



USAID's

Strengthening *Earthquake Resilience* in *Bangladesh*
(SERB)

E-Newsletter

Activities up to June 2015



USAID
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*Overview of the **SERB** *program**

To strengthen earthquake preparedness and response capacity, the United States Agency for International Development (USAID) along with technical support from Asian Disaster Preparedness Center (ADPC) launched the Strengthening Earthquake Resilience in Bangladesh (SERB) program. This program is meant to assist the Government of Bangladesh to improve their earthquake response skills by building capacity of emergency response agencies.

The program will enhance the capacity of 16 public hospitals in Chittagong, Dhaka, Gazipur, Mymensingh, Sylhet and Tangail by providing training on Hospital Preparedness for Emergencies (HOPE) and Training for Instructors (TFI). HOPE focuses on improving capacity of hospitals and healthcare facilities to manage emergencies and mass casualty incidents. Participants learn the use of triage and patient referral protocols for management of emergency cases.

The program also includes specialized courses on Hospital Incident Command System (HICS) for hospitals of Dhaka, Chittagong and Sylhet. HICS is a new course in Bangladesh and it will assist hospital management to adapt to this new concept to manage mass casualty incidents in the hospital. After far three HICS courses have been completed in Dhaka, Chittagong and Sylhet with 78 participants (45 male and 33 female) and most of the hospitals in Dhaka, Chittagong and Sylhet activated HICS in their settings after completing HICS courses. The SERB team has been conducting risk assessments in the hospitals in order to develop an emergency response plan for better management during disasters.

The program will equip the Fire Service and Civil Defense (FSCD) volunteers with tools including search and rescue equipment, first aid kits and steel storage containers that are needed to respond to emergencies and conduct rescue efforts. The FSCD will develop a maintenance plan for the equipment and the volunteers will have access to them in the event of earthquake or other hazards. ADPC will organize advanced training on search and rescue for 920 volunteers in thirty batches in all six cities and towns. The volunteers will be selected from the areas where the steel containers with essential search and rescue materials are located.



Photo by: ADPC

ADPC organized Hospital Preparedness for Emergencies (HOPE) Basic Training for the public hospital of Dhaka City, 2015.

Bangladesh and **Earthquake** *VULNERABILITY*

Bangladesh is one of the most disaster prone countries in the world, mainly due to its high population density, low-lying deltaic geography, and location within an active monsoon and tropical cyclone basin. According to The United Nation's World Risk Report (2012), Bangladesh ranks fifth on the list of countries most prone to natural disasters in the world. Devastating tropical cyclones and floods are frequent in the country. Although there is no evidence of severe earthquakes in Bangladesh in recent decades, the earthquake risk in the country is very high due to the country's location at the nexus of two major tectonic elements of the ongoing Indian-Eurasian plate collision. Several major active faults, including the Plate Boundary Fault (the northern extension of subduction fault), Madhupur Fault and the Dauki Fault also cross in the country. Research reveals that these faults are able to generate earthquakes over a magnitude of eight on the Richter scale (CDMP, 2009).





The Bangladesh Meteorological Department detected at least 90 earthquakes taking place in this region between May 2007 and July 2008, nine of them were magnitude five on the Richter scale. According to seismologists and earthquake scientists, these minor tremors are indicators of the possibility of much more powerful earthquakes in Bangladesh that may result in severe damage and massive destruction with severe consequences for the entire country (Ferdousi, 2010).

Earthquake risk is comparatively high in urban centers in Bangladesh, and is growing with every passing moment because of the unabated growth of human settlements and other economic activities.

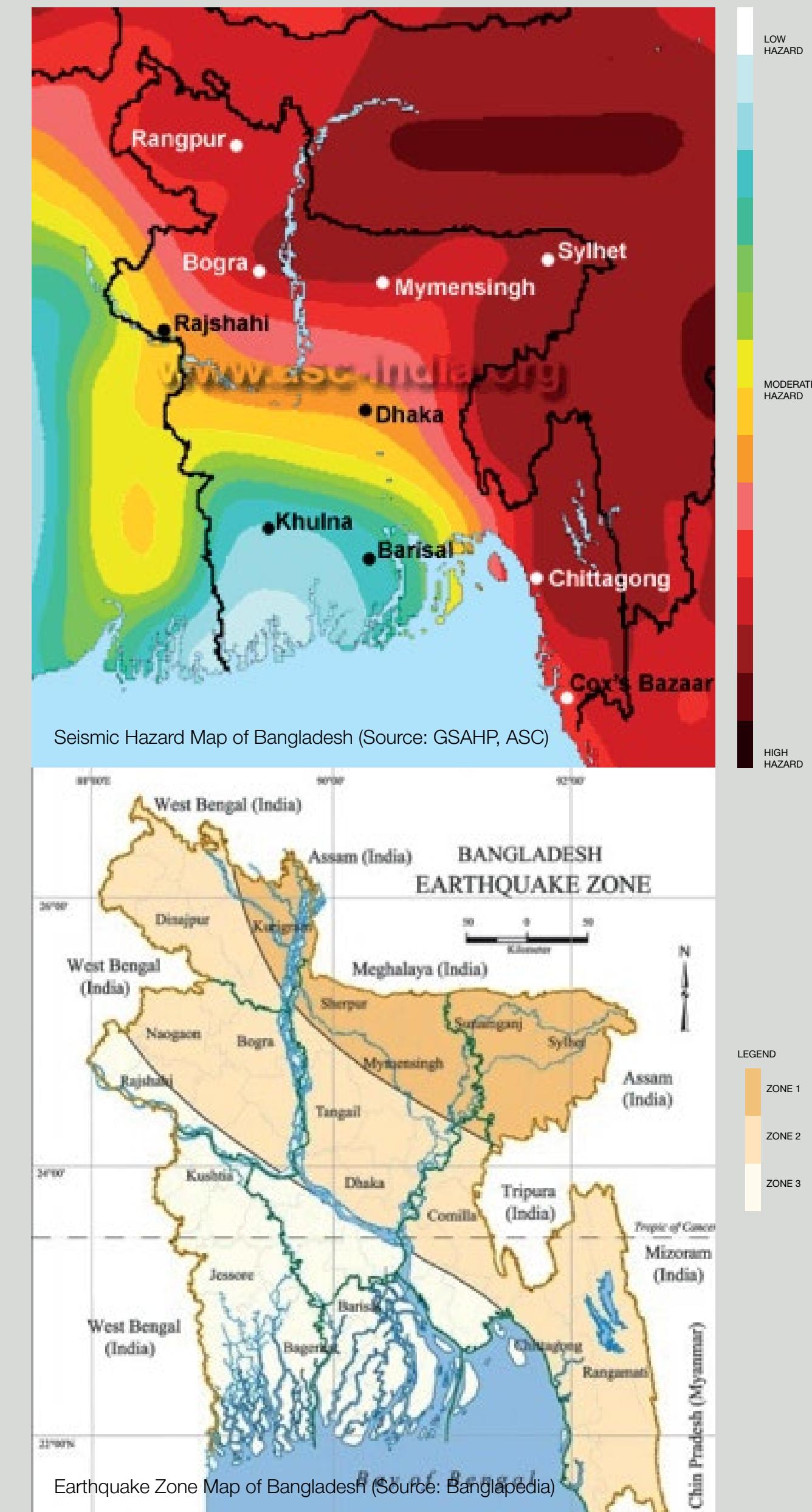
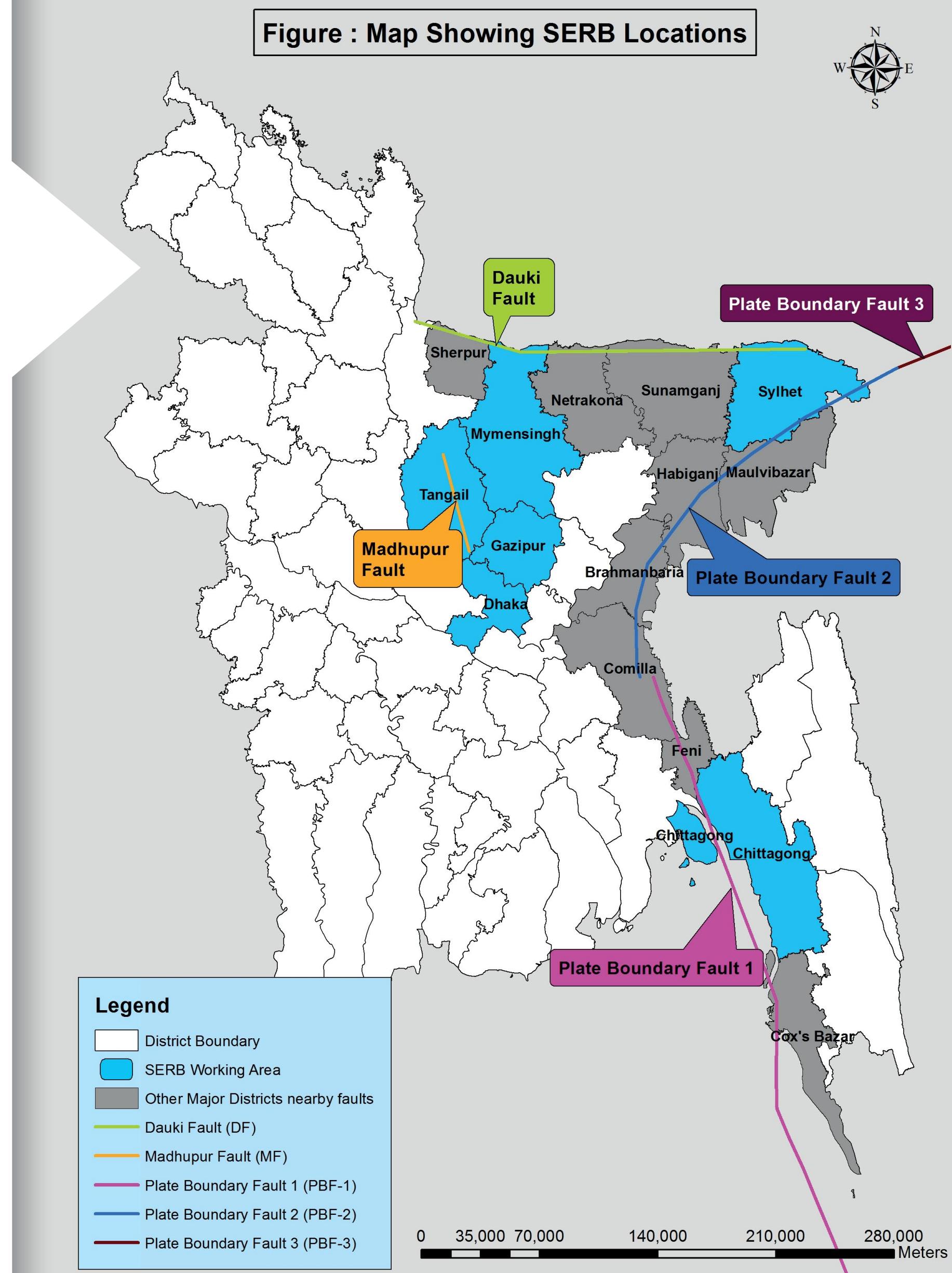
Major causes behind such an ever-increasing earthquake risk include haphazard urbanization and sub-standard construction of buildings and other infrastructure without taking underlying earthquake risks into account. Studies show that a strong earthquake affecting a major urban center like Dhaka, Chittagong or Sylhet may result in widespread damage; high numbers of fatalities; and destruction of buildings, infrastructure and utility services (CDMP, 2009). A strong earthquake can quickly overwhelm the conventional response efforts, and currently available resources and capacities.

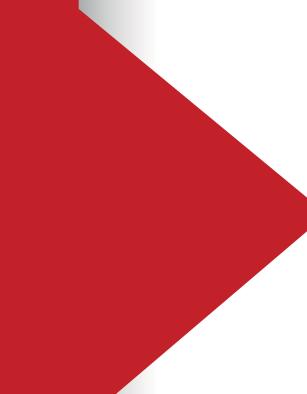
Photo by: ADPC

ADPC trained Bangladesh Fire Service and Civil Defence volunteers in Dhaka on search and rescue with equipment provided by the SERB program.

SERB LOCATIONS and FAULT LINES *in Bangladesh*

The maps present SERB interventions in relation to fault lines which represents earthquake vulnerable zones. Map 1: Map showing SERB locations in relation to fault lines, Map 2: Hazard Map of Bangladesh showing hazards and frequency, Map 3: Earthquake zone Map of Bangladesh outlines the areas vulnerable to earthquake.





Updates on **SERB** INTERVENTIONS

CAPACITY-BUILDING ACTIVITIES

- Hospital Preparedness for Emergencies (HOPE)

HOPE focuses on improving the capacity of hospitals and healthcare facilities in order to prepare them to manage emergencies and mass casualty incidents and events.

Since October 2013, nine HOPE Basic courses have been conducted with participants from 14 hospitals from Chittagong, Dhaka, Mymensingh, Sylhet, and Tangail as well as the Directorate General of Health Services, National Institute of Preventive and Social Medicine, and the Fire Service and Civil Defense. As of May 2015, 215 participants attended these courses (135 male and 80 female).

- HOPE training for instructors

Two courses on HOPE training for instructors (H-TFI) were conducted with 35 participants (24 male and 11 female). The first course was conducted in November 2013, and included participants from Dhaka, Chittagong, and Sylhet. The second course in May 2015 included participants from Dhaka, Chittagong and Mymensingh as well as the Directorate General of Health Services and National Institute of Preventive and Social Medicine. A total of thirty participants qualified as instructors of whom seven are female.

- Hospital Incident Command Systems (HICS)

Three HICS courses were conducted in three cities (Dhaka, Chittagong and Sylhet). Dr. Erin Downey, ICS Expert from USA and Dr. Pir Mohammad Paya facilitated the first course in Dhaka on 1–5 June 2014. The second course was held in Sylhet in November 2014; the third in Chittagong on 1–5 March 2015. A total of 78 participants were trained on HICS (45 male and 33 female).



*Photo by: ADPC
Simulation Exercise in Sylhet MAG Osmani
Medical College Hospital (SOMCH)
in April, 2015*



• Hospital Risk Assessment Workshops and Emergency Response Plans

Hospital Risk Assessments have been conducted in eight hospitals in Dhaka, Chittagong and Sylhet – this chapter summarizes the outcomes of two of these workshops.

ADPC conducted a Hospital Risk Assessment Workshop on 8–9 March 2015 at Chittagong Medical College Hospital, bringing together experts and practitioners to discuss and finalize the first hospital risk assessment for the city.

The workshop brought together 32 medical practitioners from various disciplines, including persons trained under ADPC's courses on Hospital Preparedness for Emergencies (HOPE) and Hospital Incident Command System (HICS). Practitioners and experts participated in the assessment process,

*Photo by: ADPC
A group discussion took place during an assessment exercise in Kurmitola General Hospital.*

Another photo: Hospital visit during Hospital Risk Assessment to identify risk factors of Sylhet MAG Osmani Medical College Hospital.

which was conducted based on the Hospital Safety Index, established by the World Health Organization and Pan American Health Organization. The results of the risk assessment will be endorsed by the hospital authority.

A similar workshop was conducted on 9–10 March 2015 at Chittagong General Hospital, which was upgraded to a 250-bed facility in February 2012. The hospital was established in 1901 and started a medical school in 1927. It is situated in the hilly area of Rang Mohler Pahar serving population from around Chittagong. The workshop gathered 25 medical practitioners and representatives from the different departments of the hospital, including graduates from ADPC's Hospital Preparedness for Emergencies and Hospital Incident Command System courses. The workshop was conducted

using the Hospital Safety Index and the findings of the risk assessment will be approved by the hospital authority for further development of the facility.

The workshop was conducted by using Hospital Safety Index, established by World Health Organization and Pan American Health Organization. The findings of the risk assessment will be approved by the Hospital authority for further development of the hospital.

For more information about the Comprehensive Safe Hospital Framework, visit www.safehospitals.info

Training on Urban Search and Rescue

Capacity-building training on advanced search and rescue started in May 2015. 280 volunteers from seven fire stations in Dhaka City participated in the Refreshers' Courses on Collapsed Structure Search, Rescue, Fire Fighting

and First Aid. The courses enhanced the participants' knowledge and skills especially on using collapsed structure search and rescue, fire fighting and first aid equipment and tools. This is linked to a previously conducted course on Urban Community-level Training Course, which most volunteers had already taken. It is determined that community volunteers can be assigned as first responders for any incident especially in earthquake-prone cities of Bangladesh.

The refreshers' course is mainly focused on retaining information from previously conducted courses and to orient participants about operation plan and to familiarize participants with operation plans and a variety of equipment. Volunteers are oriented on specific roles, responsibilities and functions related to search and rescue and first aid, enabling them to play a vital role as first responders before the arrival of professional



*Photo by: ADPC
ADPC organized a HOPE Basic Training in Gazipur, 2015.*

first responders of the Fire Service and Civil Defence Directorate in case of any disaster. According to the FSCD Volunteer Operation Plan, two teams focus on search and rescue while one team focuses on first aid. A total of forty volunteers participating in each course will be assigned in two search teams of six members, two rescue teams with eleven members and one first aid team with six members. The refreshers' course focuses on the following topics:

- volunteerism
- incident command systems
- station area mapping
- gender sensitiveness during response
- earthquake management
- CLCSSR organization and operational activities
- construction materials and collapsed types

- operation safety
- search and locating system
- tools, equipment and accessories
- rescue technology
- emergency rescue and load lifting
- first aid and patient assessment
- wounds and fracture; and
- fire fighting and evacuation.

Hospital simulations

ADPC conducted a hospital simulation exercise with the Sylhet MAG Osmani Medical College Hospital in Bangladesh on 27 April 2015. The simulation focused on operation management and the hospital's organization during a disastrous event, giving the hospital an opportunity to assess its coordination mechanisms- especially between the departments and wards. ADPC also

trained the hospital management on to set up and activate an incident management team.

Seventy practitioners from the emergency department, wards and administration participated in a full-day event supported by the Bangladesh Fire Service and Civil Defense and Bangladesh Red Crescent Society. Community volunteers from Sylhet City Corporation acted as patients during the exercise to create a realistic scenario.

SEARCH AND RESCUE EQUIPMENT AND FIRST AID MATERIALS

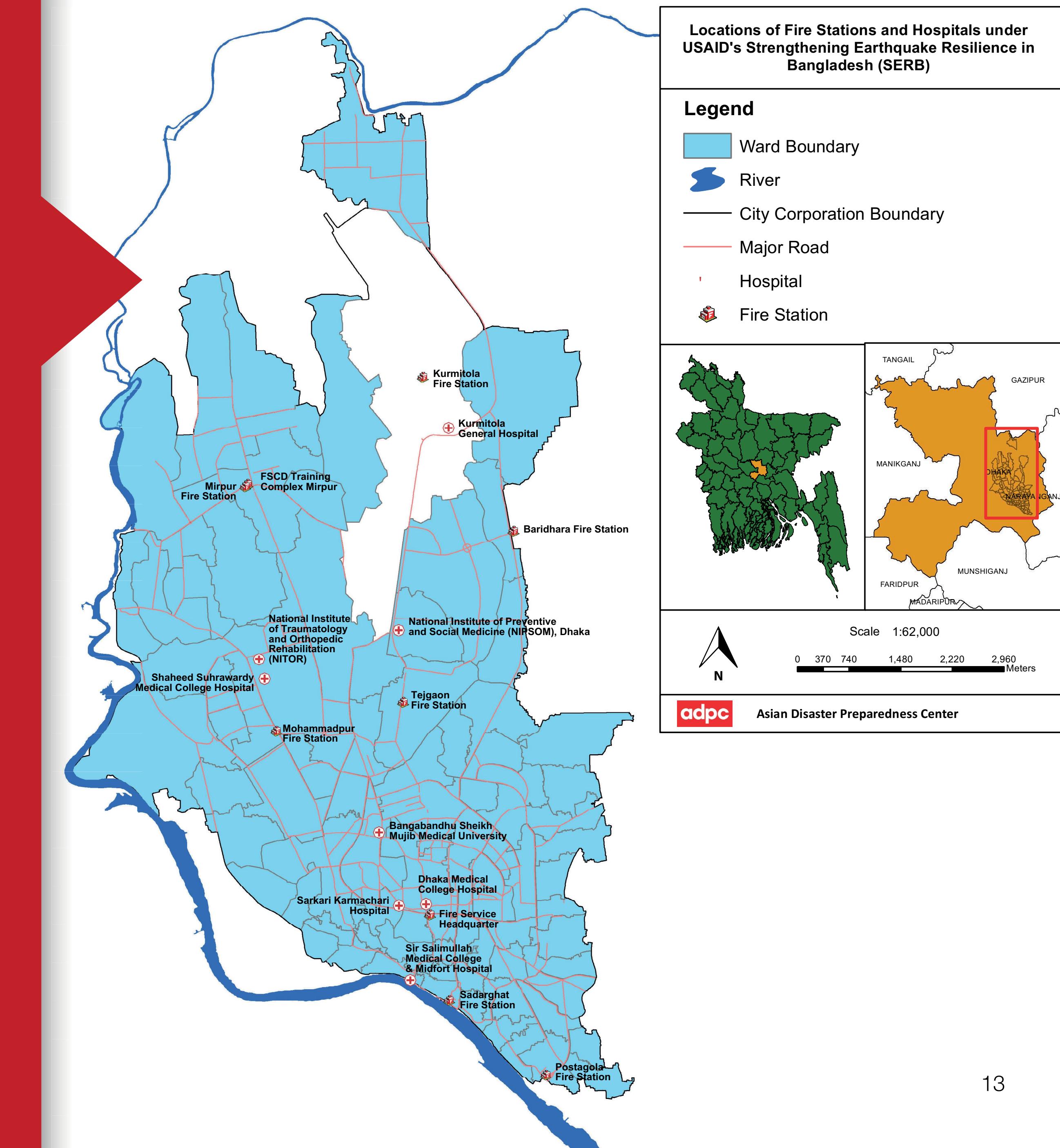
A search and rescue operation, after a major earthquake or building collapse, is a complex task which requires coordination and appropriate equipment. Quick mobilization of rescue teams is key. Search and rescue often involves extrication of trapped victims using appropriate equipment and maintaining safety standards. One of the components of the SERB program is to provide the Bangladesh Fire Service and Civil Defense volunteers with necessary equipment to conduct search and rescue operations.

In November 2014, USAID in partnership with ADPC formally handed over search and rescue equipment to Bangladesh Fire Service and Civil Defense for the urban community volunteers to utilize in times of disaster.

Search and rescue equipment and first aid materials are kept in steel storage containers located across the following twelve fire stations in the Bangladesh:

1. Kurmitola fire station, Dhaka
2. Baridhara fire station, Dhaka
3. Mirpur training complex, Dhaka
4. Mirpur fire station, Dhaka
5. Tejgaon fire station, Dhaka
6. Mohammadpur fire station, Dhaka
7. Siddique Bazar fire station, Dhaka
8. Sadarghat, Dhaka
9. Postagola fire station, Dhaka
10. Agrabad fire station, Chittagong
11. Chandanpura fire station, Chittagong
12. South Surma fire station, Sylhet

For more information, [click here.](#)





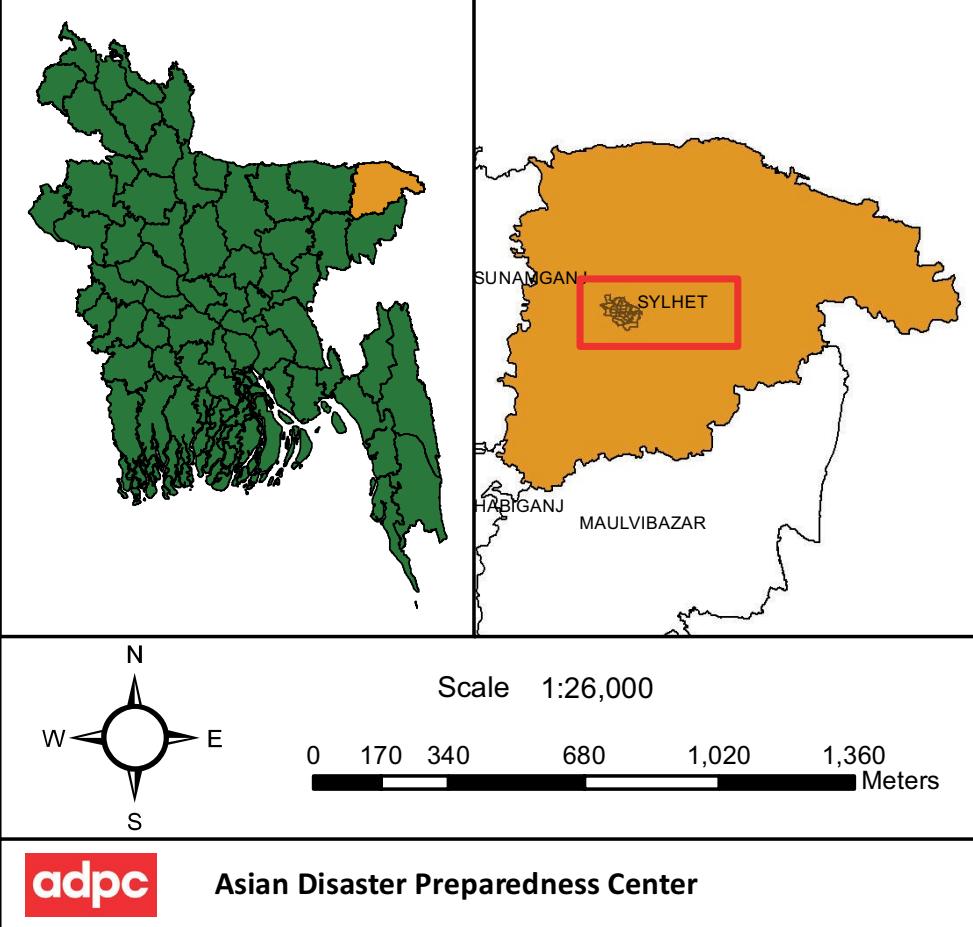
In November 2014, the United States Agency for International Development in partnership with Asian Disaster Preparedness Center conducted a Handover Ceremony of search and rescue equipment to the Bangladesh Fire Service and Civil Defence for Urban Community Volunteers to utilize in times of disaster.

*Photo by: ADPC
from left H.E. Mr. Dan Mozena, Ambassador of United States to Bangladesh, Mr. Shane Wright, AFSM, Executive Director, ADPC, Thailand, Mr. Sajedul Hasan, Director, ADPC, Thailand, Brigadier General Ali Ahmed Khan, psc
Director General, BFSCD and Ms. Janina Jaruzelski, Mission Director of USAID*



Legend

- City Corporation Boundary
- Ward Boundary
- River
- Major Road
- ⊕ Hospital
- Fire Station



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Asian Disaster Preparedness Center

Photo by: ADPC
Locations of Public hospitals under SERB in Sylhet



For more information please visit:

Bangladesh Fire Service
and Civil Defence:
www.fireservice.gov.bd

National Institute for
Preventative and Social Medicine:
www.nipsom.org

Ministry of Health and Family
Welfare: www.mohfw.gov.bd

USAID Bangladesh:
www.usaid.gov/bangladesh

Asian Disaster Preparedness
Center: www.adpc.net