

School Disaster Management Action Plan

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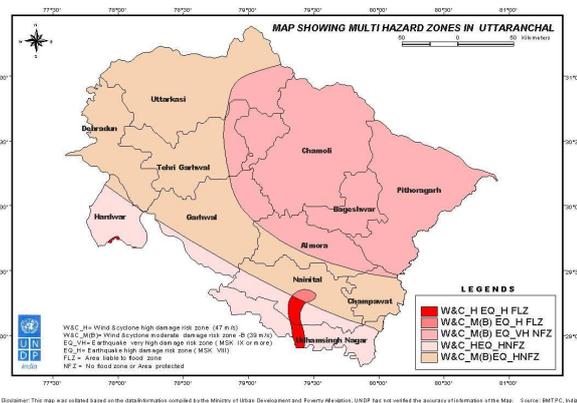
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Background

Uttaranchal was created as the 27th state on 9 November 2000 after the bifurcation of the earlier Uttar Pradesh. It has 13 administrative Districts (*Uttarkashi, Chamoli, Pithoragarh, Champawat, Udham Singh Nagar, Nainital, Bageshwar, Almora, Pauri Gharwal, Tehri Gharwal, Rudrapur, Haridwar, and Dehradun*) with 95 development blocks, 73 towns and 15,669 inhabited villages with a geographical area of 48,435 sq. Km. About 62.30 percent of the total area is under forest cover. Comprising mostly of hilly regions, the State consists of two regions namely Kumaon and Garhwal with historical distinctions.

The Uttaranchal has distinct and varied physical features, varying from fertile *Terai* plain land along southern most part to very high snow covered hilly region in North. Due to its unique geographical features and a fragile eco-system, Uttaranchal is one of the disaster prone states in India. Landslides, Forest fires, Cloudbursts and Flash floods are seasonal in nature and they strike during a certain period of the year with high frequency. Earthquakes are the most devastating disaster in the mountains and are unpredictable. As per the earthquake zoning, 4 out of total 13 districts are in Zone V while 5 districts are in Zone V & IV and remaining 4 are in Zone IV.



Uttaranchal as a State has been endowed with very rich natural resources. However, the general topography, the physical features of the area and active geomorphic changes has converted the area vulnerable to natural disasters. In recent times, Uttaranchal has experienced two major earthquakes (>6 magnitude) in Uttarkashi (1991) and Chamoli (1999) and a series of landslides/cloud burst such as Malpa (1998), Okhimath (1998), Fata (2001), Gona (2001), Khet Gaon (2002) and Budhakedar (2002). The losses to human lives and infrastructure have been huge.

In order to pursue the long term vision of Disaster management for Sustainable Development, and to build capacity of the state government functionaries and other stakeholders, the state government established an autonomous nodal body as "**Disaster Mitigation and Management Center (DMMC)**". DMMC jointly works with the line departments, NGOs/CBOs/schools and community. The Center organizes in-house training programs and out-reach workshops/ awareness camps regularly on disaster preparedness and mitigation.

Uttaranchal has been a nerve centre of education since the pre-independence era. Dehradun and Nainital have been famous for the educational institutions and for modern education. In Uttaranchal, many school buildings are gifts from government or

private organizations. These private organizations do not always take into consideration the natural hazards prevalent in the region and the schools, therefore, may not be built with specific hazard vulnerability criteria in mind. In addition, schools are often built on marginal pieces of land owned by the government that are unsuitable for commercial or agricultural use. All too often, school buildings are situated in vulnerable areas because proper site-selection criteria were not applied. It is estimated that most of the classrooms in Uttaranchal are vulnerable to natural hazards. We owe it to our children to provide them with a safe learning environment.

School buildings often serve multiple purposes in a community. For most of the day, they house one of our most precious resources, our children. In addition to their role as learning centers, they may serve as gathering places for community events and fundraisers, meeting places for clubs and religious organizations, storage places for books and other technical equipment, and public shelters in emergencies. When a school building is vulnerable to natural hazards, the welfare of the entire community is at risk.

The vulnerability of school facilities must not be seen only in terms of the need to prevent catastrophic damage that may destroy the buildings. It is also necessary to prevent lesser damage that may affect the continuity of the services they provide. For example, if a school is unusable, the children will have to go to other schools, often in shifts, and their education suffers.

The Government of Uttaranchal has focussed mainstreaming disaster management in School and College curriculum within the overall disaster management initiatives . The approach focuses on the following policies, processes, projects and preparedness.

Policies

- Set goals and objectives for vulnerability reduction in the education sector and include all relevant organizations.
- Define acceptable levels of risk.
- Prepare and adopt a vulnerability reduction plan for schools .
- Define policies and priorities in the education sector related to the reduction of vulnerability to natural hazards.
- Create advisory committee to guide the implementation of the vulnerability reduction plan.

Processes

- Define ways to incorporate the reduction of vulnerability to natural disasters in the school planning process.
- Determine the number of existing school buildings, their location, the date of construction, possible uses of the building, and the types of hazards to which they are vulnerable.
- Investment for structural mitigation.
- Train technical personnel to develop projects that conform to acceptable standards and criteria.

- Propose non-structural mitigation measures to be adopted.

Preparedness

- Identify preparedness programs for emergencies in places where vulnerability reduction is complex and costly or has not been completed.
- Support emergency and disaster preparedness programs based on the dissemination of information about natural disasters among the educational community.

Reduce Vulnerability through School Planning Process

Ideally, vulnerability to natural hazards should be considered before construction begins. It is estimated that mitigation against natural hazards adds less than 10 percent to the capital cost of the entire project at the time of initial construction. Mitigation for earthquake-prone areas is typically more costly than mitigation against wind and rain. Planners and designers need to ask themselves the following questions to determine whether mitigation is cost-effective:

1. What is the anticipated lifetime of the structure being built?
2. What are the intended uses of the building? Will it be used as a shelter?
3. What hazards are the building exposed to?
4. How often is each type of hazard expected to occur within the lifetime of the structure?

For example, if the probability that a significant earthquake will strike an area is once every 500 years and the last earthquake was 100 years ago, it may not be necessary to construct a building that can survive an earthquake of 7.5 on the Richter scale. The decision whether or not to mitigate against disasters, and to what extent, is a complex one that should not be taken lightly or be based purely on cost. Planners must decide how much risk they are willing to take.

Steps to Reduce the Vulnerability of School Buildings to Natural Hazards

With this in mind, we should develop a three-part approach to reducing the vulnerability of school and shelter buildings to natural hazards, focusing for the moment on infrastructure rather than public participation and academic aspects of vulnerability reduction, though these are equally important. The School Vulnerability Reduction Program should be divided into the following three components:

1. The Development of State Plan to Reduce Vulnerability of School Buildings to Natural Hazards
2. The Survey of Existing School Buildings to Create Vulnerability Profiles
3. The Development of School Maintenance Plans

The results of this three-part process should be used in the preparation of project profiles for investment in school/shelter retrofit.

1. Development of Plans to Reduce the Vulnerability of School Buildings to Natural Hazards

Ministry of education is not the only institutions responsible for school design, construction, repair, maintenance, and rebuilding after a disaster. Ministry of finance, the departments of public works and planning, department of disaster management, and community organizations should also play an important role. By developing a State Plan

to Reduce the Vulnerability of School Buildings to Natural Hazards, Uttaranchal can clearly define the role of each organization and institution involved. This will help to avoid duplication of efforts and promotes understanding and cooperation among and between all the parties.

2. Survey of School/Shelter Buildings to Create Vulnerability Profiles

In Uttaranchal, it is difficult to obtain information about the condition of school buildings. The record-keeping systems often do not have basic information about school or shelter buildings such as the date of construction, design type, as-built drawings, or the donor institution that financed the construction.

Before we can attack the problem of vulnerable buildings, the first step is to create a database or profile of the existing stock of school buildings. It is necessary to know what types of hazards are prevalent in the area and how the building will perform if faced with these hazards. Once this information is collected, a strategy can be developed and priorities set to retrofit or upgrade the buildings.

3. Maintenance of School Buildings

A structure that is not properly maintained is more vulnerable to natural disasters. Unfortunately, school buildings are often poorly maintained and little money, if any, is typically set aside for maintenance in recurring budgets. As part of the project with the DMMC, a Maintenance Manual for School Buildings in Uttaranchal can be developed for non-technical staff (school principals, headmasters, and teachers). The manual contains a series of checklists and hints on how to prolong the life of school buildings.

As a general rule of thumb, it is recommended that the annual maintenance budget for school buildings be about 4% of the contemporary capital cost of the building and equipment, assuming that the building is in good shape. School maintenance should become a routine activity like changing the oil in a car or visiting the dentist for a six-month cleaning.

Other Activities in School Vulnerability Reduction

Working with local organizations and school groups, the non-governmental organizations can help communities develop school emergency plans and trained students and teachers in Uttaranchal to prepare for natural disasters.

Take the Initiative

Uttarancha is no stranger to the forces of Mother Nature. While we cannot prevent natural events from occurring, we can minimize the impact on property, through mitigation and proper planning. With each natural event, we gain valuable experience as we learn, sometimes through trial and error, how to be better prepared. Advances in technology have enabled us to make better predictions and forecast the paths of natural

events. Many studies and training resources are also available to aid us. While the media and many donor organizations tend to focus on disaster response and recovery, it makes more sense to concentrate our efforts on mitigation to avoid future tragedy.

Hazard mitigation is not the responsibility of government agencies alone. Small, inexpensive measures can be taken to reduce vulnerability in the education sector that can make a great impact. Simple things like wrapping textbooks in plastic bags and storing them a few meters off of the floor at the end of the school year may save thousands if wind and torrential rain from a cloud burst flood a classroom. Everyone has a role to play in this important initiative.

Further information on training and technical materials related to disaster management is available from Disaster Mitigation and Management Centre, Government of Uttaranchal.

Introduction

Aim and Objective:

The aim of emergency planning is to ensure that the safety of the students and the staff is maintained during an emergency. The emergency management plan is a means by which this can be achieved.

In this unit, we will look at

- how to identify the hazards in the school
- how to manage the hazards
- how to mitigate the effects through planning and effective response

Need for the plan:

The School is a densely populated place and has small children that are one of the most vulnerable groups in the society. To reduce this vulnerability particularly for schools, it is important to have a school Disaster Management Plan. Schools also have many resources and are community nodes. Therefore, a School also has responsibility towards its immediate locality, just as the neighbouring community is linked to the school.

Planning Principles:

When developing a school emergency management plan, observance of the planning principles mentioned below will assist planning committees to develop a set of arrangements and procedures which will work during an emergency.

Simplicity: The plan shall be concise. Roles and responsibilities shall be clearly stated. Emergency procedure which staff shall be expected to remember and implement shall be kept to a minimum.

Flexibility: The plan shall be flexible. Emergency procedures shall still work if key personnel are unavailable on the day, or if a pre planned route to an evacuation assembly area is cut off by the hazard.

Comprehensive: It shall be comprehensive. It shall describe arrangements for preventing, preparing for, responding to and recovering from the effects of an emergency.

Decision Making Process: The plan shall describe the decision making process which will be adopted when an emergency occurs. While each emergency will be different, the decision making process shall remain reasonably consistent.

Consultation: The plan shall be derived from consultation with the school community of various levels. One shall see to it that the plan suits and is understood by all in the school. The commitment of individuals to the plan is likely to be greatest when they have been involved in its development.

Dissemination: The plan needs to be widely disseminated. All members of the school community shall be familiar with the content of the plan, and shall be trained in and

regularly exercise its procedures. Apart from the school community, the plan shall be shared with the parents of the students so that they too are familiar with the emergency planning of the school and there is no chaos.

Review: The plan needs to be reviewed on a regular basis, preferably annually and following any significant emergency, to ensure that it remains workable.

Co-ordination: Planning in the school shall be coordinated with other agencies, such as the emergency services and local municipalities, who shall have their own plans linked with the plans of the districts/municipalities/surrounding community.

Policy: Policy issued shall be resolved during the planning process. The death of the student inevitably raises issues concerning who will attend the funeral, whether a memorial shall be held and how media requests for information shall be managed. The stress could be reduced if local policy issues have been considered in advance.

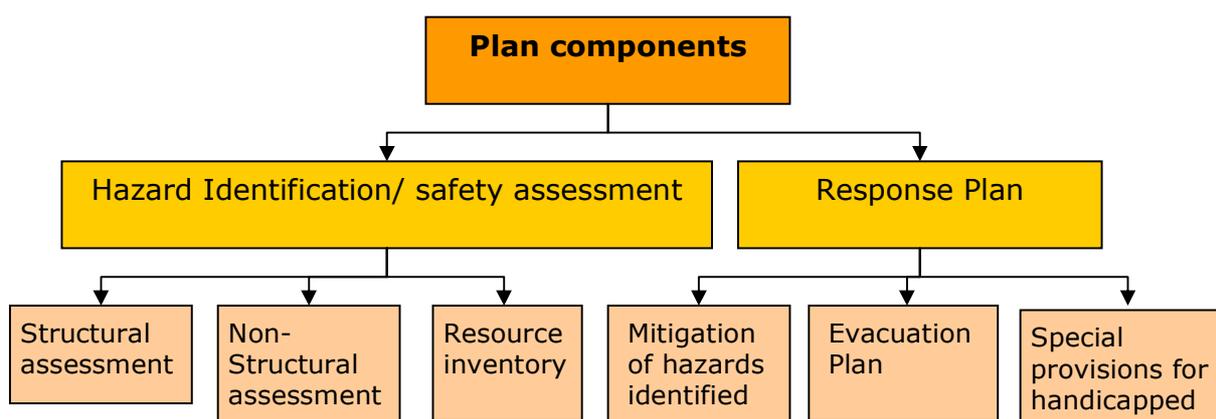
Consistency: The plans shall be consistent with the local policies of relevant education authorities. The plan shall not permit a lesser degree of supervision of students during an emergency than regulations required.

Scope of Responsibilities: The plan shall describe the scope and the limitations of staff and students responsibilities. The school is responsible for ensuring the ongoing safety of the staff and students for the duration of the emergency. Staff and students shall not be expected to place themselves in danger by combating the emergency themselves.

Co-operation: The plan shall also emphasise the role of the school in providing support to the emergency services (i.e., police, fire services, ambulances etc) that are legally responsible for managing the emergency.

Preparing the School Disaster Management Plan:

The Plan has two components as depicted in the following chart



While preparing the plan one needs to see to it that the plan prepared has a holistic approach to combat any disaster. A written description of the school and its surroundings shall provide a basis for identifying hazards to which the school might be

exposed. Once the hazard has been identified, it becomes possible to develop preparedness, prevention and a response programme to minimise them.

Not all emergencies can be prevented. Therefore, the plan needs to describe arrangements for responding to those emergencies that do occur/are at a greater chance of occurring. It shall describe key roles and responsibilities including who will be responsible for coordination, control and communication when responding to an emergency.

As students and teachers, there are two very important contributions you can make to reduce disaster risk for yourselves and for your communities:

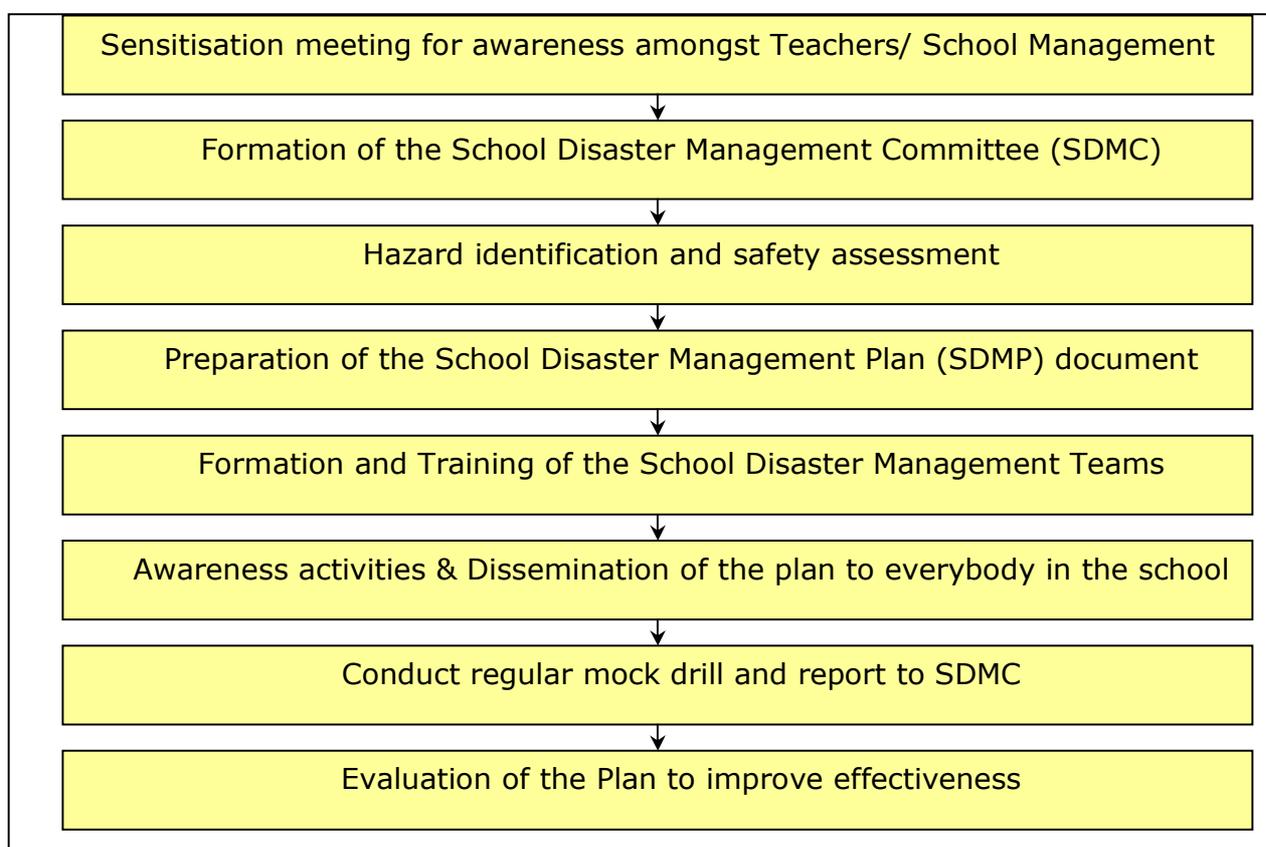
1. Take care of yourself

Prepare for, mitigate and prevent disasters through a – School Disaster Management Plan (SDMP) – and at home, through a family disaster management plan. This will ensure that during an emergency, we are free from danger, so that we can be of help to others.

2. Spread the word

Create widespread awareness amongst our families, friends, and neighbourhood and not the least of all, those communities that are lesser privileged than us. Here we are talking about helping others to understand their vulnerabilities, and how to overcome them. We can call this our ‘social responsibility’ as a student or teacher, and as a responsible citizen of India

Steps in School Disaster Management planning



Sensitisation meeting for awareness amongst Teachers/ School Management

As a first step towards preparing a SDMP and training school teachers, on how prepare a plan, the trainer should organise a sensitisation meeting with the school authority where the following should be present from the school side.

- Principal
- Vice principal
- Administrative staff
- All Teachers
- Head boy/girl
- Student Leaders (Head boy and girl, prefects, presidents of different clubs, house captains, etc.)

In the presentation following points can be covered

- Presentation on the potential hazards a school can face
- What preparations a school should do for disaster management
- Why the school should do these preparation
- And how can they do it

Formation of the School Disaster Management Committee

Three groups namely: Co-ordination group, Disaster Awareness group, and Disaster Response group need to be constituted, and their roles and responsibilities defined. We will first discuss about the Co-ordination Group / School Disaster Management Committee.

School Disaster Management Committee (SDMC) / Co-ordination group

Members¹

- Chairperson: Principal
- Vice Principal, Heads of primary and middle sections
- District Education Officer
- Parent Teacher Association President
- 1-2 Parents (at least one lady)
- 4 Students (Disaster Awareness Group Student Leader, Disaster Response Group Student Leader, Head Boy and Head Girl)
- Representative of Disaster Mitigation & Management Centre (DMMC)/ District Administration/ Municipal Corporation
- Representative of the Fire Services (from Closest Fire Station)
- Representative of Police (from Closest Police Station)
- Representative of Health Department
- A Warden from Civil Defence (in Dehradun District)
- Representative from Red Cross
- Administrative/Logistics Officer / Estate Manager from School Office
- Resident representatives from the local community
- Locally working NGO representative
- Market Trader Association representatives from local community
- Local Doctor(s)
- Others (NCC, NSS, Scouts and Guides, Nehru Yuvak Kendra Sangathan, etc.)

Roles and Responsibilities of SDMC

- The members of the School DMC shall have an understanding of the policy and planning principles, similar to that required for the development of curriculum or a

¹ **Note:** The committee member's don't need to be experts of emergency management. Expertise from the above mentioned departments like the Fire Services, Police, Health, etc. can be sought through the state and district administration.

student welfare policy. These members will help the school in preparation of the school disaster management plan.

- Evaluation of the school Disaster Management plan
- Carrying out the mock drill twice a year
- Updating of the plans at regular intervals (at least once a year, and after any significant disaster) to ensure that the plan is workable.
- Look into the structural safety requirements of the school for various hazards (earthquake, fire, floods, cyclone, etc.). Get the school building assessed for the hazards identified and prompt remedial measures taken, as required.
- Earmark fund arrangements for carrying out preparedness and mitigation measures in the school through school funds, corporate sectors, civil societies and establishing linkages with various departments and organisations working in the field of disaster management.
- During a disaster the SDMC shall coordinate the groups and teams.
- Media management to be carried out by the SDMC
- Mobilising relief and any external support in case necessary for those who have taken shelter in the school (children and if outsiders)
- Identify separate shelter places for the school children and also for outsiders in case necessary.

Hazard identification and safety assessment

a) Identification of Potential Structural Hazards existing in the area

Structural safety of the building needs to be assessed with regards to its safety from hazards like earthquakes, landslides, floods and fire. For this the school authorities need to contact their architect or the nearest local disaster management authority / district administration, which can guide them in getting their building assessed.

Is your school building very old? If yes, it is highly likely that the building codes at the time of construction of the school have been updated and the building may not be safe now.

Does your school building look safe and strong? If yes, the only way to be certain is to get it assessed by a qualified / trained structural engineer who knows earthquake engineering.

b) Identification of Potential non-structural hazards existing in the area:

The plan shall identify the potential hazards that frequently occur in that area. It is therefore necessary for us to identify potential hazards to which the school might be exposed. For this a hazard assessment shall be conducted by taking into account the history of disasters that have occurred in that area for the last 20 - 25 years. Based on the hazard assessment, the members of the SDMC will prepare the **School Disaster Management Plan**. The description shall extend beyond the school and include a description of the neighbourhood in which it is located. This shall include whether the school was located in the urban, residential or industrial environment or a rural and remote area.

A hazard assessment could also be carried out by the children of the school under the guidance of their teachers within the school premises and outside in the neighbouring area by taking a walk.

Walk the class through the designated evacuation route(s) to the appointed reception area(s) outdoors. Ask students to make mental notes, as they go along, of things that might become hazards during an earthquake/fire. When you reach the designated site, talk about what they noticed or hazards they thought of. A list of such hazards is below:

- Power failure (is there emergency lighting?)
- Halls or stairways cluttered with debris – from ceiling tiles or plaster from walls
- Halls blocked by fallen lockers or cabinets
- Smoke in the hallway
- Exit doors and windows that jam and will not open
- Bricks, glass and debris piled up, outside electrical wires on the ground
- Suspended ceilings
- Pendant light fixtures
- Large windows - either exterior or interior - not protected against shattering.
- Tall bookcases or cabinets that may topple because they are not bolted to the wall.
- Classroom equipment such as T.V., VCR's, Stereos and Slide projector.
- Stairwells
- Areas where flammable liquids are stored
- Chemistry Labs – the bottles used for storing the chemicals are not secured or protected against shattering

Potential hazards outside the school:

- Power lines
- Trees
- Areas near buildings that may have debris fall on them - parapets, roof tiles, chimneys, glass etc.
- Routes past concrete block walls
- Covered walkways

- Places under which large gas mains run.
- Areas near chain link fences (Which can be electric shock hazard if touched by live wires.)

When you return to the classroom, discuss with the students how the hazards could be reduced, and/or how they could cope with them if they happened.

The seasonality of hazards shall also be listed so that the school is prepared to face it and the children are well prepared to face it. The table below cites the seasonality calendar of Uttaranchal.

Hazards	Months											
	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Earthquake												
Landslide												
Flash Flood												
Flood												
Forest Fire												
Domestic/ Industrial Fire												
Others												

During hazard assessment the existing coping mechanisms of the hazards identified must be reviewed. If the mechanisms are found inadequate, necessary measures should be incorporated while developing the response plan of the school.

c) Points to remember while co-ordinating a survey

- Different classes take up responsibility to do the survey of the building, grounds, rooms.
- A coordination committee consisting of teachers and head boy, girl, sports captains and prefects etc collect and collate the information.
- The areas which would cause problems in an earthquake, flood, landslide, fire are identified and put up in a public place.
- Report of the work done rewarded on an occasion.

d) Inventory of resources available in the school

All the resources available in the school need to be listed out like:

- List of skilled human resources (teachers and students having a knowledge on first aid, rescue and evacuation)
- List of material resources available in the school such as a stretcher, fire extinguishers, ladders, thick ropes, torch, communication system, and first aid box, open space in the school premises.
- Inventory of nearest available critical resources
- Resources present within the locality to be assessed and recorded for easy referencing along with the details - name, address and telephone number. *E.g.* Hospitals near the school with details about the number of beds, doctors etc.
- Make an inventory of
 - i. Rooms in the school
 - ii. Open areas where evacuation is possible
 - iii. Stairs and lifts locations and uses.
 - iv. Open verandas and roof tops.

Preparation of the School Disaster Management Plan document

i. The physical location and demographic details of the school building and its surrounding environs

A detailed situational analysis of the school needs to be carried out. This exercise could be carried out by the teachers and later shared with the students. The map shall indicate the following components:

- Number of class rooms in the school (Pacca RCC, Tiled)
- The staff room in the school
- The laboratories in the schools (physics, chemistry, biology, home science etc)
- The play grounds or open space within the school premises

ii. Resource mapping – showing the resources available within the school

- The human skills present in the class (students and teachers) to be identified
- Material resources available in the school such as a
 - i. Stretcher
 - ii. Fire extinguishers
 - iii. Ladders

- iv. Thick ropes
- v. Torch
- vi. Communication system
- vii. First aid box
- viii. Temporary shelters (tents and tarpaulins)
- ix. Open space in the school premises.

iii. Map showing nearest available critical resources:

This can be shown in the form of a “chapatti” diagram chart showing the direction and the distance to the nearest available resources like the fire service station, hospital/ Primary Health Centre/ Dispensary/ private clinic/ medical college/ medical shop, Red cross, office of the district magistrate, District Emergency Operation Centre (DEOC), police station, NCC and NYKS offices etc.

iv. Vulnerability mapping and coping mechanisms – showing the vulnerable location of the school building

- Number of children in each class (male, female, physically challenged, sick and ailing). – to be demarcated on the map of each class room.
- The vulnerable classrooms in the school
- Taps (for drinking water) located in the vulnerable pockets within the school premises
- Main switch board and the Electrical wires which are vulnerable
- If the schools are on slopes of the mountain then based on the soil condition the vulnerability is to be decided.
- Identifying the low-lying areas within the premises.
- Coping mechanisms for the hazards identified should be listed out

v. Safe places and evacuation route chart of the school:

In this map we need to identify the safe places

- Safe places where the children and staff members can take shelter (one need to mention the number of children who can be accommodated in the area identified).

Evacuation route:

Use a detailed map of the school showing the all stairs, doors, and windows.

- The exits shall be clearly demarcated in the map in case of a fire / earthquake.

- Show the various exit routes by arrows on the map.
- Post the map at various points in the school – mark the location on the map with “You are here” in bold and red. This will help give an orientation of the nearest exits and the evacuation route to anyone who looks at the map.
- Also work on developing alternative exit routes in case the main exits are damaged / not accessible.

Formation & Training of the Disaster Management Teams^{2,3}

DISASTER AWARENESS GROUP

1. Awareness Generation Team

Members

- Teacher I/C, Disaster management
- Art teacher
- Crafts teacher
- Drama teacher
- Music teacher
- 1-2 parents (preferably working in the print / electronic media)
- Students active in the creative arts and public speaking

The members of this group should be creative and have an inclination for art and culture. While developing the materials for awareness generation, kindly note that the cultural background of the area should be kept in mind. Both the rural and the urban community should be targeted, based on where the school is located.

Materials Required

- All the IEC (Information, Education and Communication) material available with the DMMC, district administration and other authorities – in the form of posters, pamphlets, films, etc. on disaster management.
- Additional material will be developed by this team – simple do's and don'ts, street plays, "nukkad natak", posters, cartoon strips, songs, etc.
- The team will require:
 - Map of the school
 - Evacuation Plan
 - Information on number of students and classes
 - Information on number of employees
 - Contact information of nearest fire station, police station, nearest medical facility, local Red Cross
 - Contact information of the Municipal Council/Jila Parishad/Gram Panchayat representatives in the immediate neighbourhood.

Training Required

- A thorough orientation on different aspects of Disaster Risk Management.

² The staff of the school should also be involved in the various teams.

³ Members of all teams would at least have read the Class VIII CBSE textbook on Disaster Management – "Towards a Safer India".

Roles and Responsibilities:

Before the disaster

- Develop IEC materials – posters, pamphlets, simple tips on do's and don'ts in different disasters, street plays and “nukkad nataks”
- Conduct awareness generation activities systematically in the whole school, targeting different classes and also staff and teachers.
- Conduct awareness generation activities in the neighbouring areas in coordination with the DEOC representatives, the local police station, and any local NGOs.
- Organise innovative activities and exercises for students and teachers on Disaster Management to ensure continuing interest on the issue during normal time. The school can organize
 - Art Work: Posters, bulletin boards, exhibitions, wallpaper, cards, bookmarks etc.
 - Creative writing competitions – Essays, Poetry, Slogans
 - Drama – Street plays, “nukkad nataks’, Role playing.
 - Song writing
 - Debates
- Organise demonstrations on fire safety, first aid, and search and rescue through linkages with the appropriate agencies.
- Assist in organisation of the Evacuation Drills for various hazards
- Work with the Warning & Information Dissemination Team in making students, faculty, and staff aware about the different warning levels and the colours and locations of flags / signs that will be used.

During the disaster

- **Duck, cover and hold** at first sign of earthquake. Hold on to furniture legs if furniture moves. If outside, move away from buildings.
- In case of other hazards, assist the Evacuation Team in evacuation of the school building.
- For a chemical hazard, assist the Warning Team in disseminating the required safety tip to the entire school.

After the disaster

- Disseminate information on do's and don'ts so that the situation doesn't worsen, in coordination with the Warning and Information Dissemination Team.

2. Warning and Information Dissemination Team

Members

- Computer Teacher (or a teacher who is familiar with computers and surfing the internet)
- Physics teacher
- Geography teacher
- HAM club in-charge (if any)
- 1-2 parents (preferably working in PWD, Irrigation, Office of the District Magistrate, Police, etc.)
- 4-6 students (know how to operate a VHF set)
- Members of the HAM club (if any)

The students in this team shall be from std. VIII to std. XII. The students from the lower grade can help in manning the Emergency Operations Centre (Control Room). Students trained in the operation of VHF sets or members of the HAM club (if any) shall be part of this team.

Materials required

- Computer with Internet access and e-mail, telephone, fax machine, radio, television, mobile phone, VHF set / HAM instrument.
- Siren
- Flags of different colours
- Battery operated radio and batteries
- Contact information of the various local authorities – district magistrate, police, fire services, health department, Red Cross, etc.

Training Required

- A thorough orientation on different types of hazards
- Training in the operation of VHF wireless equipment.
- Familiarity with the Internet and disaster information websites.

Roles and Responsibilities:

Before the disaster

- Monitoring and taking regular updates from TV/ Radio/Internet on the potential hazard that school can face, e.g. weather updates in case of heavy rainfall, landslide, hail storm etc.
- Inform the school authorities of any impending hazardous situation

- Maintain contact with district authorities and communicate any directions to the school authorities
- Post warning signs / flags of appropriate colour for different warning level at prominent and designated places in the school.
- Disseminate the information to all the classrooms and teachers
- Coordinate with the other teams and inform them about the latest weather / warning situation

During disaster

- **Duck, cover and hold** at first sign of earthquake. Hold on to furniture legs if furniture moves. If outside, move away from buildings.
- Cross check the warning received from various sources
- Warning the school in case of an emergency by either ringing a bell/siren or on the public address system or through a messenger, whatever is available in the school
- Reporting to the school disaster management committee about the disaster in the school building
- Reporting to the government emergency response departments (DEOC, Fire, Police etc.)
- In case of the school being used as a shelter, inform the shelter staff about the latest updates and weather reports.

After disaster

- Continue monitoring the various information sources
- Keep reporting on the situation of the disaster to all concerned teams and coordinate with them
- Disseminate safety tips in coordination with the Awareness Generation Team
- Work with the Incident Management Team from the district administration in preparing updates and disseminating information

DISASTER RESPONSE GROUP^{4, 5}

1. Evacuation Team

Members

- All class teachers
- Class monitors and Hall monitors
- Prefects

Materials Required

- A detailed map of the school with the different exits, stairs, doors, and windows clearly marked.
- School Evacuation Plan
- Information on number of students and classes
- Information on number of employees
- Master keys
- Siren
- Signs to post and writing materials
- Special equipment for mobility-impaired students

Training Required

- Training in evacuation procedures through local fire services

Roles and responsibilities:

Before a disaster

- Check the exits
- Identify the open areas where the school can assemble after evacuation in an emergency
- Make sure there are no hazards present for evacuating to the designated area
- Make sure that necessary supplies are accessible
- Assist the Planning Committee in developing options in the event evacuation is required during inclement weather

⁴ The members of the various teams in this group may be chosen from NCC, NSS, and Scouts and Guides in the school. However, such students already receive different types of training from these organisations. Other students may also be encouraged to become a part of these teams.

⁵ All students will get consent from their parents before getting involved in the response teams.

- Be prepared for special equipment needs for mobility-impaired students
- Any special response procedure for special needs students must be tested during drills
- Conduct regular drills in coordination with the other teams and practise the different evacuation procedures used in different hazards
 - These different procedures have to be disseminated to the entire school and separate drills to be conducted for them

During disaster

- **Duck, cover and hold** at first sign of earthquake. Hold on to furniture legs if furniture moves. If outside, move away from buildings
- Evacuate in an orderly fashion as practised in the drills

After disaster

- Ensure that emergency assembly area is accessible and safe
- Determine if any additional assistance is required for evacuation.
- Take roll call and report group status to Principal (School Emergency Operations Centre).

2. Search and Rescue Team

Members

- Sports teachers/NCC I/C/NSS I/C
- NCC, NSS, Scouts and Guides instructors
- District Adventure Sports Officer
- Fire Service representative
- 1-2 parents (preferably from the Armed / Paramilitary forces / Police / Fire Services)
- Able-bodied students

Materials Required

- A detailed map of the school with the different exits, stairs, doors, and windows clearly marked.
- Information on number of students and classes
- Information on number of employees
- Torches with spare batteries
- Master keys
- Hard hats
- Stretchers, ropes and ladders

Training Required

- Training through local Police/Adventure Sports Officer / Fire Services in basic search and rescue techniques

Roles and responsibilities:

Before a disaster

- Make sure needed supplies are on site
- Make sure team members stay current with their training
- Any special response technique for special needs students must be tested during drills

During disaster

- **Duck, cover and hold** at first sign of earthquake. Hold on to furniture legs if furniture moves. If outside, move away from buildings
- Start rescue and search operations in case of another disaster

After disaster

- According to pre-established pattern, check (visually, vocally, physically) every room in the building.
 - Report location of injured to First Aid Team.
 - Report location of other problems to SDMC.
- Look for obvious structural problems/significant structural damage as sweep is made through the building(s)
 - Report any damage to the Principal (School EOC).

3. **First Aid Team**

Members

- School Doctor
- School Nurse
- Red Cross volunteers
- Local hospital authorities
- 1-2 parents (preferably from the Medical / Paramedical profession)
- Students interested in health issues

Materials Required

- A medical kit for the entire school
- Classroom first aid kits
- Health Cards containing information on Special medicines being regularly taken by any student(s) / employees
- Emergency Cards containing information on medical resources in the area

Training Required

- Training through Fire Services / Red Cross / Health Department in basic first aid techniques and CPR (cardio-pulmonary resuscitation)

Roles and responsibilities:

Before a disaster

- Make sure that first aid supplies are up to date and always complete
- Keep emergency cards and health cards up-to-date
- Ensure training for all new members and refresher training for existing members (every year)
- Be aware of special medical requirements of students / employees and ensure that some stock medication (maybe 1-2 days medicines) are kept in the school and regularly updated
- Participate in regular drills

During disaster

- **Duck, cover and hold** first sign of earthquake. Hold on to furniture legs if furniture moves. If outside, move away from buildings.

After disaster

- Administer first aid and record all cases and treatments.
- Determine need for further medical assistance. Coordinate requests for assistance through the Principal.
- Assign First Aid Team members to accompany Search and Rescue Teams during their search operations.

4. **Fire Safety Team**

Members

- Teachers (2)
 - 1-2 parents (preferably from fire services / Police)
 - Students (10)
- (Teams comprising 1 teacher and 5 students each may be formed)

Materials Required

- Fire extinguishers
- Hard hats, Gloves
- Map of school showing location of all exits, doors and windows, the electric main switches and the fire extinguishers

Training Required

- Training through local Police / Fire Services in basic fire fighting and fire safety techniques

Roles and responsibilities:

Before a disaster

- Make sure fire-fighting equipment (extinguishers, etc.) is in working order and that staff has received training in its use
- Ensure that all non-structural earthquake hazards that can be cause of fire (i.e. Chemical Laboratories, Cafeteria Kitchens, hot water tank) are properly secured
- Coordinate with the SDMC in ensuring that a fire safety assessment of the school premises is conducted by the local fire department and that the recommendations are implemented

During disaster

- **Duck, cover and hold** at first sign of earthquake. Hold on to furniture legs if furniture moves. If outside, move away from buildings.

After disaster

- Check for and confirm existence of fire. Report location to Principal (School EOC) and Site Security team
- Control fire, if possible (ensure personal safety)

- Look for conditions that may cause a fire to develop and seek maintenance staff assistance in removal of condition.
- In case of electrical fire, turn off the electric main switches

5. Site Security Team

Members

- School Estate Manager
- School Security Staff
- Local Police Station representative
- 1-2 parents
- Teacher (1)
- Students (5)

Materials Required

- Map of facility / school
- Evacuation Plan
- Master keys
- Signs to post and writing implements
- Identification badge or armband

Roles and responsibilities:

Before a disaster

- Work with the Planning Committee, the School Principal and the District authorities to establish a release policy and communicate this policy to parents and staff.
- Develop procedures for how release will be handled.

During disaster

- **Duck, cover and hold** at first sign of earthquake. Hold on to furniture legs if furniture moves. If outside, move away from buildings.

After disaster

- Lock all external gates and doors, and secure buildings. (Note: Be sure locked doors can be opened from inside to prevent entrapment.)
- Station one team member at main gate/front door to deal with community/parents. Have that member route fire, police, rescue and medical to area of need.
- Keep the Principal (School EOC) informed of activities.
- Release students according to pre-arranged policy.

6. **Bus Safety Team** (for each bus)

Members

- Teachers going in the respective buses
- Student getting down on the last stop
- One senior most student

Materials Required:

- Emergency Cards containing contact information of the local authorities – district magistrate, police, fire services, health department, Red Cross, etc.

Training Required:

- Basic First Aid training (if no first aid team member goes in a particular bus) through local hospital / fire services / Red Cross

Roles and responsibilities:

Before a disaster

- Know school policy for procedures in the event a damaging earthquake occurs while buses with students are enroute to or from school.
- Assist SDMC in providing 2-way radio communications capability between buses and school Administrators.
- Carry emergency cards with information on contact numbers for the school EOC, and important district contact numbers (district administration, police, fire, medical, etc.)
- Take First Aid Training.
- Develop plans to assist special needs students.

During disaster

- Pull over to side of road if possible in the open. (Not under an overpass or bridge or along side buildings or trees.)
- Instruct the passengers to crouch down between seats and in aisle until shaking has stopped.
- Ensure special needs students are assisted.

After disaster

- Assist any injured students providing First Aid as needed.
- Establish communications with School EOC

- Implement school policy for earthquake occurrence while students are enroute to or from school.
- If condition of bus and transportation routes allow movement of bus proceed cautiously.
- If crossing a bridge is necessary; stop bus, get out and physically inspect bridge if damage is apparent to make judgment that bridge is safe for bus passage. If not, follow established school policy regarding the continued movement/ release of the students.

Dissemination of the plan to everybody in the school

It is important that after plan preparation the plan is disseminated to its participants and school children through innovative and interesting activities like: Art Work, Creative, Poetry writing, Slogan writing, Drama, Games and Sports, Rescue drill, Evacuation drills, simple quickness of Reflexes games, Memory games, and observation games etc.

Conduct regular mock drills

Mock drills are conducted to train students and teachers and to test the various elements of your response plan in order to evaluate and revise it. During a disaster, life-protecting actions must be taken immediately. There will not be time to decide what to do next; everyone must already know how to react appropriately. After a disaster, further life-protecting actions such as emergency evacuation or first aid administration may be necessary; well-trained staff and students will guarantee that these crucial steps are taken as quickly as possible. Drills and exercises are an extremely important part of your preparedness plan because they 1) teach students, staff and parents how to respond to the complications of an actual disaster, and 2) help you evaluate how well all parts of your emergency plan work together, and how well your staff and students have been trained.

i. Safety Considerations

Explain to the class that if there is a strong earthquake, each student's first responsibility is for his or her own personal safety. Every student should learn, however, how to help someone else who is injured.

Present some "**what if**" questions to provoke discussion.

- What if the teacher is injured?
- What if a student is cut by shattered glass and is bleeding?
- What if someone is hit by a falling light fixture or heavy object and knocked out?
- What if a student is very upset by the earthquake?

ii. Emotional Considerations

Lead a discussion with the students about the reactions they may have to a disaster. Mention that it is normal to feel very frightened, worried, or even physically sick. Some people respond to the fear by crying and some by laughing. Have the students talk about what they can do after disaster to help themselves and their classmates feel less scared and worried.

It may take a long time for parents or caretakers to get to the school, so everyone should be prepared to wait patiently. Students may be very concerned about their

parents or siblings; they may in fact be "worried sick". Have students discuss what they can do to help each other pass the time and not worry so much. Point out that if their family has made a **"Family Disaster Plan"**, they will have a better idea of what to expect from each family member.

iii. Drill

Earthquake

- Practice **drop, cover, and hold**
- Evacuate classroom in less than 1 minute without pushing or falling.
- Evacuate school in less than 4 minutes using different exits.
- Look out for friends.
- Stay away from weak areas.
- Help those who need assistance.
- Escort young children or elders.

Fire/ Chemical Accident / Drill

- The need to prepare for sudden accidents needs awareness and sufficient knowledge.
- To know Why and how to handle an accident is important
- Information.
- Write what to do clearly in the Laboratories and Kitchen area in the school
- Practice mock drills every month
- Quiz the children every week on what they would do if
 - i. The chemical in the test tube caught fire
 - ii. The gas was leaking and someone lit a match.
 - iii. The acid splashed on the floor.
 - iv. Glass broke
 - v. Someone drank nitric acid by mistake

Evaluation and Updating of the Plan to improve effectiveness

The school plan needs to periodically evaluated and updated. The suggested period for plan updating is quarterly. This is the responsibility of the SDMC to make sure that the plan is effective and is taken seriously by all concerned. First mock drill when conducted in any organisation will have many loop holes. This drill need to be evaluated and made more efficient. Following check list can be used to evaluate the school plan:

Earthquake considerations for Students with Special Needs

One of the segments of the school population that has been left out of the written school guidelines for earthquake preparedness has been those students with special needs. Students with diabetes, hypertension or any of the maladies that require special diets, daily periodic medications or special equipment and supplies in order to sustain life, activities, dignity or reasonable comfort have not been given adequate considerations in planning for disasters that cause isolation. What could be a mere inconvenience for able bodied students could become a major threat to the students who have special needs.

It is the objective of this appendix to provide major considerations that students with special needs should have in earthquake preparedness, response and recovery planning. In some cases, such considerations could mean the difference between life and death, during and after, an earthquake.

Although some of the following considerations have been provided in above Sections it is felt that by providing all considerations in this appendix it will emphasize their importance and at the same time provide a document that concentrates them for the review of school emergency planners, rather than their having to review the total in order to access them.

BEFORE THE EARTHQUAKE

- Evacuation plans must provide for problems involved in students with mobility, visual and hearing impairments. Special evacuation transportation provisions may be necessary - both from the school building to the assembly area(s) and away from the school area. And plans must also address assistance that will be provided to mentally retarded students during and after the earthquake.
- Special needs students should have a back-up supply of vital medication, equipment or supplies with them, at school or enroute. Those students or their teachers should be prepared to bring the extra medication or supplies if evacuation from the school premises is ordered.
- Parents or guardians of these students should be consulted concerning care considerations if the student is isolated at school for both a short term and long term basis.
- These students should have in their possession an individual emergency card describing their special needs. The cards should list information such as; disability, medications and their application frequencies, mobility constraints, attendant needs, allergies, primary physician, etc.
- Any power requirements for special sustaining equipment, if normal power is off for a long period of time, should be considered.
- Assignments must be made to a staff member or a special team along with training for managing the special needs of these students.
- Allow for individual self sufficiency of these students as much as possible by getting them involved in preparedness and response activities. Include in

response planning obvious ways in which special needs students can assist others in response to disastrous conditions - include them in your drill. As an example, in the dark (due to power loss and no outside light), sighted people could depend on the blind students to navigate through debris laden evacuation routes. Blind people are experienced at being placed in new, unfamiliar environments and finding their way. Many of the special needs students can learn and administer first aid.

- Also communicate preparedness and response information and instructions (according to need) to these students with braille, audio cassette, visual aids, large print, etc. Don't let them out of the process.
- Alarm systems for fire, etc. will benefit most people if they incorporate both audible and visual elements. The hearing impaired and deaf students would be best alerted by flashing light alarms.
- Emergency back-up lighting systems, especially in stairwells and other dark areas would benefit those students with limited visual acuity.
- Students with hypertension, dyslexia or learning disabilities will have difficulty reading complicated directions for evacuation or response plans. Simple diagrams or pictures will give non-reading or overstressed students sufficient information to get to safety.
- Hearing impaired students should practice some basic hand signals with the teachers and other students for emergency communication.
- Mobility impaired students should practice moving their wheel chairs or having them move into doorways (or other designated safe area), locking their wheels and covering their heads with a book or with their arms or hands.
- Partnerships should be established between the able bodied and special needs students. The able bodied partners should be prepared (and practice during drills) to assist the special need student.
- Rescue teams should be made aware of the best way to rescue special needs students. As an example, mobility impaired students should be allowed to instruct rescue team members on the best way to move them from the hazardous area. The fireman's carry may be dangerous to someone with respiratory problems.
- Special response provisions may have to be made for ensuring duck and cover protection for these students. Barriers to earthquake safety are highly individual for them and accommodation plans may have to fit the requirements. The guidance provided by this document should be modified to fit each special situation of each special needs student. **NOTE: ANY SPECIAL RESPONSE PROCEDURE MUST BE TESTED DURING EARTHQUAKE DRILLS.**
- Visually impaired or blind students should have an extra cane at school even if they have a seeing eye dog. They should be informed of alternate evacuation routes.

DURING THE EARTHQUAKE

- Special needs students or able bodied partners should implement special duck and cover actions. An example; mobility impaired students should know how (through practice) to get in doorways, lock wheel chair wheels and cover head with book, arms or hands.

AFTER THE EARTHQUAKE

- Hearing impaired or deaf students need face to face contact in order to read lips. Writing on a note pad is only practical if there is enough light to see.
- During evacuation from classroom, sight impaired or blind students need to be informed about obstacles that may be in their paths and require verbal or physical guidance through hazardous areas.
- In total darkness, sight impaired or blind students may be more capable of guiding sighted students and staff.
- For mobility impaired students, evacuation by themselves may be extremely difficult or impossible because of obstacles in their paths or because electric dependant machines are not functioning. Special preplanned assistance must be provided.
- Any special medications, supplies and equipment for the special needs students must be transported with them during evacuation.
- If evacuation from school area is called for, utilize special transportation arrangements.
- If special needs students, for some reason, become separated from school authorities during evacuation, they should inform other authorities of their special needs as soon as possible so that proper considerations can be provided.
- Re-establish special power requirements for the equipment of special needs students as soon as possible.
- Rescue of special needs students should be accomplished utilizing special techniques as practiced.

SCHOOL EMERGENCY MANAGEMENT PLAN CHECKLIST:

LOCATION.....

DATE.....

	YES	REMARKS
▪ Have the emergency numbers been confirmed with the concerned departments	<input type="checkbox"/>	
▪ Are the emergency contact numbers prominently displayed on the plan	<input type="checkbox"/>	
▪ Does the plan clearly specify procedures for reporting emergencies to the government services and the relevant education authority	<input type="checkbox"/>	
▪ Are the potential risks within and up to a kilometre from the workplace identified?	<input type="checkbox"/>	
▪ Does the plan clearly mention about the evacuation plan?	<input type="checkbox"/>	
▪ Are the roles and responsibilities of key personnel's clearly defined – task force team leaders, class teachers, office staff and students.	<input type="checkbox"/>	
▪ Are the staff responsibilities to account for and supervise students during and following the emergency clearly described?	<input type="checkbox"/>	
▪ Does the plan give emphasis on the children below class V?	<input type="checkbox"/>	
▪ Does the plan address the students with special physical, mental and medical needs?	<input type="checkbox"/>	
▪ Does the plan describe about how the staff will be trained and when exercise will be conducted?	<input type="checkbox"/>	
▪ Has the plan been endorsed by local police and fire brigade?	<input type="checkbox"/>	
▪ Are arrangements for reviewing the plan described?	<input type="checkbox"/>	

School Disaster Management Planning

Model School Evacuation Plan

**SCHOOL EVACUATION PLAN SHOULD GIVE DETAILS OF THE FOLLOWING
TO BE FILLED BY SCHOOL AUTHORITY ONLY**

NAME OF THE SCHOOL

.....

ADDRESS

.....

OWNED BY

.....

MAINTAINED BY

.....

TOTAL NO. OF STAFF

.....

TOTAL NO. OF STUDENTS

.....

TOTAL NO. OF CLASSROOMS

.....

TOTAL NO. OF LABORATORIES

.....

OTHER ACTIVITY ROOMS

.....

BUILDING WISE DETAIL

	Building Name	No. of Rooms	No. of Class Rooms	Age Group of Students	Type of Roof Construction	Age of Building
Block I						
Block II						
Block III						
Block IV						
Block V						

DETAILS OF OPEN SPACES

S. No.	Type of Open Space	Approx. size (L X B)	Accessibility from the road
1.	Play Ground with swings		
2.	Cricket/Football Field		
3.	Basketball court		
4.	Assembly Ground		

TEAM-I School Disaster Management Committee

S.No	Name	Designation	Contact Nos	
			Office	Res/Mobile

TEAM-II School Awareness Generation Team

S.No	Name	Designation	Contact Nos	
			Office	Res/Mobile

TEAM-III Warning and Information Dissemination Team

S.No	Name	Designation	Contact Nos	
			Office	Res/Mobile

TEAM-IV Evacuation Team

S.No	Name	Designation	Contact Nos	
			Office	Res/Mobile

TEAM-V Search & Rescue Team

S.No	Name	Designation	Contact Nos	
			Office	Res/Mobile

TEAM-VI First Aid Team

S.No	Name	Designation	Contact Nos	
			Office	Res/Mobile

TEAM-VII Fire Safety Team

S.No	Name	Designation	Contact Nos	
			Office	Res/Mobile