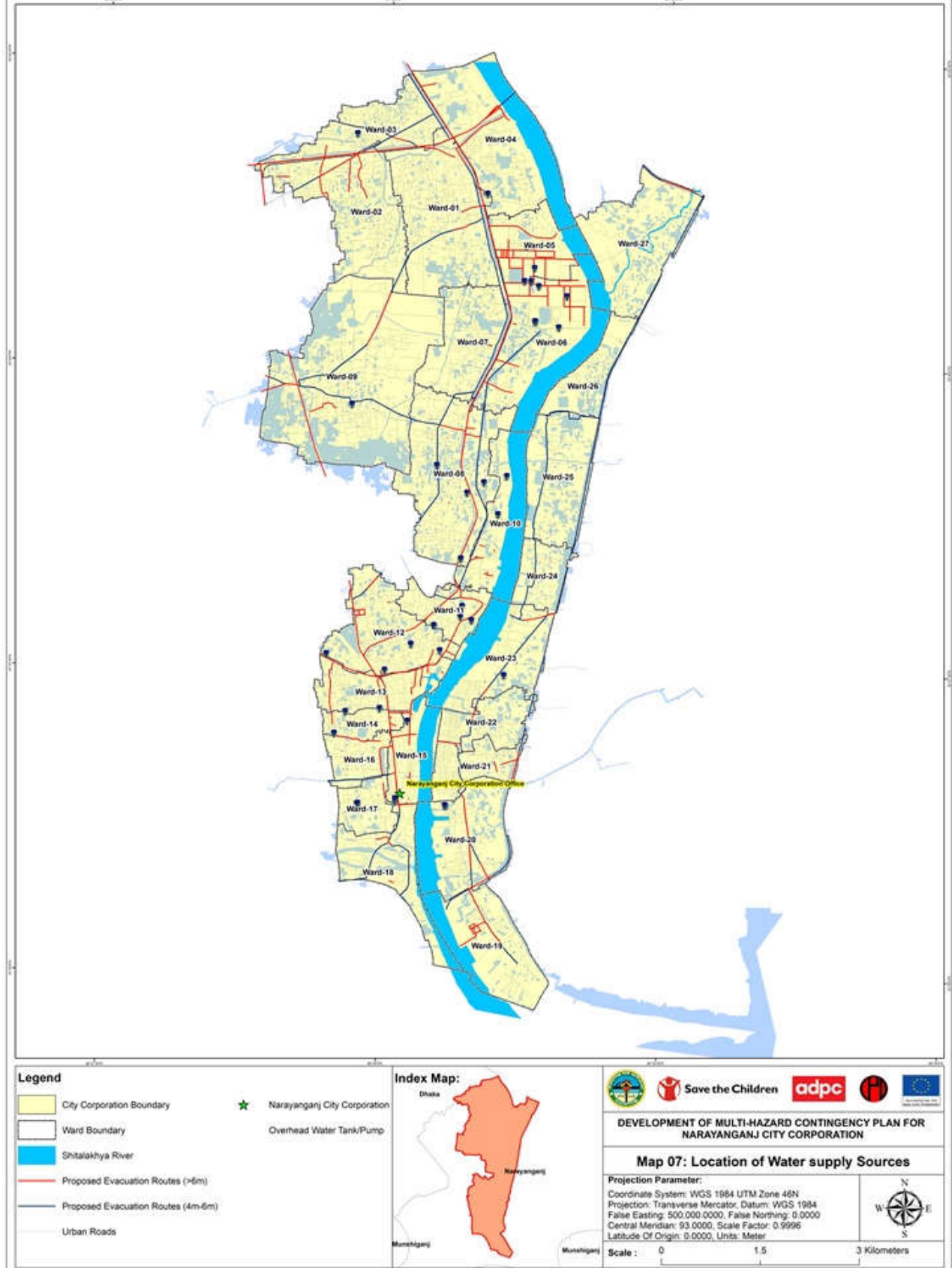
Key Emergency Agencies, Narayanganj City Corporation



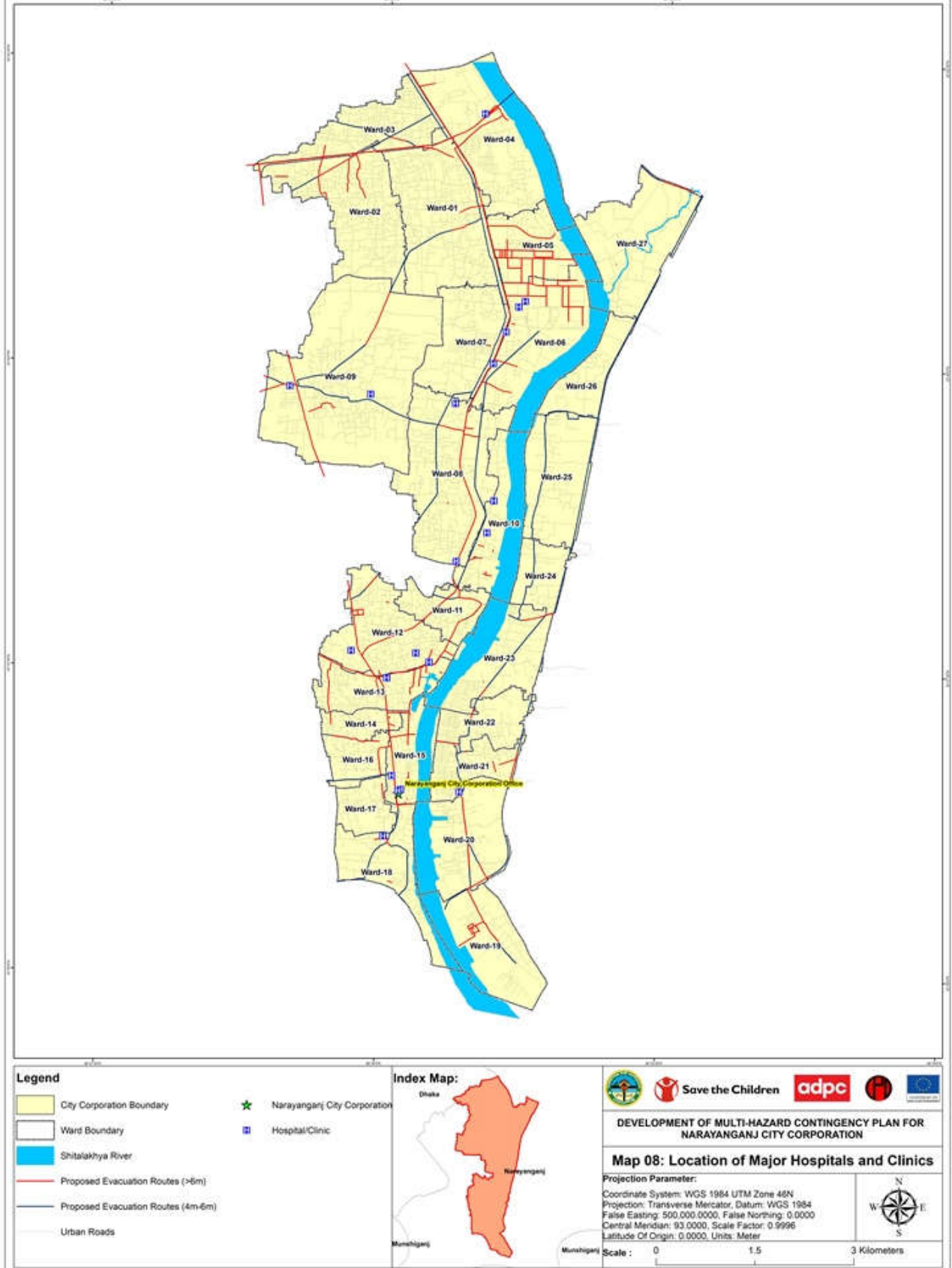




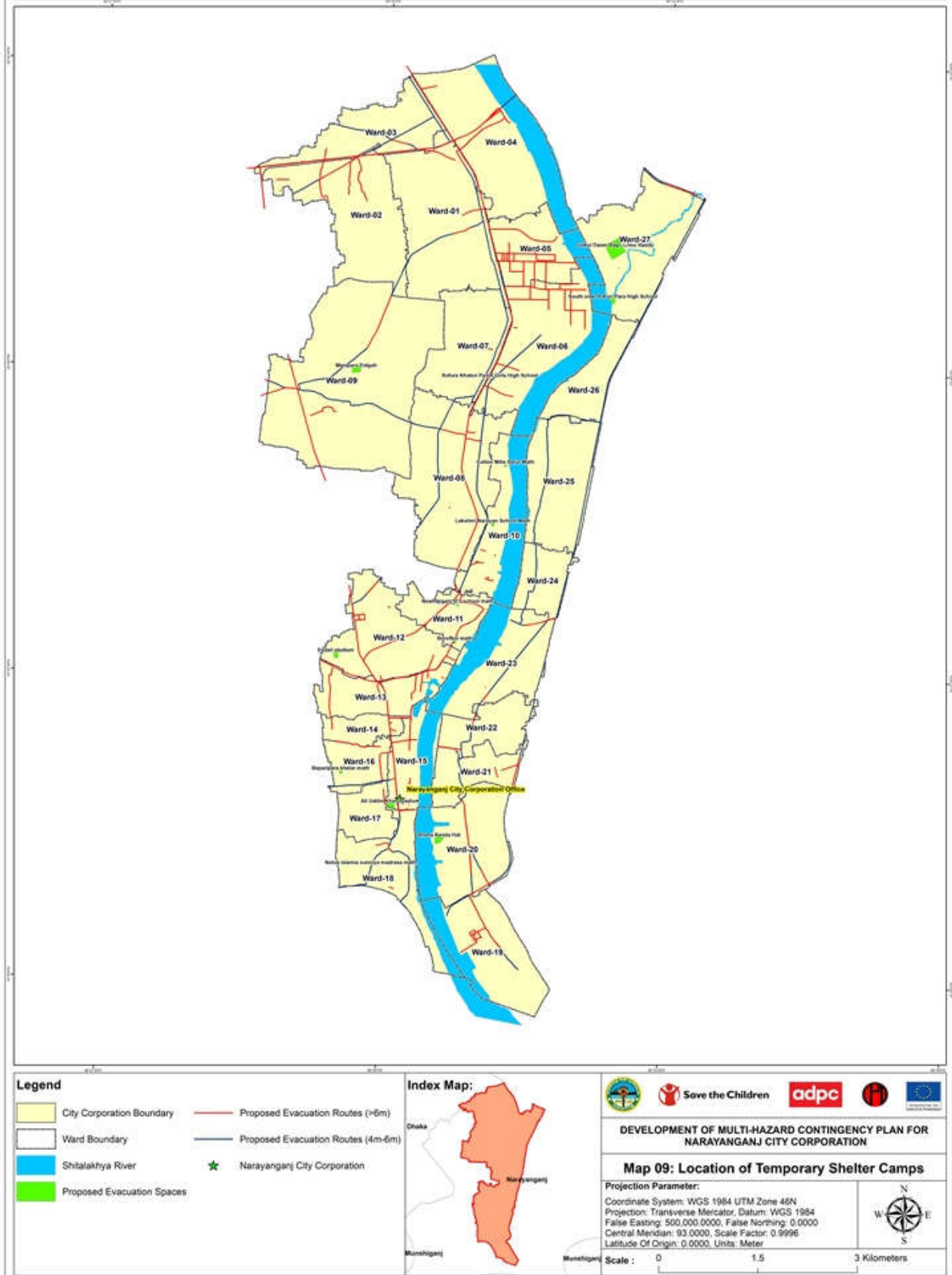
Water Supply Sources, Narayanganj City Corporation



Location of Major Hospitals/Clinics, Narayanganj City Corporation



Location of Temporary Shelter Camps, Narayanganj City Corporation



Location of Major Educational and Communal Buildings, Narayanganj City Corporation



Legend

- City Corporation Boundary
- Ward Boundary
- Shitalakhya River
- Proposed Evacuation Routes (10m)
- Proposed Evacuation Routes (4m-6m)
- Urban Roads
- Educational & Communal Buildings
- Narayanganj City Corporation

Index Map:



DEVELOPMENT OF MULTI-HAZARD CONTINGENCY PLAN FOR NARAYANGANJ CITY CORPORATION

Map 10: Location of Major Educational and Communal Buildings

Projection Parameter:
 Coordinate System: WGS 1984 UTM Zone 46N
 Projection: Transverse Mercator, Datum: WGS 1984,
 False Easting: 500,000.0000, False Northing: 0.0000,
 Central Meridian: 93.0000, Scale Factor: 0.9996,
 Latitude Of Origin: 0.0000, Units: Meter

Scale : 0 1.5 3 Kilometers



RF : 1 inch = 2.65 miles

Location of Fuel Re-Felling Stations, Narayanganj City Corporation

