

## Report on the Training of Trainer (ToT) programme on “Hazard Risk Mitigation and Earthquake Preparedness in Schools”

Organised by Delhi Disaster Management Authority & GeoHazards Society,  
Date: 26th-27th October, 2009 Venue: Timarpur Sarvodaya Boys School, New Delhi

**Background:** Delhi is very vulnerable from the seismological point of view as it falls entirely in Seismic zone IV (as per the Seismic Zoning map of India) and these regions are likely to be affected by earthquakes with intensity up to VIII. Research in the subject indicates that, over 50% of the losses in an earthquake are due to falling-hazards or non-structural hazards (i.e.: the contents of the building falling down and causing injuries and damage). Even if night-time earthquakes are deemed more catastrophic as it affects the response capacities of the administration, in day-time earthquakes, it has been noticed that the percentage of children dying are far higher due to unsafe, unprepared schools. Though DDMA has taken aspects of earthquake risk mitigation in schools seriously, there was a dire need for developing trainers from all the districts to ensure that these efforts are sustainable. In this context, a training of trainers programme was organized centrally to develop a team of trainers (Principals and Teachers) from different schools eg. Government Schools, Public Schools and Central Schools from each district where schools safety programme has been initiated. Geohazards Society (GHS), New Delhi carried out the training programme for two days on 26<sup>th</sup> and 27<sup>th</sup> October at Timarpur Boys’ Sarvodaya Vidyalaya for 41 participants from different schools.

The main objective of the training was to develop a team of trainers representing different parts of Delhi in school safety programmes and thereby ensuring proper preparedness in schools in the city against earthquakes . The facilitators of the event were Mr. Durga Prasad, Ms. Pooja Agarwal and Ms. Sundus Tasleem. Trainers from GHS conducted the event including the hands-on exercises successfully.

**Day 1:** At the onset, the Principal of the school Mr. M Sharma, welcomed all the participants to this programme. He briefed the participants on the objectives of this workshop and introduced GeoHazards Society (GHS) and their work to the participants.

The first session started with a detailed lecture on Earthquake Risk Management in Schools. The trainers then explained the concept of Plate Tectonics, described past Indian Earthquakes, detailed Zoning map of India and Delhi and the Earthquake Hazard in Delhi.

Trainers explained the “**need for school safety**”. A short video was exhibited to the participants on the immediate effects of the Wenchuan earthquake which helped participants understand the effects of earthquakes in school. One of the aspects that was covered thereafter was the **steps that schools can take towards earthquake safety** and described the primary steps such as awareness generation, preparation of School Emergency Plans, secure falling hazards, encourage preparedness at home for teachers/ parents.



Following this, a session on **the Structural Risk Mitigation** was taken, where the participants were given a brief idea about the behaviour of the buildings during an earthquake. Trainers described different types of buildings, their performance during an earthquake and gave a brief on features that make an earthquake resistant building by taking minimum precautions. The next session highlighted the importance of “**Falling Hazards Mitigation**” in schools which was emphasised by references to the DDMA manual. Falling hazards are those objects inside a building that could fall down on the occupants in an earthquake causing injuries and even death. In many urban earthquakes, it has been noted that over 50% of the losses are caused by such falling objects. A virtual hazard hunt activity was undertaken using videos and several slides showing common falling hazards from various schools. In the last session of the day, the trainees were introduced to the Hazard Hunt form and were asked to carry out a hazard hunt at their own home and to present the same during the next day.

## Day 2:

The second day of the training programme commenced with recap of the previous day training sessions and a discussion of the hazard hunt conducted by the teachers in their own home. Some of the teachers had done an extensive hazard hunt and described the hazards causing objects they found around their homes. The trainers helped them in identifying simple risk reduction measures that they could undertake in their homes. Afterwards there was a session on the anchoring the falling hazard objects. The participants were divided in to two

groups and were taken for a practical hazard hunt within the campus guided by Mr. Hari Kumar and Mr. Mrinal Nath of GHS. The teams visited the Chemistry Lab, Bio Lab and Computer room, corridors and classrooms. In each room, the participants tried to find out the probable hazards that could cause injury, block exits or could lead to economic losses. The participants were able to discuss and decide on simple steps that can be taken to mitigate these hazards. It was found that the Chemistry lab was especially hazardous as the acid bottles were kept on the concrete racks just next to the seats of the students. In the computer room they found out that the UPS system was kept next to the main exit and the loose wires could create problems during any earthquake.



The participants thereafter returned back to the training venue where both the groups interacted with each other and shared their experiences. Photographs of the hazards that they observed were also shown and discussed.

The second session '**how to create a disaster management plan for your school**' started with the trainers describing the steps to be taken in each school as a follow up of this training. This was a part of the Planning Process to be adopted at Schools by the participants. Some of the steps suggested were- meeting with school administrators, conducting sensitization programmes for teachers/ staff/ parents/ committees, conducting sensitizing programmes for students, conducting Hazard Hunt, develop emergency preparedness plans, secure falling hazards in the school, conduct evacuation drills, discuss emergency plans with parents, discuss earthquake safety at home, etc. This was intended to take the training programme to the next level and to enable the trainees to become resource persons and change-agents in their own schools.

The last session was on Personal Preparedness for School staff members. This was considered important as the school staff will be expected to remain on duty following any calamity and would not be able to attend to their own family's needs at that time. It was

discussed that the teachers will have to ensure preparedness within their own families and households so that the family could be self-sufficient to manage any eventuality. The session highlighted aspects of a family preparedness developing a family disaster preparedness plan. The necessity of a family emergency kit and its basic constituents were discussed in detail.

At the end of the second day's training, the participants provided comprehensive feedback on the way the training was organised and conducted. Some of the comments are quoted below.

'The programme was helpful for me, a teacher teaching disaster management in the school, because it gave me a new perspective to look into my classroom and other areas as a person who has a hazard hunting eyes'. -Mrs. Shachi Mathur, LVM Sr. Secondary School, Shakti Nagar

"Presentations were very informative and an eye opener. More training will be appreciated in connection with terrorism, and how to deal with that in schools. Thank you so much for wonderful and informative programme. -Mrs. Abha Verma, St Columba's School

At my school we were thinking that we had done a lot to prepare ourselves. This training programme helped us to realise how much more left to do and steps to do it. -Mrs. Neeta Rastogi, Sadhu Vaswani International School for Girls

"The workshop was quite informative and interesting. It will surely help to make a disaster preparedness plan for my school much more comprehensive" -Mrs. Anita Garg, Bal Bharati School

Each Principal/Teacher trained could be allotted a cluster to further train people so that a cascading effect and many more number could be trained and prepared for any eventuality. -Mrs. Sushma Datta, SKV, Dayanand Road



The programme was brought to conclusion by a vote of thanks and distribution of training resource materials for further reference by the participants.