

Chapter 5

Are You Prepared ?

Tips For Safety At Schools and Homes

In our previous chapter, you read of the important role played by the community members to reduce the risk and steps to be followed to prepare a Community Disaster Management Plan. Homes and schools form an important part of this community and it is therefore necessary to have a safe home and school environment as students spend a reasonable amount of time in these places. Preventing homes and schools from natural and human induced hazards is thus *a* matter of concern, one that every school and community must take seriously and strive continuously to achieve.

There has been a large number of incidents both natural and human induced in recent past, where a large number of students have been affected. The Gujarat earthquake (26th January 2001), killed 971 students and 31 teachers. 1884 school buildings collapsed because of weak structures and 300 students marching in the Republic Day procession in the narrow lanes of Bhuj were killed when buildings collapsed into the narrow street from both sides. There were reports of children running towards the school building from the open ground, as they feared a bomb blast when the ground started shaking.

The China earthquake which killed more than 900 students of a high school on 12th May, 2008 also reminds us of the importance of having safe schools both structural and non-structural. Many precious lives could have been saved had the teachers and students carried out regular mock drills and had a School Disaster Management Plan in place. Another incident that reflects the vulnerability of children in schools is the Kumbakonam fire tragedy that occurred in Lord Krishna School on 16th July, 2004 in Tamil Nadu killing 93 students all below the



A student from another school looks through books found in the ruins of the Juyuan Middle School, in southwest Sichuan province on Saturday May 17, 2008. All but a handful of the school's 900 students were killed when the school collapsed in Monday's earthquake. (AP Photo/GregBaker).

age of 11 years. The impact of this accident could have been reduced to a considerable extent had the administration, teachers and students been better trained prior to the incident. The administration could have looked into the location of the kitchen in the school, placement of fire extinguishers/sand buckets, preparation of fire evacuation plan in the school and generating awareness regarding fire safety amongst the teachers and students. Had teachers and students been properly sensitized, the precious lives of the 93 young students could have been saved by evacuating them to safe places.

Activity 11: Look out for similar accidents/disasters that have affected the schools, namely the **Dubwali fire**, **Earthquakes in Pakistan and India** and the **recent earthquake in China** and identify the lessons learnt and the roles schools can play to reduce the impact of such events.

The incidents mentioned above reflect some major learnings for the administrators, teachers and students to create a safe environment in schools. To create a safe and enabling environment, each one of us has a role to play as most of the disasters don't come with a prior warning. Some of the basic activities that can be taken up in home and school are as follows :

1. Awareness generation on various hazards in schools and home
2. Preparation of a School Disaster Management Plan
3. Ensuring safe location of schools which are away from busy roads, low lying areas, railway tracks, hospitals etc.
4. Ensuring structural and non-structural safety in schools.

Activity 22 List out some of the common natural and human induced hazards that schools are prone to.

Natural hazards

1. Flood
2. Cyclone
3.
4.

Human-Induced

1. Accidents during annual day functions like fire, stampede
2. Execursions
3. Fire within the school premises (Canteen, classrooms, labs etc.)
4. Terrorist attack
5. Kidnapping
6. Deliberate act of violence
7. Food poisoning
8. Accidents while commuting
9.
10.

Read the Story.....

Here is a story of a young school girl named Mina and her teacher, Renu who planned to volunteer and initiate the preparation of their School Disaster Management Plan and also motivate the families in and around the school to prepare a Family Disaster Management Plan.

It was general discussion in the Social Science class and Miss Renu always spoke to the students about civic responsibilities. One day Mina asked her teacher, “Ma’am, I read about the disaster which occurred in Bhuj, and the one in Tamil Nadu, and I realised that in each of the disasters there has been a huge loss to life, property and livelihood. They have caused a huge loss to the country’s economy. Whatever development is taking place immediately comes to an end. Isn’t it possible to prevent these disasters from happening”? Rahul, a student in the same class started laughing and soon the others in the class started giggling thinking what a silly question it was. Miss Renu then banged the desk and said, “Students be quiet. There is nothing to laugh at. It is a very good question and we need to think and answer the question that Mina has put”. There was a sudden silence in the classroom.....one of the boys stood up and said, “Ma’am I feel it is a very important issue. We not only have to get prepared in school, but each one of us should take this knowledge back home and prepare a ‘Family/Home Disaster

Management Plan' so that our near and dear ones are safe.

"Great idea!" said Sheela, another student sitting in one corner of the classroom. "But then Ma'am what is it that we can do to have our school and home safe?" With a pause Miss Renu replied, "First we need to be aware of various hazards and vulnerabilities that are present in and around us and then think of the preparedness measures". The class dispersed but the discussion continued among the children on the various vulnerable pockets in the school. Mina thought of loose electric wires hanging in the corridor, the cracked walls which had water seepage and big glass panes which would break in case of strong winds. Rahul rightly pointed out that a couple of his friends were blind and needed special care so that they were also moved to a safe place along with the others in case of disasters. Mina decided that once she reached home she would look for such hazardous points in her home and neighbourhood as well and share the information with her father. After all, safety is important for everybody.

After reading this story, you must have had an idea of various vulnerable pockets in your school. Carry out this activity mentioned below to identify hazardous pockets in your home.

ACTIVITY 3

- i. *Is your house safe ? (Ask a structural engineer, civil engineer to survey it)*
- ii. *Is there any seepage, leakage in the walls and roof ?*
- iii. *Are there any unsafe electric connections ?*
- iv. *Are there any false ceilings and partitions made of flammable board ?*
- v. *Are there shelves, decorations, etc; which are heavy and could fall during an earthquake and cause injury ?*
- vi. *Is the approach road to your home wide enough for fire brigades and an ambulance to reach in time ?*
- vii. *Is your home located in a low lying area and could be flooded in case of heavy rains ?*

To create a safe school environment it is necessary to have a school and home Disaster Management plan in place so that the loss incurred during a disaster is reduced. Let us now try to analyze the necessary components of the School Disaster Management Plan.

Components of a School Disaster Management Plan

1. Sensitization and awareness amongst teachers and school management : Before preparing the School Disaster Management Plan, there is a need to carry out a sensitization programme with the key people like the Principal, Vice-principal, the school management and administrative staff, teachers and head students so that the need and the importance of the plan is felt by the everybody.

2. Formation of the Disaster Management Committee : The members of this committee will have the overall responsibility in guiding and developing the plan for the school and also carrying out regular mock drills in school. This committee should be chaired preferably by the Principal of the school and members should include other active members of the school like teachers, head boys/girls, representatives from the Parent Teacher Association, local administration, representatives from health department, NGOs, Civil Defence, Market Trader Association, some volunteers from (NCC, NSS, Scouts and Guides, Nehru Yuva Kendra Sangathan, etc.).

3. Hazard identification and assessment : It is important that the schools know the hazards (structural and non-structural) that they are prone to. Schools should identify the structural hazards that they are likely to be affected with (weak concrete structure) as well as non-structural hazards like location of cupboards, lights and other fixtures in the school, trophies, chemicals stored in the school laboratories etc.

For example: schools located in Vadodara need to get prepared for hazards like floods, cyclones and even earthquakes as Vadodara is also prone to earthquakes. Apart from natural hazards, schools are also prone to human induced hazards like fire or road accidents. There is also a necessity to look into the structural safety of the schools as there have been instances where buildings have collapsed because of heavy rains, minor tremors etc. The schools can take the help of a structural engineer or a civil engineer to assess the structural safety of the school building.

4. Inventory of resources- human and material : Human and material resources play a very important role in effectively responding to a disaster. The resources available in the school should be tapped and listed out mentioning their location and contact details. Human resources include people trained in First Aid, Search and Rescue, fire fighting etc. Teachers, administrative staff and senior students should be trained in these fields.

Material resources include ladders, ropes, fire extinguishers, stretchers, First Aid Box, communication system etc. that are available in the school. Resources available in close proximity of the school like hospitals, primary health centres/clinic/dispensaries, police station etc. can also be listed so that in case of any emergency they can be contacted immediately.

5. Mapping : A mapping exercise needs to be carried out as this would help the younger students and other staff members to be aware of the exit routes and the location of the resources available. There are four different types of maps to cater to different requirements :

aa. Social Map:: This map details the physical location of the school. It demarcates the

- i. Number of classrooms in the school (Pucca, RCC, tiled)
- ii. The staff room in the school.
- iii. The laboratories in the school (Physics, Chemistry, Biology, Home Science etc.)
- iv. The school canteen and any prominent landmark in the school.
- v. The play grounds and open spaces within the school premises.

lb. Resource Map:: All the resources identified and listed (human and material) need to be mapped in this so that they can be easily located in case of a disaster.

cc. Vulnerability Map:: This map shows the vulnerable locations present in the school building.

- i. Number of children in each class (male, female, physically challenged, sick and ailing etc.) to be demarcated in the map of each classroom.
- ii. Location of the vulnerable classrooms in the school (rooms near the school canteen, laboratories), classrooms which have weak structures, laboratories, canteen etc.
- iii. Identification of the main electric switch board/area in the school.
- iv. Identification of low lying areas in the school.

d. Safe place and Evacuation route chart of the school :

- i. In the map we need to identify the safe places.
- ii. Safe places where the children and staff members can take shelter.
- iii. For an evacuation route chart of the school to be in place, there is a need to show the entire staircase, doors and windows, open spaces etc.
- iv. The exist should be clearly demarcated in the map in case of a fire/earthquake.
- v. The exist routes in the school should be clearly demarcated by arrows.
- vi. The maps drawn should be located in various strategic points.
- vii. There is also a need to develop an alternative exit route in case the existing one fails.

6. Formation and Training of Disaster Management Teams (DMTs).

- **Awareness Generation Team :** The members of this group should be creative and have an inclination for art and culture. This team will have to generate awareness on the various hazards that our school is prone too in pre, during the post disaster scenario. The group can use print and electronic media for generating awareness. Posters, folk songs and dance, films etc. can be used in the school.
- **Warning and Information Dissemination Team :** The school can have a school Control Room and students from classes VIII to XII can man the Control Room. Students trained in the operation of VHF sets or members of the Ham club shall be a part of this team. The school needs to have sirens, bells, flags, computer and internet, VHF/Ham sets etc. for smooth functioning.
- **First Aid Team :** This team will be responsible for providing First Aid, in case of any causality in the school. Since this is a skilled task to be carried out in case of an emergency, there is a need to provide them training. Training on this can be provided by Civil Defence, Fire Service, St. John's Brigade, Red Cross etc.



- **Search and Rescue Team :** The team is responsible to carry out Search & Rescue in case there is any emergency within the school premises. Sports teachers alongwith some senior students both boys and girls can be a part of the team.
- Since the teams formed by the school are expected to carry out skilled jobs like first Aid, Search and Rescue, e-safety etc. there is therefore a need to train the members with the help of local resource persons like Fire Service Department, Civil Defence, Police, Red Cross St. John's ambulance etc.



7. Mock Drills : Mock drills are conducted to test the elements of the Disaster Management Plan prepared by the school. The school with guidance and support from the School Disaster Management Committee is expected to respond to a built-in scenario which they are likely to face. These frequent simulation drills will help the school to respond effectively at the time of crises.

DROP, COVER and HOLD is a simulation exercise carried out in areas prone to earthquakes. After discussing the plan with students and teachers, a mock exercise can be carried out in the school by creating a scenario and responding to it as effectively as possible.



8. Review, approval and updation of the plan : Just preparing the plan and carrying out mock drills is not sufficient. There is a need to review the plan prepared so that gaps identified may be resolved. Once the plan is prepared, the Disaster Management Committee of the school should approve the plan and share it with officials present at the district level like the District Magistrate or the District Education Officer.

Now that we are aware of various components of a School Disaster Management Plan, as responsible students and teachers it is our responsibility to take this initiative beyond the school boundaries to our home and community. It is to be noted here that the components of a School Disaster Management Plan as shared above can be followed for preparing a plan for homes.

Every family needs to plan for what might happen. Students should sit down with their family and talk about :

- What types of disasters might happen.
- What you should do to prepare yourself for such a disaster (like creating your family disaster kit)
- What to do if you are asked to evacuate (which means to leave your home)
- Where to meet away from your home in case of a fire (like a neighbour's house or the corner of the street);
- Where to meet outside your neighbourhood if you must evacuate. You should pick a friend or relative's house;
- Where to call to "check in" if you become separate from your family during a disaster. You should memorize the phone number of a favourite aunt or family member who lives in another state. You would call there to report where you are so your family can find you.
- Have the blood group of every member of your family checked.
- Keep handy a list of important telephone numbers of your locality.
- You can also talk with your whole neighbourhood or Resident Welfare Associations (RWA) about disaster plans. Find out if someone in your neighbourhood has a special skill-like being a doctor.
- It's also a good idea to take a first aid class so you will be prepared to help others.

Preparation of a family disaster kit

Every family should have a Disaster Supply Kit in their home. The kit will help you and your family during a disaster. In a cyclone or earthquake, for example, you might be without electricity and the water supply may be polluted. In a strong wind storm or flood, you may not be able to leave your house for a few days. In times like this, you will

need to rely on yourself. Your disaster supply kit will make it easier. Remember, your family will probably never need to use your disaster supply kit, but it's always better to be prepared.

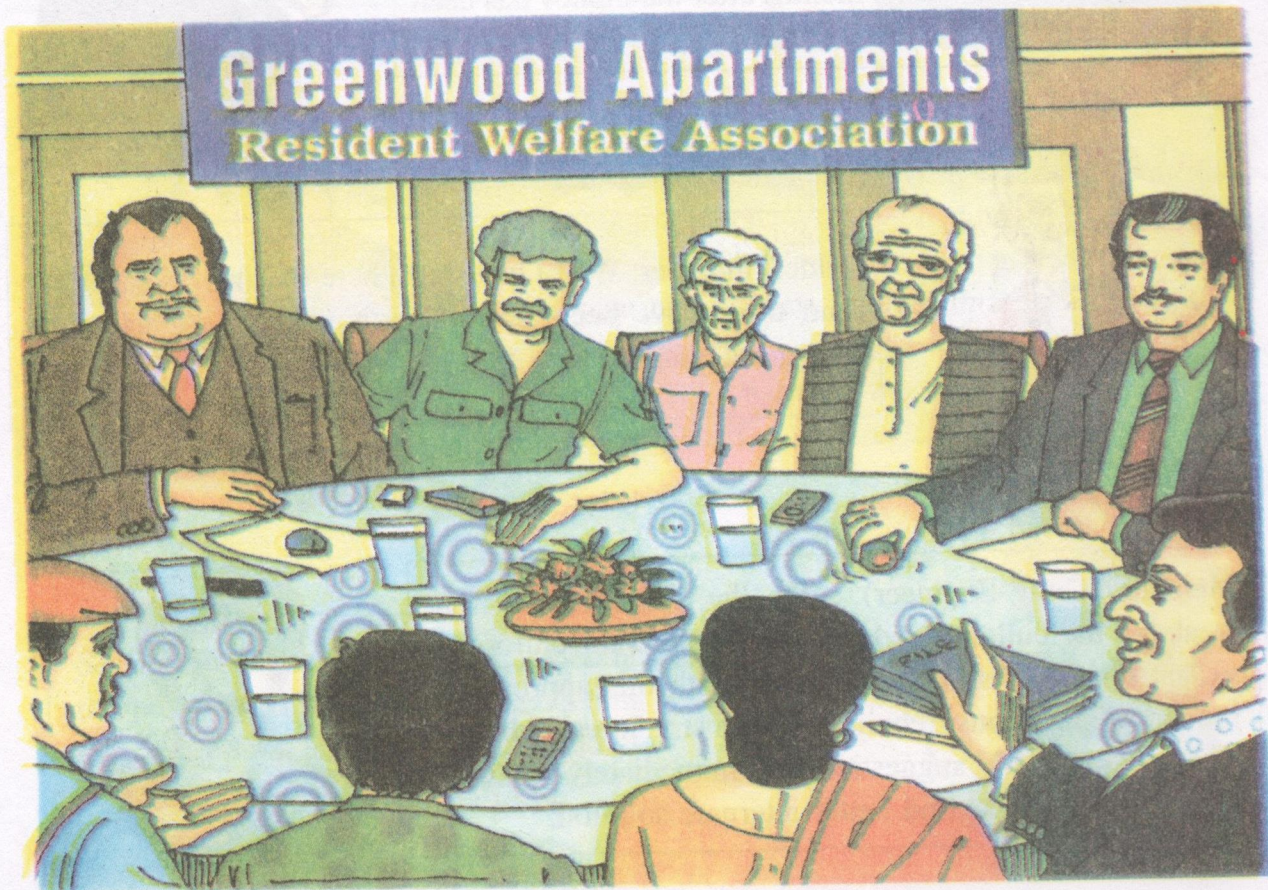
You may have to leave your house during a disaster and may sleep somewhere else for a while. It's smart to put together the things required by family and prepare family disaster kit. These can all be stored in a backpack or duffel bag. Just make sure you can carry it easily. Some suggested items of your Family Disaster Kit :

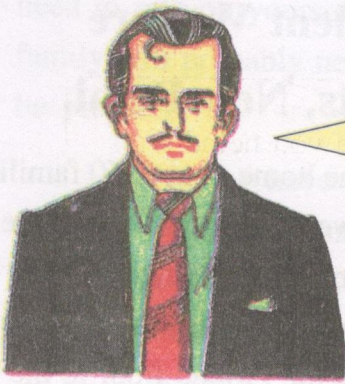
- A set of warm clothes
- Dry food items and drinking water
- Important documents
- Batteries, torch, transistor
- First aid box
- Medicines for sick and ailing
- Favorite toys and games.
- Blanket or pillow
- Pictures of the family and pet
- Think of similar items that you can add to this list.

A scenario at a meeting of the Resident Welfare Association of Greenwood Apartments, New Delhi.

Greenwoods Apartments, New Delhi, India has been the home to over 50 families since 1960. This is the 3rd generation of the families that live there now. There are 5 residents who are over 80 and have known all the problems of the building and how to solve them. The residents discovered a crack in the lift wall after the earthquake in June 2007. The back of the lift wall developed a vertical crack from the ground floor to the 6th floor. An Emergency meeting of the Residents Association was called on Sunday at 11 am to discuss safety measures.

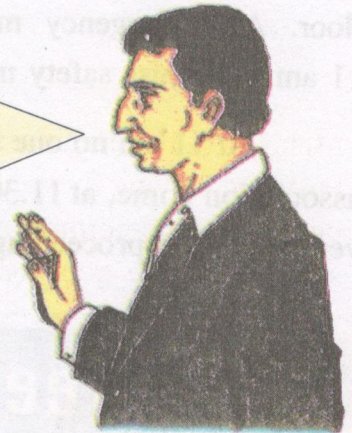
At 11 am no one is present, 11.15 the Secretary, President and Treasurer of the association come, at 11.30 am 7 members arrive. The meeting is adjourned and reconvened and the proceedings start.





President : Thank you all for coming. As you know we have to take urgent measures to reinforce this building so that further damage does not happen. The Secretary has discussed with Architects and has a plan for retrofitting which will cost each of us least 20,000 rupees. So please understand what is being planned.

Secretary : The plan is simple, we have to reinforce the lift walls with metal bands on every alternative floor and run a tight band around the floors. Since the building is on stilts we will have to make a few more columns between the existing ones and build a wall. The Architects feel that the present design is not earthquake proof. The work will take at least 6 months after the money has been deposited.



Oldest member: Well I have been here for the last 28 years and there have been several earthquakes, nothing great has got damaged; what is the anxiety now.

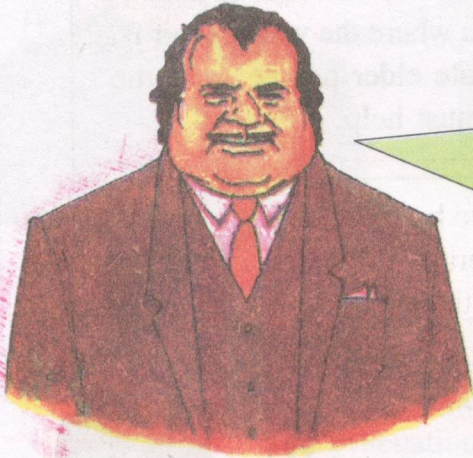
Member (Civil Engineer) : Sir the last 28 years has weakned the building and so now we need to reinforce it to last longer. Yet, I do not agree with this approach to retrofitting. We must rebuild the base structures and cover all the garages. My suggestion is to immediately repair the wall of the lift and find better alternate solution.





Secretary : Can you helpd with this Sushant.

Member (Civil Engineering) : No, sorry I am very busy and leaving for the USA. You must find another person for the committee. I will certainly see if the suggestions are good or not.



Member (Businessman) : Well I can help, but the cost is too much. We have to find a cheaper alternative. I am told that if we have good exit options we can all evacuate the building faster and damage can be reduced. Is that not better than spending so much on retrofitting ?

Secretary : That too has been planned but, to prevent the building from damage or weakening we have to take some measures as it is quite old.





Member (Housewife) : Well I have all day and am not able to run down in an emergency. How should I really evacuate the building, you have never had a mock drill and I have no idea what to do.

Secretary : Yes, I agree, can the ladies group here give me a time and day when they will all be available and we can have a mock drill with only women and children. My request is that when you feel earthquakes please do not panic, there is enough time for you to leave the apartments and come down. However please keep few valuables in the house and your papers like vote ID, passport, and bank documents in a place which is accessible place which you can take with you.



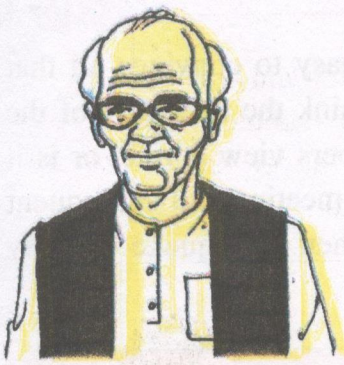
Member (Housewife) : We must form an evacuation team which knows where the wheel chair is, which homes to evacuate elder people from the young boys and girls must help.

Secretary : Yes this will be done on priority, but what do you say about the retrofitting.



Member (Housewife) : I cannot say anything, it is costly, so please tell us more and ask the architect to come and explain his or her plans.





Member (Oldest) I still think nothing will happen. You are all very scared, I promise you this.

Secretary : I hope you agree that we must do the repair of the wall at least and then think about the rest of the building.



Member (Businessman) I will like to oversee the expenses, and help to buy the materials of good quality. Please put me on the committee.

Secretary : Thank you and Mrs. Joshi will organise the mock drill for evacuation and put up the notice



Member (Housewife) : Yes this one time, next time find someone else.



Secretary : Thank you.

(Meeting closes and members disperse)