





For School Safety Campaign in Disaster Prone Areas



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### **About the School Safety User Guide**

This user guide is developed based on piloting of a campaign in 20 schools in Bhachau taluka of Kutch District. The campaign concept was articulated after consultation with All India Disaster Mitigation Institute (AIDMI), SEEDS, India and Focus Humanitarian Assistance, India. The films, material and publications developed by these institutions was of great help in systematising the steps of campaign for school safety in Kutch district of Gujarat. We are thankful for the support of these institutions.

The school safety campaign conducted by Gujarat State Disaster Management Authority (GSDMA) provided many insights to design the campaign strategy.

Knowledge Works has been involved in designing the poster sets for the campaign. Our sincere thanks to the team and in particular Ms. Mona C. Anand.

Without the support of the Principals, Teachers, Students, School Management Committees (SMCs) and Gram Panchayat representatives this campaign would not have been made the desired impact. Our sincere thanks to all.

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## School Safety Campaign in Disaster Prone Areas

### **Background**

Past experiences with regard to several disasters throughout the world show that school children are a major vulnerable group, especially when hazards occur during school time. Schools either located in vulnerable areas or unsafe building structures and lack of preparedness

for emergency evacuation can cause tremendous injury and loss of lives. The 2001 earthquake in Gujarat caused the death of 971 students and 31 teachers. 8000 classrooms fully collapsed and 42000 were significantly damaged. In 2004, 93 school children were brutally burnt in Kumbhkanam, Tamilnadu due to broke out of fire in the cooking area of the school. In Haryana, in the year 1995, more than 200 school children were burnt due to lack of appropriate arrangements and immediate response in a school function. Kashmir earthquake of 2005, there are death and serious injury to school children due to collapse of school buildings. Loss of life and injury could be minimized through preparedness and mitigation efforts. There is an urgent need to ensure safety of the students and staff in schools.

There are exemplary stories of children who saved lives because of their knowledge about disasters and skills to save their own life as well as of others. Children play a major role in carrying

information to the society. Schools play a key role in creating a positive culture. The Hyogo Framework for Action 2005-2015 stresses the importance of including disaster risk reduction in school curricula.

Provision for education on safety features, preparedness, safe places, search and rescue, immediate care and first aid to all children is a must. Also, structural and non structural measures for safe building and safety facilities in schools are very crucial. Fire extinguisher, first aid kit, and trained task forces are very handy during emergency situation in school.



### Initiatives for school safety in Gujarat

Gujarat State Disaster Management Authority (GSDMA) implemented a pilot school safety programme in 2005. School based preparedness activities were implemented in 150 schools in earthquake affected areas. A National School Safety Programme was initiated in the year 2011 covering 400 schools in Jamnagar and Kutch districts of Gujarat. The main objective is to promote a culture of disaster preparedness in the schools, motivate participation of key stakeholders in activities that would help building disaster resilient schools and to implement non-structural mitigation measures in selected schools.

### **Importance of Awareness Campaign**

Campaigns help to create awareness and behaviour change about safety and preparedness among school children, teachers, School

Management Committees (SMC) and The school authorities, community. students and other stakeholders should be motivated to take part in planning, preparation and conducting campaign. It also contributes in the capacity building on disaster preparedness and emergency response in the school. After the awareness campaign, school authorities and SMC could work further on the corrective measures on structural and non-structural aspects of the school. School level task forces can demonstrate mock drills and promote safety behaviour and culture in the school.

Visualising the importance of School Safety, Unnati initiated a campaign in 20 Schools Bhachu taluka of Kutch district as a pilot. 2970 children, 96 teaching staff, 23 SMC members and 341 community representatives participated in the campaign. For the preparation, Unnati team visited the villages and interacted with school authorities, Sarpanch and community leaders. The campaign team oriented the school management on hazard, risk and vulnerability of school





children and staff and the need of organising awareness events. During the preparatory phase, basic information about schools, children, staff



and risk and vulnerability was collected. Then team revisited the schools and finalized the activity schedule, date and time. Roles and responsibilities of stakeholders were defined and shared with the school management. Tools and methods to be used during campaign were identified for each school based on the risk and needs of the school. The school staff decided to use methods like dramas, skits, foot march, elocution, essay competition, drawing competition to enhance participation of the school children. The criteria for selecting winners for the competitions were decided by the schools, and prizes to the winners of each competition were provided by Unnati.

Based on the processes followed in the pilot project, a set of steps are mentioned bellow.

### **Preparation for the Campaign**

It is necessary for the campaign facilitators to understand the structural and non structural safety gaps in the schools. School staff, SMC and children should participate in the needs assessment process, so that they can subsequently articulate their role in ensuring school safety. Some of the essential components of the pre-preparation are:

1. Formation of facilitating team:

The campaign facilitation team should have adequate understanding of disaster risk and vulnerability in the context of the schools. The team should consist of people with technical, social, and community mobilisation background and experiences. Participatory skills are essential in involve all the stakeholders including school children, teachers



and community. Understanding about the initiative of the government and other agencies helps in developing a coordinated effort. The campaign materials already developed can be collected to make best use of them without duplication. The team also should have skill of using IEC material and audio visual equipments during the campaign. Specific roles and responsibilities like school community mobilisation, process facilitation, and documentation and logistics arrangements should be defined and assigned to each member.

2. Identification of the schools: Schools to be covered need to be identified in advance and the consent of the school authority need to taken about the timing of the campaign and their role. If possible a ToR can be developed so that an explicit commitment



is agreed upon to take up safety issues subsequent to the campaign. The agency working on the school safety shall also inform the school authorities and the disaster management authority at the district and the state level. Panchayats and SMC should also be involved to take responsibility for the improvement in the safety features of the school.

3. **Needs assessment:** Schools of one geographical area might have similar hazard risk but there might be variations in their levels of preparedness and capacity to respond to emergency situations. School level needs assessment will increase the relevance of the campaign for the schools. facilitating team should spend at least a day with school children, teachers and community to understand specific issues and gaps in their capacity for preparedness. The team should assess the structural and nonstructural aspects of the school from the perspective of safety.

### 3.1 Structural aspects

- Site for the school building: Risk varies according to the location of the structure vis-à-vis thef hazard. For example, a building located in a low laying area is more vulnerable to flooding.
- Use of disaster resilient design codes: The structure has to be designed considering the appropriate disaster resilient design codes. Design of spaces should be non-obstructive and allow quick evacuation. For example, staircase, corridors etc should be designed in such a way
  - that evacuation during an emergency can be done quickly.
- Quality of the material and construction: There should be









discussion with the teachers and community about the construction standards and quality of the material like cement, water, wood and iron used construction. It is always not possible to undertake a technical test to measure the strength, however, the remarks of local people on the construction quality can give some idea about the quality of the construction. Teachers, community and SMC can share about quality of the construction and use of skilled masons. As most of the schools are



constructed by the local authority, Panchayats and contractors so the technical information can be collected by interacting with them

• Maintenance and up gradation: Assessment team should look into the capabilities of the existing building structures to resist disasters. Team should list down what kinds of building maintenance measures have been taken to make building disaster resistant. Needs related to repair and up gradation should be discussed and listed during the assessment process.

### 3.2 Non structural aspects:

Suitable design for easy evacuation: Timely and safe evacuation during emergency is very important to prevent casualties and injuries. Entries and exits of the classrooms and the school campus are important in this context. Specific points should be listed with regards to the internal and external evacuation routes and if there are any obstacles that need to be removed. Issues related to construction, systems and interior arrangements should be discussed and identified by the team

 Fixtures, fittings, and wirings: Electrical wiring should have proper earthing to prevent short





circuits. The team should observe whether there is a main switch at easy reach for emergency cut off the electric supply.



Examine whether the fans and other hanging objects are tied properly, cupboards and writing boards are properly fixed on the wall, whether loose stationery or Teaching Learning Material (TLM), and other material kept in the class room has any

potential risks. Arrangement of tables and benches including the placement of old discarded furniture are important as they might cause obstacles during emergency evacuation.

Laboratory and cooking area: Many schools having laboratories for higher classes, and government schools usually have a cooking place provided for mid day meals of children. Safety assessment of the both these should be done during the visit to the schools.



- · School Disaster Management Plan:
  - A comprehensive school disaster management plan is necessary to strengthen safety through prevention, mitigation and preparedness activities. School management should prepare a plan in consultation with students and SMC of the village.
- Task forces and capacity to response: team should assess the formation, activeness and training status of the task forces for evacuation, first aid and rescue. The functional status of fire safety equipments, first aid kits and rescue equipment should also be observed.
- · Insurance of school building, children and staff for risk transfer: There should be discussion on whether any risk reduction schemes have been initiated in the schools.
- Community Participation: Nature of stakeholder participation can be assessed to bring the issues to the notice of all the stakeholders

Above mentioned list is indicative. It can be elaborated to suit the purpose and planning. The assessment report should help in identifying the structural and non-structural risks and vulnerabilities of schools and their capacity to respond. Findings of the assessment should be shared with the school management, SMC and Panchayats for the necessary actions. Campaign content, design and schedule can be developed collectively based on the need of the school and the capacity of the school children and staff for the awareness programme. Responsibilities and resource sharing should be clear. Local youth groups may also be given the responsibility for some tasks apart from the teachers and the SMC.



## Implementation of the School Safety Campaign

Choice of methods to be used in the campaign depends on the familiarity of school staff, children and their age groups on disaster related risks. The method should also refer to the needs and issues identified during the assessment and preparation phase. Methods should be interesting and have scope for maximum participation. Some of the schools use methods like, essay writing, elocution, drama, skits, drawing and colouring, poster making, question – answer, etc. These methods always invoke high student and teacher engagement in terms of researching, preparation and practice. It could be encouraged with appropriate



modification during the campaign. Some other interesting tools like 'snake and ladder' game based on the school safety issues, foot march – prabhat feri using educational materials (slogans, songs and banners) can be effectively used. Teachers and children should be orientated for effective use of the tools. Mock drills are helpful in raising the awareness and capacity of teachers and children. Competition usually raises the interest levels but care should be taken to ensure that it does not exclude some from participation. Involvement of a group of schools in one campaign event can be more interesting. Tools developed with a low cost and locally available material would be useful.

### List of methods used in the School safety campaign in schools of Bhachu, Kutch are as follows:

### Essay writing:

Identified topics related to local hazards, preparedness, response, DRR practices were discussed with the teachers. The main topics were Maru Gam and Bhukamp (my village and earthquake), Mara Gam ni Afto (hazards of my village), Clalo Sajj Baniye (Lets become prepared ) Mari shala Salamat shala (my school safe school ). Essay writing competition was conducted prior to the campaign; teachers checked



the entries and finalised the winner. Winning essay was read out during the campaign and winners were felicitated during the event.



### Drawing and painting competition:

Themes and topics were identified with help of teachers. Drawing sheets and colours were provided to the students. Where the school did not have resources, they were provided stationery and other materials. The paintings and coloured pictures were used during the event for discussions. Later they could be framed and displayed in the school premises as IEC material. Some of the themes selected were impact of hazards (earthquake, flood, cyclone and tsunami) on village and schools safety features for school, health and sanitation, etc.

### **Elocution Competition:**

Process was similar to that of an essay writing and drawing competition. It could be utilised to increase knowledge of the students and teachers. This was conducted before the campaign event and the winners gave their speeches during the event. Reference material was provided to the participating students for preparing their speeches. Some of the topics identified for the competition were hazards of my area, our preparedness to cope with the hazards, let's make our school safe and recent disasters across the world as read in the newspaper and seen in the television, etc.

#### **Quiz:**

The teacher or student teams conducted the quiz. The student groups were identified based on their classes and age groups. he quiz was conducted during the campaign event. Questions related to types of equipments for the preparedness and response, disaster timelines, do's and dont's for the preparedness and response and some of the questions about school

safety were identified from the school curriculum.



These were very powerful and interesting methods for mass









communication. Skits, parodies and dramas were developed by the facilitating team, children and teachers jointly and enacted during the campaign event. Some of the topics and roles for the skits used the past experiences of the school and community related to disaster preparedness and response. This can be more effective if the students in the groups develop the programme themselves. During the campaign, some of the skits performed by student were on hazards and immediate response,



preventive measures for the accident and fire, how hazard affect school children etc. Average time taken for performing of the each skits and drama was about 15 to 20 minutes, one or two key massages were explained after the enactment.

### Snake and ladder game:

It was one of the most popular methods to interact with school community and develop critical understanding on issues. The game was printed on a large paper or cloth sheets with a scale of 10x12 feet. It can also be drawn on the ground by identifying cause and effect of the situation. Two groups of children played on the surface. At every step of the game discussion shall be facilitated. Some corrective measures were also discussed and planned.

### Foot march:

Foot march can spread awareness on issues of disaster risk and safety measures to the community. This is a conventional method for the awareness creation in the community. Children and teachers along with community members can take a walk in the streets shouting awareness slogans





and holding placards. Few songs were identified related to safety and DRR and children sang during the march.

### Poster, hoardings and banners:

These can be developed and printed in different sizes as per the need of the method of interaction. Hording and banners can be tied/ hung on



the main roads of the village and in the school premises. Posters can be used in the small group discussion as added material for reference. Teachers and students can be the facilitators for the discussion. The images, content, design should be appropriate based on the need assessment, culture of the area and easy to understand by the children.

### Video films:

There are many video films and clippings available with national and state disaster management authorities, NGOs, INGOs and other educational agencies. Many rural schools are equipped with Audio Visual equipments for showing videos to the students. A set of available films can be shared with the school management.

### Use of poster set for Campaign:

A set of posters on school safety was developed using appropriate photographs, illustrations and short write ups so that students, teachers, SMC and rural community can follow the key messages. A 24 visual aids developed by Unnati focus on disaster risks and impact on school and children and structural and non-structural aspects of safe schools and school level preparedness.

The poster set was used by campaign facilitators in different ways to enhance participation of the school community

- 1. This poster was printed (2.5x3 ft. size) and displayed in a sequence. The students saw the posters and discussed in groups about the key messages that they received from the posters.
- 2. A question-answer session was initiated after seeing the posters.
- 3. A set of the fill in the gaps was prepared by the facilitator related to the posters and then it. After this, a discussion was initiated.

This poster set was useful to make a preliminary assessment of the school building. In few schools teachers and children themselves use











this poster set to initiate discussion during the event and assess structural and non structural aspects of their own school based on the details given in the posters.

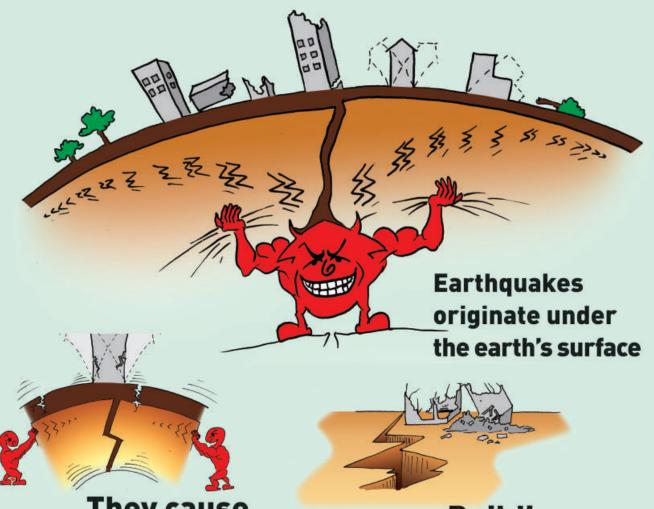
### Points to be remember for organising a campaign

- 1. Team should develop the program jointly so that the schools have ownership over it. The team shall facilitate to elicit full participation of the schools, however, shall not burden them or abandon them mid way.
- 2. The community leaders, Panchyat members, SMC and other important stakeholders should be invited by the school for the events. Turn the campaign as social events and the teachers and parents should take pride on the performance of the children.
- 3. The IEC material, posters, hoardings and banners must be collected in advance and displayed aesthetically at the appropriate places in the school premises. If our methods required stage/ dais, it should erected at the proper place and must be arranged accordingly.
- 4. In the beginning of the programme, facilitator (preferably from school staff) should explain about objective of the event and key activities and time frame of the program.
- 5. Duration of the whole events should be fixed keeping into account the contents, interest of the teachers and children, and school timing. It should not disturb academic sessions of the school, however it can be planned for maximum two to three hours for each event.
- 6. Methodologies should be identified in which different age group of the children can participate effectively.
- 7. Methods and tools should be cost effective because government schools do not have special budget for such expenditure. Panchayats and community should be encouraged to contribute.
- 8. Methodologies of the programme should be flexible considering unreliability electric power supply in the villages.
- 9. If there is a plan to distribute prizes for the competitions, it should be packed and kept aside according to the list given by the school before the event.
- 10. At the end of the program, there should be a follow up meeting with staff and management about action points emerged from the event. In this the role of each stakeholder can be made clear with a clear time frame.
- 11. Documentation of the events should be done and selected paintings, drawings, essays could be collected, so it can be used as the IEC material by the schools and other agencies in the future.
- 12. After the events, letter of thank you, few selected copies of the pictures and citation for remembrance could be sent to the school management.
- 13. Follow up action should be developed with school management, SMC and Panchyats.



## EARTHQUAKES

## Natural hazards and how they affect us



They cause buildings to SHAKE

Buildings FALL down

Earthquakes do not kill. Falling buildings and objects due to earthquakes cause injuries and even death.







# Floods and Tsunamis can wash away entire villages



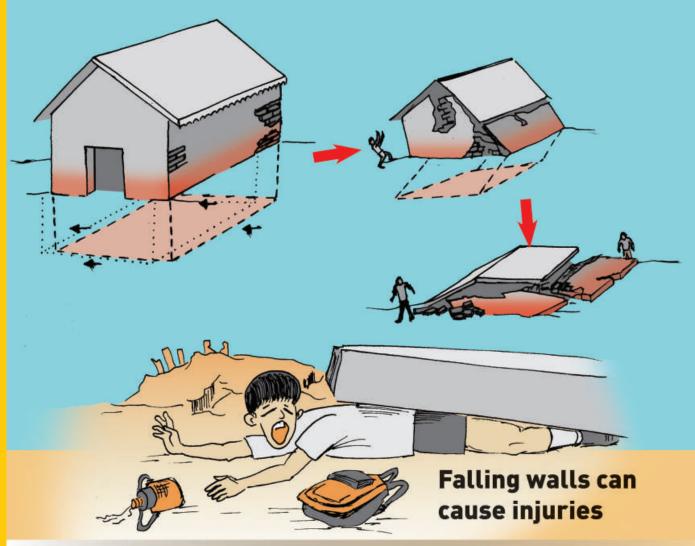
### These losses are preventable







## Due to floods, foundations may get damaged leading to collapse of the entire building



Buildings in flood prone areas need to be designed to withstand this risk



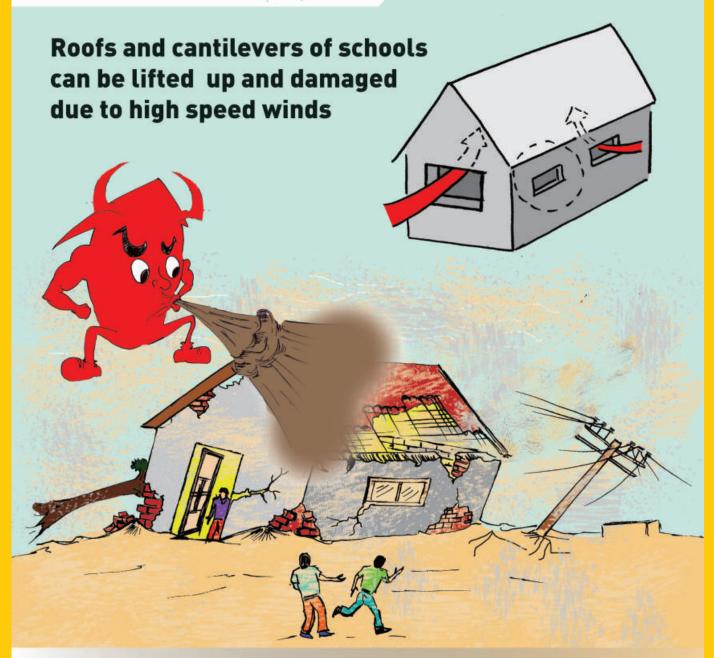




# CYCLONES

Natural hazards and how they affect us

4

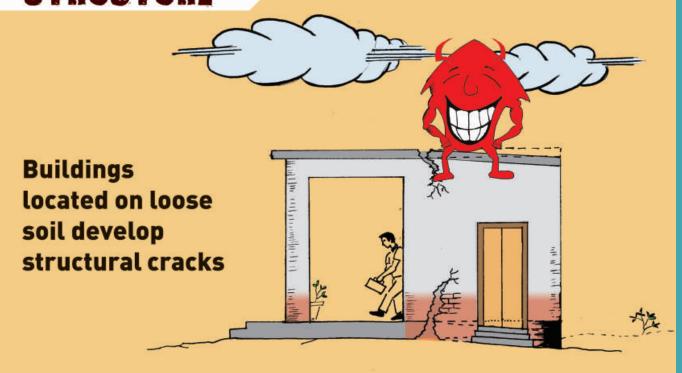


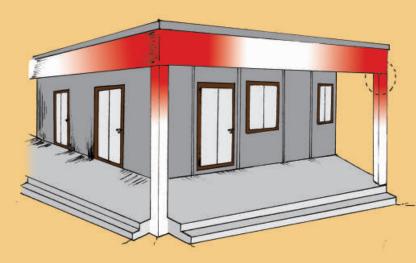
Cyclones and high speed winds can damage buildings, trees, lamps posts or other objects that can fall on us.











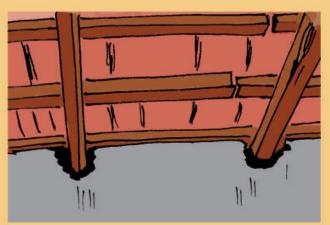
Poorly designed structural systems pose a threat eg. isolated columns in corners make the entire building vulnerable











Poor construction practices eg. untied support structure make a building weak





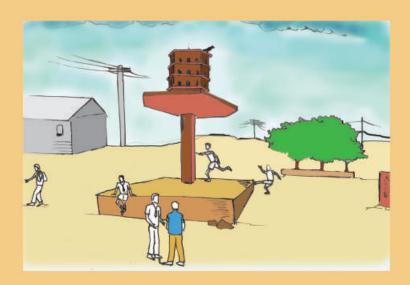




Heavy objects such as jars, containers in kitchen or in science labs that may be loosely placed at a height can pose a threat to safety.



Free standing structures in the school campus that may fall during an earthquake are a hazard.









Congested internal routes with loose objects can be hazardous and can cause problems in evacuation.











**Barriers** in outdoor spaces such as irregular stairs, open water tanks, debris and open ditches and uneven earth can pose problems in evacuation











# **EMERGENCY EVACUATION**

How Safe our schools are 10









## SITING OF SCHOOL BUILDING

Structural Measures for Safety

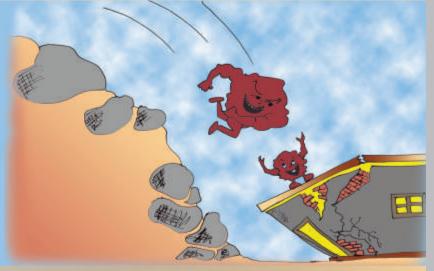
Schools located in flood plains especially those with low plinths can be damaged during floods.





Large trees & electricity poles close to school building can fall and cause damage to the building during cyclones.

Falling rocks from hill slopes during earthquakes and landslides can cause damage to buildings and injury to children.



Ensure that the safety of school building is not threatened by any elements that can cause harm.

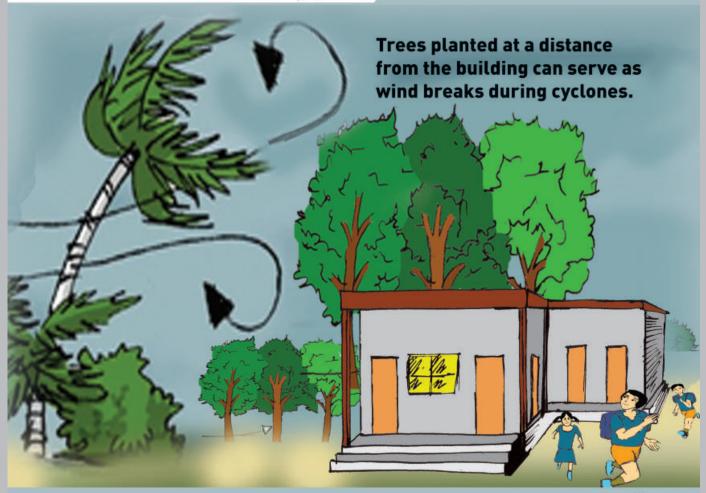






## SITING OF SCHOOL BUILDING

Structural Measures for Safety





Strong retaining walls of near by hills can prevent damage during land slides and earthquake.

> High plinth can prevent damage during floods.

Take necessary steps to safeguard your school against disaster risk



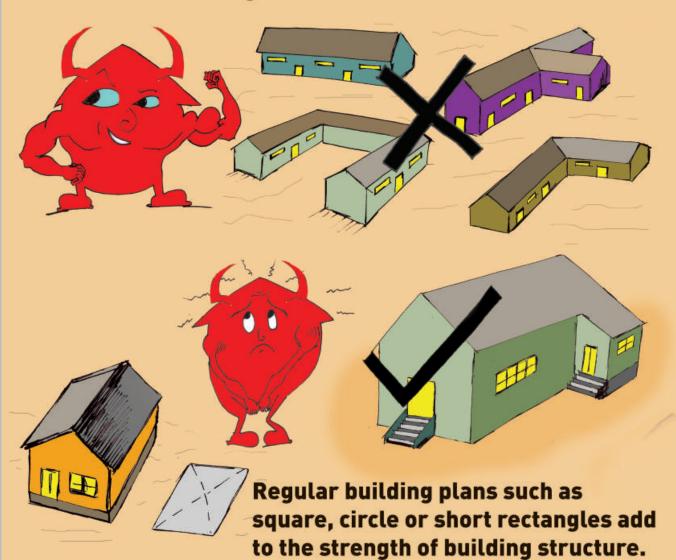




### ARCHITECTURAL DESIGN OF SCHOOL BUILDING

Structural Measures for Safety

Irregular building plans due to extension or upgradation can make a building vulnerable.



The building plan should be regular. Remember this while planning extensions to existing schools

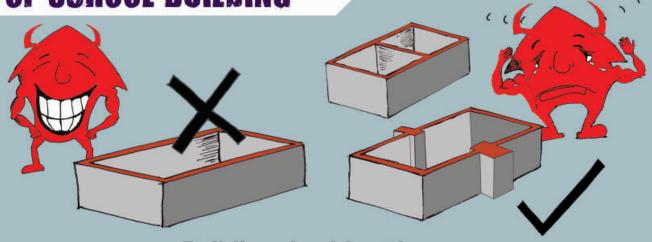






ARCHITECTURAL DESIGN OF SCHOOL BUILDING

Structural Measures for Safety



Building should not have continuous long walls



Heavy components like water tanks can be isolated from the building structure and secured.

Architectural design of schools should promote safety







### ARCHITECTURAL DESIGN OF SCHOOL BUILDING

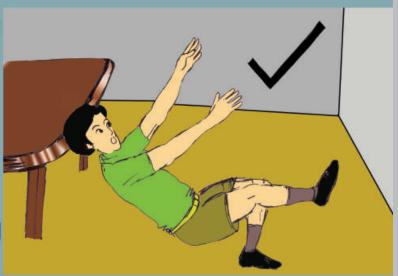
Structural Measures for Safety

Design of spaces should be non-obstructive and allow quick evacuation



Architectural details should be Child friendly such as use of rounded / splayed corners rather than pointed edges of walls and furniture.

Integrate safety features in the architectural design and detail.



Architectural design and detailing of schools should promote safety



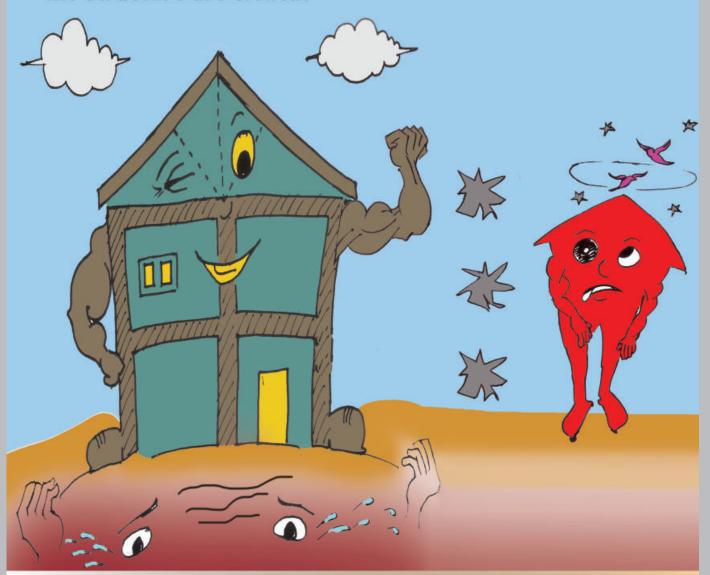




# STRUCTURAL DESIGN OF SCHOOL BUILDING

Structural Measures for Safety

For earthquake risk, horizontal and vertical bands to tie the structure are critical



Structural design should include necessary features to address disaster risk.







# STRUCTURAL DESIGN OF SCHOOL BUILDING

Structural Measures for Safety

If not already in place, ensure that safety features are included in the building. Seek the advice of a trained engineer to choose between retrofitting of the existing building or new construction of a safer building.



Structural design should include necessary features to address disaster risk.







Ensure that the plinth is above the flood level for schools located in flood prone areas.

For cyclones, ensure that the roof is secured well with the main structure.







Structural design should include necessary features to address disaster risk.







### SECURE CONTENTS

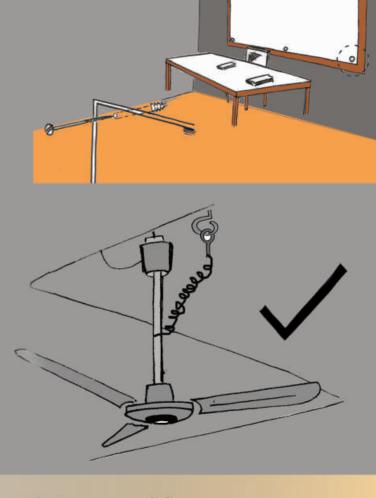
**Non-structural Measures** for Safety



Tall and heavy furnishing or any other elements that can cause injury need to be secured.



Objects like fans and lights suspended from the ceiling need to be secured well.



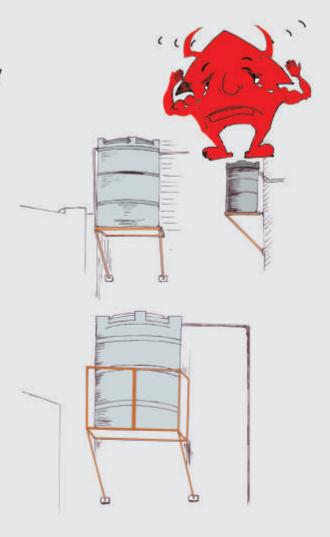
Secure all contents that can cause injury







Water tanks should be secured not only vertically to be prevented from falling but also shaking off the side. Seek the help of an engineer or local fabricator to design the securing system.





Use appropriate fixtures to hold doors in place.

Seek professional advice on securing heavy contents of the building







## Make your school safer 21

## HELP YOURSELF, HELP OTHERS

First of all, join the school disaster management committee' and / or safety club in your school. In case you do not have such a body in your school, request your management to initiate this.



Look for opportunities where children, teachers and school management can be trained.



During an earthquake, children should not panic and cause a stampede, rather they should practice 'Drop, Cover, Hold'.

Build capacity within the school for risk reduction.







Conduct a Hazard Hunt with your school safety team by going around the school looking for hazards. Many of these can be mitigated easily by the team without any additional resources.

**Identify various dimensions** of vulnerability of the school and enlist structural and non-structural measures required to make your school safer.





Look for harzards in your school and address them







## HELP YOURSELF, HELP OTHERS

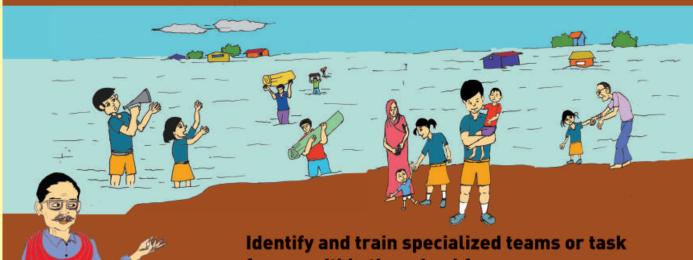
Make your school safer 23



Devise Floor-wise evacuation plans and display them all over the school.

Make an Inventory of resources for use in emergency management.

Also make a ready list of emergency contact numbers





forces within the school for:

- Emergency Evacuation
- Search and Rescue
- Fire Prevention and Control
- First aid

Conduct mock drills to test effectiveness of the safety plan

You can play a role in the safety of the people around you









Constantly watch out for any things that need maintenance. Regularly update emergency equipment such as first aid kit, fire extinguisher, emergency radio and torch light.

> You CAN beat the Devil! So how would you move ahead from here?







### About us

### **Vision**

To create an inclusive society where all stakeholders, particularly the vulnerable, participate with full empowerment and gain equal access to and control over services, resources and institutions.

### **Mission**

To promote social inclusion and democratic governance so that the vulnerable sections of our society, particularly the dalits, tribals, women and persons with disabilities, are empowered to effectively and decisively participate in mainstream development and the decision - making process.

### **Strategy**

We work at the field level in partnership with local civil society and people's organisations. The collective experience, learning and insight enable us to work on knowledge building, training and advocacy. All initiatives are executed in a framework of collaboration and partnership to empower people for demanding their entitlements and enable the service providers, including the government, to deliver in a transparent and accountable manner.

All our activities are carried out through three thematic centres:

Social Inclusion and Empowerment

Civic Leadership Governance and Social Accountability

Social Determinants of Disaster Risk Reduction

The learning derived from our field experiences are consolidated and disseminated in print and electronic forms for wider sharing through a Knowledge Resource Centre. It is our endeavour to build an academy for community leaders, especially dalits and women, so that they can effectively address local issues.



Organisation for Development Education

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