

# AVOIDING AN URBAN NIGHTMARE: TIME TO GET PLANNING RIGHT

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A good amount of search-and-rescue equipment has been bought with support from bilateral and multilateral donors and the Fire Service Department's fire-fighting capacity has been tremendously improved.

PHOTO: FACEBOOK

## The looming threat of earthquakes

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(i) Sector-specific risk assessment guidelines and mapping for earthquake for major cities (such as Dhaka, Chattogram, and Sylhet) and for medium and small urban areas, as well as for tsunami in 13 coastal districts; (ii) Seismic micro-zonation of Dhaka city, comprising probabilistic calculation of peak ground acceleration levels, estimation of predominant period of local amplification for micro-tremors, and amplification factor of each geomorphological type; (iii) Establishment of three new earthquake observatories, four seismometers and 30 accelerometers in earthquake vulnerable locations; (iv) Development of National Earthquake Contingency Plan by anticipating future earthquake risks, debris management plan and dead body management plan; (v) Development of Ministry and Sectors' Contingency Plan anticipating future risks of multi-hazards.

With the support of the Global Facility for Disaster Reduction & Recovery (GFDRR), the GoB has also developed Guidebooks on City Earthquake Risk Atlas, Legal and Institutional Frameworks, Dhaka Risk-Sensitive Land Use Planning, and an Information, Education, Communication and Capacity Building Roadmap as part of earthquake preparedness for Dhaka. Emergency Operating Centres (EOCs) have been identified, equipped and made functional during disasters like cyclones and floods.

The Comprehensive Disaster Management Programme (CDMP) Phase I and II of the Ministry of Disaster Management and Relief (MoDMR) has developed an urban risk assessment (URA) methodology which is widely used by different actors to develop urban risk assessment of Sylhet, Rangpur and parts of Dhaka and Chittagong. UNDP and GoB jointly developed seismic exposure level and contingency plan of Mymensingh city. The earthquake risk atlas of Chittagong City Corporation (CCC) was developed by CCC and NGOs with support from the European Commission Humanitarian Aid Office in 2005. The Bangladesh National Building Code has been revised by experts, and is now awaiting final approval of the authority. The concerned authorities with the support of structural experts and earthquake scientists have identified a number of vulnerable buildings in Dhaka city and drafted a debris management plan. MoDMR and NGOs are regularly

organising national and international workshops and symposiums to highlight the risk of earthquakes and to raise public awareness. MoDMR with Public Works Department has retrofitted a couple of buildings in the Secretariat and other parts of Dhaka city. Yearly earthquake drills have been organised involving all stakeholders and international actors in Dhaka for the last decade.

**WHAT STILL NEEDS TO BE DONE** Earthquake preparedness should be everybody's business. All stakeholders have a role to build an earthquake-resilient Bangladesh, not only the concerned authorities. Action needs to be taken at the individual, family and community levels to build a culture of earthquake resilience. Private sector, mass media, and social media have a critical role in enhancing awareness on earthquake preparedness.

Earthquakes are not only a national threat but also a regional threat. We should not only be satisfied by taking all necessary steps for earthquake preparedness in the country; we should also strengthen regional cooperation to tackle earthquake threats. Locating the epicentre and monitoring each shock may improve our understanding. However, it is important to focus on training and public awareness; integration of seismic resistance in infrastructures; development of safety systems in all public buildings; and introduction of local actor-based earthquake management.

First of all, it is important to implement existing policies and acts such as the Disaster Management Act without any delay. The rules of the Act need to be finalised and approved immediately.

The building code should be strictly enforced for all new construction. All constructed buildings should be investigated to measure earthquake resilience. In this regard, the private sector can play a big role.

Insurance should be made an essential requirement for all kinds of construction. If all the buildings are brought under an insurance scheme, the risk will be transferred to the private sector. Insurance companies will be responsible for ensuring standards and enforcing the building code for their own businesses. This will also make the real estate companies, contractors and building owners responsible for maintaining seismic resistance of constructions.

We have to: (i) Take measures to minimise gaps in urban planning to reduce the increasing risks. Steps need

to be taken for complete decentralisation of urban governance and shifting power to elected city bodies for comprehensive planning and execution; (ii) Effectively utilise educational institutes to reduce the impact of urban risks. All educational institutes should be assessed for earthquake vulnerability and ensure investment for retrofitting vulnerable buildings; (iii) Ensure more effective resource allocation for earthquake preparedness and make earthquake risk reduction measures an integral part of all development programmes; (iv) Continue refresher trainings and orientation programmes for volunteers and ward disaster management committees and awareness-raising and preparedness activities at school to enhance knowledge and disseminate public announcements, alerts and education materials on earthquakes. Children are the change-makers and can bring an effective change in the mindset of their families about earthquake preparedness.

The youth in our society are the first responders in any emergency situation. We should look beyond vulnerable urban centres and reach out to the youth at the grassroots level around cities. They can be a valuable local resource for raising awareness in society on earthquakes and fighting disasters in times of need.

We should build: (i) A strong volun-

teer group and first responders in the least vulnerable areas surrounding risk cities. When the city is on the verge of collapse, those trained volunteers and first responders will be able to act fast and save lives in the devastated areas, and (ii) Capacity of our water-police and ability of fire service department to move through the waterways around all major cities and other earthquake vulnerable urban areas so that they can respond quickly during any big earthquake when the major roads are damaged or blocked by debris.

We need to have a plan for transport management. During a major earthquake, millions of people will try to leave the cities and urban centres and go to relatively safer locations, mostly to their semi-urban and rural homes. During the Nepal earthquake, the transport workers and owners' association played a key role to assist more than 700,000 people to leave Kathmandu city. We need to be prepared for such mass evacuation with proper planning and support system. We have to raise awareness and management capacity of the transport workers and owners.

Coordination and management of hundreds of groups during a mega-disaster become a nightmare for local and national governments. The Disaster Management Act and Standing Order on Disaster need to incorporate the scope of regional cooperation and

facilitation of international search and rescue teams and responders during any major earthquake in Bangladesh. Our airport authorities and staff should be trained to handle record amounts of relief materials, personnel and cargos in the major airports. In case the airport collapses, alternative airports need to be made ready to facilitate the necessary international and regional support during a mega-earthquake.

All identified evacuation centres, locations and open spaces should be equipped with water supply, sanitation, faecal sludge management system, health care, energy supply and shelter to prevent post-earthquake deaths due to cold, waterborne diseases or lack of essential services. We would need trauma counsellors who will be able to provide psychosocial support to the survivors immediately after the devastation and help them recover quickly.

There is no early warning for an earthquake. But scientists have developed household level sensors which can track the first wave of earthquake energy and give a signal for second wave of energy which is stronger and can create major devastation. Depending on the location of the epicentre of an earthquake, people have anywhere between 30 seconds to a couple of minutes to get out of the buildings or take shelter in a safe location in the buildings. People should be instructed to install those systems in all government buildings, religious centres, shopping malls, industries and residential buildings.

Above all, all plans, preparedness and risk reduction measures for earthquake should be inclusive—ensuring that no one is left behind, that all persons with disabilities, children, women, third gender, elders are identified and taken care of, that they are involved in preparation of evacuation plan and drills.

Since the last most devastating earthquake in 1950 in the region, the population of this seismically active region has increased 50 times. Major cities like Dhaka, Chattogram, Sylhet, Mymensingh, Bogura, and Rangpur now have populations of more than several millions. Unless these measures are taken seriously and given adequate priority, earthquake preparedness will remain a distant dream for a country like Bangladesh. It's time we took earthquake preparedness seriously.

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