TRAINING MODULE FOR MASTER TRAINERS ON SCHOOL SAFETY

(National School Safety Programme)

National Disaster Management Authority
NDMA Bhawan, A-1,
Safdarjung Enclave.
New Delhi

National Institute of Disaster Management
Ministry of Home Affairs, GOI
5-B, I.P. Estate, M.G. Road,
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ISBN: 978-93-82571-13-1

Edition: First, 2015

Published by

National Disaster Management Authority & National Institute of Disaster Management, Ministry of Home Affairs, New Delhi-110002

Citation

Raj, Ritu (2014): Training Module for Master Trainers on School Safety, National Institute of Disaster Management, Ministry of Home Affairs, New Delhi-110002, Pages 129

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The document can be downloaded from http://www.nidm.gov.in

Design and Printing

Chandu Press, D-97, Shakarpur, Delhi-110092, Ph.: 011-22526936

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सत्यमेव जयते

MESSAGE

Member Secretary
National Disaster Management Authority
Government of India

Children represent hope for the future. Schools are institutions of learning, instilling values and passing on both traditional and conventional know-how to youngsters. Damage to educational institutions disrupts the education system and eventually the development of the country. Children in schools are the most vulnerable groups to disasters. Exposure to various hazards, inadequacies in the structure and lack of preparedness measures can have disastrous consequences on them in the event of a disaster. One cannot completely avoid disasters but through proper preparedness, mitigation and preventive measures, one may, however, reduce their risks to some extent.

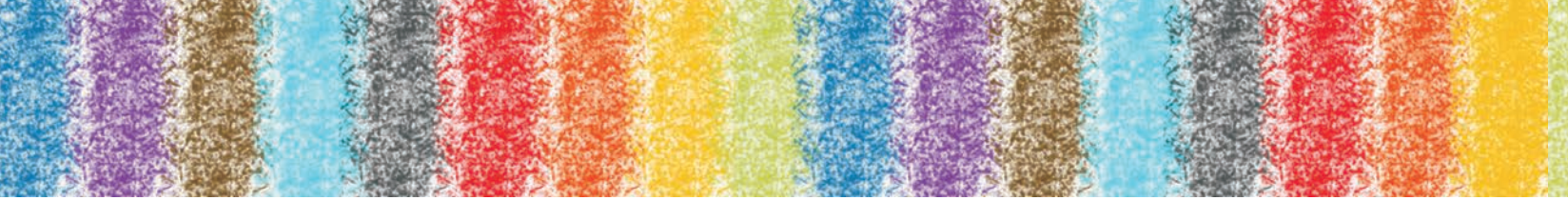
Giving due consideration to school safety, National Disaster Management Authority (NDMA) in partnership with the Ministry of Human Resource Development (MHRD) and State Governments is implementing the "**National School Safety Programme (NSSP)-A Demonstration Project**" in 22 states falling in seismic zone IV & V of the country.

NSSP, covering 43 districts and 8600 schools, is a holistic project with vision to promote culture of disaster preparedness and safety in schools. The main components of this project are: i) formulation of National School Safety Policy, ii) capacity development of Master trainers, iii) development and circulation of information, education and communication material, iv) non-structural measures and v) demonstrative structural retrofitting of selected schools.

I am pleased to present the stakeholders - "**TRAINING MODULE FOR MASTER TRAINERS ON SCHOOL SAFETY**" prepared by National Institute of Disaster Management under NDMA's technical oversight. This module is an integral part of the NSSP project. It is an easy-to-use guide that will assist the master trainers in conducting training of trainers program on school safety. The module provides a step-by-step procedure to address all the vital components of school safety like awareness, structural and non-structural measures, basic first aid, school disaster management plan, etc.

I hope that the training module will be of immense help to master trainers, various stakeholders and role players involved directly and indirectly in school safety and will enable them to make our schools safer for our children to grow and become the responsible citizens of tomorrow.

(R K Jain)



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nidm
Towards a disaster free India ...

प्रो. संतोष कुमार
कार्यकारी निदेशक
Prof. Santosh Kumar
Executive Director

FOREWORD

Children are highly vulnerable to disaster impacts and climate change, especially those who are living in hazard prone environment and are affected by poverty. They are the most unprotected section of the society facing man-made and natural disasters. The factors which accentuate the vulnerability of children impacted by disasters are malnutrition, high school drop-out rate exposure to different diseases and exploitation of children in terms of abuse and violence. This has a direct repercussion on the life expectancy rate of the region due to the exposure to increased risk for diseases.

Creating a safe environment for the children in school is the most important task, as in the case of any emergency they are the most vulnerable. Natural disasters affect even more children, causing them to lose their homes, their families, their schools, and their access to adequate food, water and sanitation. There is need for a structural, as well as non-structural intervention, to ensure the safety of the children. Structural intervention would include strict check on the guidelines set up for school buildings, while non-structural would mean educating the staff, teachers, and students about disaster management.

This handbook on school safety will act as a guideline to the educational institutions, emergency officials, teachers, students and even the community at large to address the special and multi-faceted needs of children impacted by natural and manmade disasters. It will empower students to learn about safety measures, thus becoming future disaster managers, while building a disaster resilient society.

We need to step forward and ensure the safety of our children and see to it that their childhood is not snatched away from them. Children are the future of our nation; it is our duty to provide them with a safe environment, in which they can burgeon into good citizens. Let's join hands to protect the children.

Santosh Kumar

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ACKNOWLEDGEMENT

In an attempt to carve out a standardized training framework on School Safety and disaster risk reduction in the country, this module has been prepared under National School Safety Programme (NSSP).

Based on a comprehensive study of international, regional and national practices & lessons learnt, the document has drawn information from various sources, freely available on net or circulated for general public interest, with due acknowledgements. Although due care has been taken to make it an India-specific module, it will be imperative for the users of this module to comprehend the concepts used in it and adapt as suitable to the local needs and conditions prevailing in various states of the country.

I am grateful to Dr. Muzaffar Ahmad, Hon'ble Member, NDMA and Dr. Satendra, Executive Director, NIDM for giving me this opportunity to work on this interesting project and guiding me throughout the process of drafting the content of the said module. I acknowledge the technical assistance and support of Dr. Sushma Sagar, Ms. Hardeep Kaur of All India Institute of Medical Sciences, Dr. Poonam Khattar of National Institute of Health and Family Welfare, Mr. E. Arvind Raj, Faculty, Dept of Psychiatry, KMC, Manipal in preparing this document. Thanks are due to Ms Naghma Firdaus, Senior Specialist, NDMA, Mr. Anup Karanth, Associate Director Taru and Dr. Subashish Bhadra of Gautam Buddha University, Dr. A.D. Kaushik, NIDM and Mr. Rohit Supanker for reviewing the content of the document and improvising the text of the module. Contributions and suggestions made by experts from The All India Disaster Mitigation Institute (AIDMI), SEEDS India, Save the Children, Plan, UNDP, UNICEF, Focus Humanitarian Assistance etc. during different stages of writing and reviewing of this module are also acknowledged here. Last but not the least, I would like to thank to Mr. S.K. Tiwari, Librarian for logistic support.

Ritu

Dr. Ritu Raj
Author
National Institute of Disaster Management

ABBREVIATIONS

AIDMI	-	All India Disaster Mitigation Institute
AIIMS	-	All India Institute of Medical Sciences
ATI	-	Administrative Training Institute
CBSE	-	Central Board of Secondary Education
CPR	-	Cardiopulmonary resuscitation
CWD	-	Children with Disability
DDMA	-	District Disaster Management Authority
DIET	-	District Institute for Education and Training
DM	-	Disaster Management
DRM	-	Disaster Risk Management
DRR	-	Disaster Risk Reduction
DW	-	Drinking Water
EERI	-	Earthquake Engineering Research Institute.
EFA	-	Emotional First Aid
FA	-	First Aid
GOI	-	Government of India.
HIV	-	Human Immunodeficiency Virus
HPC	-	High Power Committee
HRVA	-	Hazard, Risk and Vulnerability Analysis
HVCRA	-	Hazard, Vulnerability, Capacity and Risk Assessment
IEC	-	Information Education Communication
IGNOU	-	Indira Gandhi National Open University
INEE	-	International Network for Education in Emergencies
IPCC	-	Intergovernmental Panel on Climate Change.
MFR	-	Medical First Aid Responder
MHRD	-	Ministry of Human Resource Development
NDMA	-	National Disaster Management Authority
NDRF	-	National Disaster Response Force
NGO	-	Non-Governmental Organization
NIDM	-	National Institute of Disaster Management
NSE	-	Non -Structural Element.

NSM	-	Non -Structural Mitigation.
NSSP	-	National School Safety Programme
PRA	-	Participatory Risk Assessment
PWD	-	Public Works Department
RTE	-	Right to Education
RWA	-	Resident Welfare Association
SAR	-	Search and Rescue.
SC	-	Schedule Caste
SDMA	-	State Disaster Management Authority
SDMC	-	School Disaster Management Committee
SDMP	-	School Disaster Management Plan
SMC:	-	School Management Committee
SOP	-	Standard Operating Procedure
SSA	-	Sarva Shiksha Abhiyan
ST	-	Schedule Tribe
UNCRC	-	United Nations Convention on the Rights of the Child
UNFCCC	-	United Nations Framework Convention on Climate Change
UNICEF	-	United Nations Children's Fund
UNISDR	-	United Nations International Strategy for Disaster Reduction
WHO	-	World Health Organization
WSDP	-	Whole School Development Planning

INTRODUCTION

Education, public awareness and proper training for enhancing the capacity are the cornerstone of approaches aimed at reducing vulnerabilities to natural hazards. The Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters, adopted at the World Conference on Disaster Reduction, highlights knowledge and education as one of the five main priorities of action. Attention should be accorded and support given to efforts targeting school children and youth with the aim of making people more aware of the threat of hazards and of the need and possibility to become better prepared before disasters strike.

Government of India has approved a National School Safety Programme - a Demonstration Project being implemented by National Disaster Management Authority to:

- Promote a culture of disaster preparedness in the school.
- Initiate policy level changes for ensuring safe school environment.
- Sensitize children and the school community on disaster preparedness and safety measures.
- Motivate direct participation of key stakeholders in activities that would help building towards a disaster resilient community.
- Promote capacity building of officials, teachers and students.
- Carry out Information, Education and Communication (IEC) activities in schools and associated environment.
- Implement non-structural mitigation measures in select schools.
- Carry out demonstrative structural retrofitting in select schools.

This trainer's module is part of the National School Safety Programme (NSSP) to advance its goal of providing training to master trainers who are expected to further provide training to teachers and other stakeholders of the school safety.

Objectives of Training Module:

- To enhance conceptual understanding on various aspects of Disaster Risk Reduction and School Safety from an inclusive perspective.
- To develop competencies of the participants to undertake Disaster Risk Reduction measures in schools (training of the students, components of School Disaster Management Plan (SDMP), undertake hazard, vulnerability, capacity and risk analysis, etc).
- To enable the participants to develop the School Disaster Management Plan (SDMP).

Facilitation

Aim of the Facilitator: The main aim of the facilitator is to help the group i.e. school community to work together, to analyse problems, to develop solutions, and to take decisions.

As the facilitator, you control the process (how the group works together) as well as the content or the substance of the discussions.

Task of the Facilitator: There are five essential stages in the facilitating process. These are to :

1. Introduce (aim, methods, timings).
2. Stimulate a debate.
3. Summarize the discussions.
4. Focus the group.
5. Lead to a conclusion.

During discussions, s/he needs to be able to:

- Balance task (content) and relationship (process) i.e. achieve the task while maintaining good personal relations.
- Clarify issues.
- Summarize the discussions.
- Persuade participants to get actively involved.
- Conflict analysis and its resolution.
- Focus the group on the key issues.
- Lead the group to a conclusion.
- Finally, resist the temptation to dominate the discussions.

Characteristics of an Effective Facilitator: In general, the facilitator should always aim to be:

- Self-confident (but not overconfident).
- Enthusiastic and flexible.
- Good humoured and friendly.
- Attentive to feelings.

Active Listening: One vitally important skill for the facilitator is **active listening.**

We are often passive listeners. We listen with only half our attention. We make very little attempt to understand what the speaker is really getting at and we rarely try to help the speaker to give us the relevant information in a clear fashion.

The purpose of active listening is threefold:

- To encourage the speaker to talk freely and openly.
- To show interest in what is being said.
- To help him/her to focus on the main points and to say precisely and clearly what he/she is thinking.

N.B. Active listening implies that the listener should avoid intruding his/her own interests or interpretations. Above all, the listener should avoid judgements until the end.

How to Use this Training Module

This training module has a number of sub-modules and all of them are made up of number of sessions, each tackling a specific key issue. Most sessions consist of following:

- Session objectives.
- Outline of the content.
- Expected outcome of the session.
- Detailed session plan including facilitators notes.
- Session resources.
- References/further reading.

Session outline of five days training programme has also been provided here for ready reference.

The module encourages discussions on the issues with participants through a participatory process. It stimulates dialogue and encourages response, taking action, problem solving and negotiating skills. It focuses on experiential learning. It is structured in a manner that guides the participants through a process of experiences and activities, reflection and discussion. The participants are encouraged to look for ideas for action and application to similar situation in their lives and surroundings. Situations and problems are presented, discussed and analyzed.

Target Audience

The module, though puts together to address master trainers, can be adapted and used with groups as well.

It is intended for:

- Teachers.
- Trainers from DIET (District Institute for Education and Training) under Department of Education.
- Faculty members from State ATIs (Administrative Training Institutes).

Taking Time to Reflect

It would help the facilitator to ask herself/himself the following questions before using the module:

- What do I know about school safety/disaster management/disaster risk reduction?
- Why is it important for me to talk about the issue?
- What do I know about the disasters and related vulnerabilities?
- How would I handle the situation if there were a victim of disaster in the participating group?
- Am I aware of the government initiatives on school safety?
- What do I know about National School Safety Programme?

Room Setting and Equipment

It is recommended that this programme be run with a group size no bigger than 25 and the tables should be arranged in Horse Shoe or U shape style/ Cabaret style/ Class Room style allowing participants to work in small groups. Equipment necessary for the programme includes:

- DVD projection.
- Whiteboard.
- Flip chart paper and stand.
- Markers.

Evaluation and Validation

At the end of the course, the course team, will handout the overall evaluation/feedback form to the participants. The team must collect these before participants leave the training hall. The participants' assessment about the programme will help to improve the content for next training programme.

OUTLINE OF THE FIVE DAY TRAINING PROGRAMME

Day 1: Understanding School Safety in the overall Disaster Management Planning and Practice

Session 1.1	**INTRODUCTION**	**Time**	**90 Min**
Session Objectives	• Inauguration and Introduction of the Programme. • Introduction to the concept of school safety. • Impact of disasters on school children of various age groups, at different levels/phases (preparedness, response, mitigation, etc.) and need of DRR for safe schools. • Experience sharing, expectation and outcome.		
Session Outcome	The Participants will be able to: • List the objectives of the NSSP. • Identify essential elements of school safety practice. • Enumerate the risks faced by children due to hazards. • Relate to school safety practice within their context.		
Session 1.2	**DISASTER MANAGEMENT- BASIC CONCEPTS**	**Time**	**90 Min**
Session Objectives	• Basic concepts of disaster management and institutional mechanism. • Vulnerability profile of India.		
Session Outcome	• Identify and relate to various components of disaster management. • List the various kinds of hazard and ways to mitigate in the local context.		
Session 1.3	**RIGHT TO EDUCATION (RTE)**	**Time**	**90 Min**
Session Objectives	• Linking school safety with whole school concept. • Linkage to RTE, SSA and UNCRC. • Education in emergency.		
Session Outcome	• Participants are able to identify linkages between the practice of school safety, whole school development planning and objectives of RTE. • The participants are able to list the 10 components of RTE.		
Session 1.4	**HAZARD, VULNERABILITY, CAPACITY AND RISKS (HVCR) ASSESSMENT-TOOLS AND TECHNIQUES**	**Time**	**90 Min**
Session Objectives	• HVCR assessment in schools-tools and techniques.		
Session Outcome	• Participants are able to use the tools (hazard, vulnerability, capacity and risk) for conducting HVCR assessment.		

Day 2: Mitigation and Preparedness for School Safety

Session 2.1	**STRUCTURAL AND NON STRUCTURAL SAFETY ASPECTS**	**Time**	**120 Min**
Session Objectives	• Structural and non- structural safety issues in schools.		
Session Outcome	• Sensitized to structural risks and to know where to look for solutions. • Equipped to identify the non structural risks and ability to address them.		
Session 2.2	**SCHOOL DISASTER MANAGEMENT PLAN (SDMP)**	**Time**	**60 Min**
Session Objectives	• Introduction of school DM plan-model template. • Management of schools as relief centers.		
Session Outcome	• Participants will be able to identify the key stakeholders and their role to be involved in SDMP preparation. • Develop skills to prepare the SDMPs.		
Session 2.3	**TASK FORCES**	**Time**	**60 Min**
Session Objectives	• Roles and responsibilities of various task forces (fire safety in schools, first aid skills, search and rescue techniques in disasters, early warning etc.), • Team members and training required by task forces.		
Session Outcome	• To enable the participants to identify the need for task forces, criteria for selection and their roles and responsibilities. • Able to identify that which all technique the children to be trained upon and what all to be avoided with children.		
Session 2.4	**FIRE SAFETY/ SEARCH AND RESCUE TECHNIQUES/FIRST AID**	**Time**	**60 Min**
Session Objectives	• Fire safety/ first aid /search and rescue techniques.		
Session Outcome	• Participants are able to identify fire safety, search and rescue techniques and methodologies. • Able to impart necessary training to children • Familiar with first aid techniques, their roles and responsibilities as first responders.		
Session 2.5	**MOCK DRILL FRAMEWORK**	**Time**	**60 Min**
Session Objectives	• Introduce participants to the mock drill framework.		
Session Outcome	• Participants will be able to identify components for conducting a mock drill in school.		

Day 3: Planning for School Safety

Session 3.1	**SDMP PLANNING**	**Time**	**120 Min**
Session Objectives	• Preparation of a typical school DM plan by participants.		
Session Outcome	• Participants are able to prepare a SDMP.		
Session 3.2	**MOCK DRILL**	**Time**	**180 Min**
Session Objectives	• To give practical training of mock drill in school.		
Session Outcome	• Participants have actual experience of conducting a mock drill in school.		

Day 4: Planning for School Safety and Addressing Special Needs

Session 4.1	**MOCK DRILL – LESSONS LEARNT**	**Time**	**60 Min**
Session Objectives	• Discussion and feedback on mock drill observed.		
Session Outcome	• The participants will have a practical knowledge on mock drill and its linkage with SDMP. • To avail clarity on any component of drill. • Importance of feedback sessions or evaluation session after a drill to improvise on SDMP.		
Session 4.2	**INCLUSIVE APPROACHES**	**Time**	**60 Min**
Session Objectives	• Inclusive approach (gender, children with disability, HIV under RTE mandate) and disaster safety in schools.		
Session Outcome	• Participants are able to identify and prepare an inclusive SDMP.		
Session 4.3	**PSYCHO-SOCIAL CARE**	**Time**	**90 Min**
Session Objectives	• Psycho-social care and support for children of various age groups.		
Session Outcome	• Participants are able to recognize the need for psycho-social care and able to facilitate support.		
Session 4.4	**REVISITING SCHOOL DISASTER MANAGEMENT PLAN (SDMP)**	**Time**	**90 Min**
Session Objectives	• Revisiting SDMP finalization and sharing.		
Session Outcome	• The participants have been able to prepare an inclusive SDMP.		

Day 5: Reflection and Planning: Way Forward

Session 5.1	**TRAINING SESSION**	**Time**	**90 Min**
Session Objectives	• Enhance the knowledge and skill of delivering training in the most effective manner.		
Session Outcome	• The session will provide participants with the skill to conduct and modulate training in most effective manner with their participation. • The trainer will learn the skill of converting training session in more interesting way, thereby the knowledge is conveyed well to them.		
Session 5.2	**OPEN HOUSE DISCUSSION**	**Time**	**60 Min**
Session Objectives	• Discussion with the participants on the contextual issues and specific challenges related to school safety.		
Session Outcome	• Participants are able to resolve issues, regarding school safety and related topics, to their local context.		
Session 5.3	**ACTION PLAN**	**Time**	**30 Min**
Session Objectives	• Preparation of action plan.		
Session Outcome	• Participants are able to prepare their action plan for the next steps.		
Session 5.4	**POST-TRAINING EVALUATION**	**Time**	**90 Min**
	• Feedback and suggestions.		
Session 5.5	**VALEDICTION**	**Time**	**60 Min**

Day 1: Understanding School Safety in the overall Disaster Management Planning and Practice

Session 1.1 Introduction

1.1.1 Session Objectives

- Inauguration and introduction of the programme.
- Introduction to the concept of school safety.
- Impact of disasters on school children of various age groups and need of disaster risk reduction for safe schools.
- Experience sharing, expectation and outcome.

1.1.2 Outline of Content

This session essentially prepares ground for the five-day training programme by introducing the subject of disaster and school safety. Disasters generally have huge impact on everyone but school children are considered to be the most vulnerable. In this session, we are particularly looking at impact of disasters on schools and school children. It introduces the concept of school safety, the National School Safety Programme (NSSP), and why is there need for disaster risk reduction (DRR) at school?

1.1.3 Expected Outcome of the Session

By the end of the session, the participant will able to:

- List the objectives of the NSSP.
- Identify essential elements of school safety practice.
- Enumerate the risks and stresses faced by school children due to hazards or disasters.
- Relate to school safety practice within their context.

1.1.4 Detailed Session Plan

Materials required for the day: Flip chart/white board, chart papers and markers.

Inauguration and Introduction of the training Programme (five minutes)

During the introductory session, the facilitator will introduce himself to the participants about his role and also discuss the administrative arrangements.

Introduction of the Participants with ice breaker (20 minutes)

It is important that all the participants know each other's name and feel comfortable in the group. Participants can be introduced through a participatory game which will also help in breaking the ice:

- Divide participants in pairs.
- Ask them to find out each other's name, what they do and one thing they like.
- Give them five minutes for discussion and encourage them to use the room and not sit on their seats.
- After discussion ask each participant to introduce her/his partner to the larger group.

Expectations from the Training (10 minutes)

- Divide participants into groups.
- Give them three-four minutes for discussion.
- Ask each group to write their expectations from training on the chart paper.
- Put all charts by the groups on a wall.
- Write the common/relevant expectations on white board/flip chart.
- Read out /write/ show PPT of the training objectives as mentioned in the beginning of the module.
- Clarify that expectation outside the scope of training will be addressed where and when possible.

School Safety- Basic Concept:

Before introducing concept of school safety, ask participants following questions:

- List out 10 day to day problems/issues of a child (in school, in community and the places where children go e.g. play grounds).
- Bring in all the issues under few headings.
- With participatory approach, pick up common issues and prioritize them.
- Now ask, how these issues would be affected or aggravated during any emergencies? (Most of these issues may actually be vulnerabilities of the school; hence convey the importance of addressing them to minimize the disaster impact on children.)
- Their perception about "SCHOOL" and "SAFETY".
- Write words/phrases mentioned by the participants on the board or flip chart. People may have different perception of safety.
- About National School Safety Programme (NSSP).
- Encourage all the participants to share their views/perception of school safety.

1.1.5 Note for the facilitator (20 minutes)

Emphasizing the importance of creating safe learning environment for children, the facilitator needs to highlight some disasters that struck schools in the recent past.

"**School Safety**" has been defined as the creation of safe environments for children, starting from their homes to their schools and back. This includes safety from large-scale natural hazards of geological/climatic origin, human-made risks, pandemics, violence as well as more frequent and smaller-scale fires, transportation and other emergencies, and environmental threats that can adversely affect the lives of children[1].

The main objective of the school safety activities is **disaster risk reduction**. This includes mitigation, preparedness, and preparing a disaster management plan for the school etc. A community-based disaster management approach is followed, involving the following steps:

- Raising disaster awareness in school community;
- Hazard, vulnerability and risk analysis;
- Facility and resource mapping;
- Constitution and training of school disaster management committee and task forces;
- Establishing alert mechanism;
- Preparing school disaster management plan including evacuation and response plan and calendar for preparedness activities;
- Organising mock drills;
- Psycho-social support for children during disasters;
- Consideration of disability and gender based needs;
- Periodic review and regular updation of SDMP;
- School safety audit.

1. National Disaster Management Guidelines-School Safety Policy. December 2013. National Disaster Managemnt Authority, Government of India.

National School Safety Programme (NSSP):

Government of India has approved a National School Safety Programme (NSSP)- A demonstration project be implemented by National Disaster Management Authority (NDMA) in partnership with Ministry of Human Resource Development (MHRD), State/UT Governments, national and international agencies in 43 districts of 22 States /UTs of the country falling in seismic zone IV and V.

The vision of the NSSP is to promote a culture of disaster preparedness in the school with following objectives:

- To initiate policy level changes for ensuring safe school environment.
- To sensitize school community on disaster preparedness and safety measures.
- To motivate direct participation of key stakeholders in activities that would help building towards a disaster resilient community.
- To promote capacity building of officials, teachers and students.
- To carry out Information, Education and Communication (IEC) activities in schools and associated environment.
- To implement non-structural mitigation measures in select schools.
- To carry out demonstrative structural retrofitting in select schools.

The programme will build capacity of 200 schools in two districts each in 22 States/UTs, produce relevant IEC materials, introduce non-structural measures, and demonstrate retrofitting of one school each in 22 States/ UTs. Mainstreaming school safety in whole school development plan and formulation of national school safety guidelines are also part of this programme. It is centrally sponsored programme with a total outlay of Rs.48.47 crore.

Effects of Disaster on Schools

Natural or man made, disasters can cause unbearable negative impact on schools and all others concerned. These disasters may strike the schools directly or indirectly in the immediate future or in the long run on a human scale or through destruction of infrastructure etc.

An example of direct effect of disaster on a school is a Gujarat earthquake (2001) that damaged completely or partially over 11600 schools. Number of deaths of school kids, staff & teachers can only be imagined.

Damages to the school infrastructure are directly related to reduction in school hours, and consequently, to a decrease in the quality of education. Once a school is declared unsafe or its approach is destroyed, it stresses the management as well as parents.

A disaster put the clock backwards for a school already striving to exist or develop its infrastructure. Indirectly, disasters may lead to drop out rate rising and it may as well mean enhancing the already traumatised mental condition of the parents as well as students.

Effects of Disaster on Schools

Disasters have:

Physical impacts:	Educational impacts:
It includes direct impacts like: • Loss of life/injuries to school building occupants. • Collapsed/damaged school buildings and other infrastructure. • Non-structural hazards can also cause death and serious injuries etc.	It includes direct/ indirect impacts like • Increased dropout rates. • Loss of trust in education institution. • Decrease in education quality. • Missing educational records etc.
Economic impacts:	**Psychological impacts:**
• Unsafe/ damaged schools beyond repair need a level of reinvestment. • Loss of income, housing, etc. makes it difficult for families to support children continuing their education etc.	• Increased stress. • Students lose a sense of continuity and their hopes and plans for the future are destroyed etc.

Adapted from Marla Petal, UNISDR, Disaster Prevention for Schools: Guidance for Education Sector Decision- Makers, Consultation version, November 2008. Available at http://www.preventionweb.net/files/7344_DPforSchoolssm.pdf.

Need for Disaster Risk Reduction (DRR) in Schools:

Global blueprint for disaster risk reduction developed in the name of 'Hyogo Framework for Action' (HFA) in Kobe, Hyogo, Japan (January 2005) recommended the following five priorities for action:

(1) Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation.
(2) Identify, assess and monitor disaster risks and enhance early warning.
(3) Use knowledge, innovation and education to build a culture of safety and resilience at all levels.
(4) Reduce the underlying risk factors.
(5) Strengthen disaster preparedness for effective response at all levels.

Implementing priority three regarding knowledge, innovation and education requires inclusion of disaster risk reduction in school curricula, developing training programmes on disaster risk reduction at a school community level etc.

Across the globe, children are considered to be the most vulnerable to disasters. But at the same time they can be effective communicators about disasters at home, in school and in society/community. Awakened kids are the best insurance against disasters.

Unsafe schools abound in India. With the right to education act, more and more children are going to schools that are vulnerable to multiple hazards. Statistics have shown that nearly half of all victims of natural disasters are children under the age of fifteen.

Not only giving a safe school building in routine but using a school building as a refugee camp for public requires that school buildings should be well built and well maintained.

Central Board for Secondary Education has made disaster management as a separate subject in grades VIII, IX and X. Similarly, various state education boards across India have also introduced the subject of disaster management at various levels.

School safety is essential because:

- Children are our future generation;
- Children can carry information to the society;
- Schools are key factors to build a culture of disaster prevention;
- School are considered to be centre of community activities.

1.1.6 References/Further Reading:

- http://ndma.gov.in/ndma/nssp.html.
- AIDMI, School Safety Training Module 2.
- http://siteresources.worldbank.org/INDIAEXTN/Resources/Reports-Publications/gujarat- earthquake/executive_summary.pdf assessed on 14th June 2013.
- Human Rights Watch, The Effect of Communal Violence In Gujarat On Children, (July 14, 2003, 350 Fifth Avenue, 34th floor, New York, New York 10118, USA).
- Hyogo Framework for Action (HFA). Available at http://www.unisdr.org/we/coordinate/hfa.
- RCC guidelines 6.1 : Integrating disaster risk reduction in school curriculum. Available at http://www.preventionweb.net/files/4006_ADPCEducGuidelineConsultationVersion3.1.pdf.
- http://www.cbse.nic.in.

Session 1.2 Disaster Management- Basic Concepts

1.2.1 Session Objectives

- Basic Concepts of Disaster Management and Institutional Mechanism.
- Vulnerability profile of India.

1.2.2 Outline of Content

This session details out various components of the disaster management. To understand disaster management first we need to understand what it includes – hazards, vulnerabilities, capacity and risk.

1.2.3 Expected Outcome of the Session

By end of the session, participants will be able to:

- Identify and relate to various components of disaster management.
- List the various kinds of hazard and ways to mitigate in the local context.

1.2.4 Detailed Session Plan

1.2.4.1 Question and Answer with Discussion (20 minutes)

Ask participants the following question:

- What do you understand by "Disaster Management"?

Write words/phrases mentioned by the participants on the board or flip chart.

Sum up with brief comment:

Disaster Management (DM) involves a continuous and integrated process of planning, organising, coordinating and implementing measures which are necessary for[1]:

- Prevention of danger or threat of any disaster.
- Mitigation or reduction of risk of any disaster or its severity or consequences.
- Capacity building including research and knowledge management.
- Preparedness to deal with any disaster.
- Prompt response to any threatening disaster situation or disaster.
- Assessing the severity or magnitude of effects of any disaster.
- Evacuation, rescue and relief.
- Rehabilitation and reconstruction.

1.2.4.2 Note for the facilitator (45 minutes)

Facilitator will explain

Disasters:

A catastrophe, mishap, calamity or grave occurrence in any area, arising from natural or manmade causes, or by accident or negligence which results in substantial loss of life or human suffering or damage to, and destruction of, property, or damage to, or degradation of, environment, and is of such a nature or magnitude as to be beyond the coping capacity of the community of the affected area. *(Reference: Disaster Management Act, 2005, Government of India).*

- Before understanding disaster management, one needs to understand the following terminology:

1 National Policy on Disaster Management 2009 : approved by the Union Cabinet on 22rd October, 2009, National Disaster Management Authority.

Hazard:

Hazard is defined as "A dangerous phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage." Natural hazard events can be characterized by their magnitude or intensity, speed of onset, duration, and area of extent. *(*Reference: UNISDR Terminology*)*

Natural hazards: Natural process or phenomenon that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

Biological hazards: Process or phenomenon of organic origin or conveyed by biological vectors, including exposure to pathogenic micro-organisms, toxins and bioactive substances that may cause loss of life, injury, illness or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

Socio-natural hazards: The phenomenon of increased occurrence of certain geophysical and hydro meteorological hazard events, such as landslides, flooding, land subsidence and drought that arise from the interaction of natural hazards with overexploited or degraded land and environmental resources.

Technological hazards: A hazard originating from technological or industrial conditions, including accidents, dangerous procedures, infrastructure failures or specific human activities, that may cause loss of life, injury, illness or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

The list of hazards is very long. Many occur frequently while others take place occasionally.

School specific hazards: Those hazards which are prevalent in the school campus or in the vicinity of schools and pose a threat to the students. Like a transformer at the entry of school or a high tension electrical wire running through the school campus or an open well, chemical explosion in the chemistry lab or burns in the home science class or fire due to short circuit, unfortunate incident during picnic etc. These specific hazards are definite threat to school but may not be direct threat to the community in the area.

Difference between Hazard and Disaster:

While a hazard is a potentially damaging condition, physical event, phenomenon or human activity; a disaster is an actual event that disrupts the functioning of a community.

Vulnerability:

Vulnerability may be defined as "the extent to which a community, structure, services or geographic area is likely to be damaged or disrupted by the impact of particular hazard, on account of their nature, construction and proximity to hazardous terrains or a disaster prone area." Vulnerabilities can be categorized into physical and socio-economic vulnerability etc. *(for details refer: PPT 2)*

School specific vulnerability is also to be discussed. Like a low space or no play ground or no fencing. These are the weaknesses of the school, which aggravates the emergency situation or aggravates during emergency situation. A school which has no fencing tends to provide opportunity of kidnapping and may lead to trafficking as well.

Capacity:

Capacity can be defined as "resources, means and strengths which exist in households and communities and which enable them to cope with, withstand, prepare for, prevent, mitigate or quickly recover from a disaster". People's capacity can also be taken into account.

Hazards are always prevalent, but the hazard becomes a disaster only when there is greater vulnerability and less of capacity to cope with it. In other words the frequency or likelihood of a hazard and the vulnerability of the community increases the risk of being severely affected.

School specific capacity like trained manpower within school, fire extinguisher in school or a first aid box, is also to be discussed.

Risk

Risk is the expected loss from a given hazardous event for a given element of vulnerability over a specified time period. It is a function of:

- The probability of a hazard of a particular magnitude occurring;
- The elements susceptible to potential loss or damage (at risk);
- The nature of vulnerability to those elements;
- A specified future time period.

A community/locality is said to be at 'risk' when it is exposed to hazards and is likely to be adversely affected by its impact. Whenever, we discuss 'disaster management' it is basically 'disaster risk management'. Disaster risk management includes all measures which reduce disaster related losses of life, property or assets by either reducing the hazard or vulnerability of the elements at risk.

Conventionally risk is expressed by the notation Risk = Hazards x Vulnerability/ Capacity. Some disciplines also include the concept of exposure to refer particularly to the physical aspects of vulnerability.

Beyond expressing a possibility of physical harm, it is crucial to recognize that risks are inherent or can be created or exist within social systems. It is important to consider the social contexts in which risks occur and that people therefore, do not necessarily share the same perceptions of risk and their underlying causes.

It is to be discussed as it provides easiest way to make the participants understand the focus and importance on reducing vulnerability to reduce the risk factor.

Climate Change:

United Nations Framework Convention on Climate Change (UNFCCC) defines "climate change" as change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods[1].

Adaptation and mitigation are two main approaches for reducing the impact/risk of climate change.

1. UNFCCC Article 1, Definitions: http://unfccc.int/essential_background/convention/background/items/1349.php.

Adaptation: In context of climate change, the Intergovernmental Panel on Climate Change (IPCC) defines adaptation as "the adjustment in the natural and human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities". Adaptation focuses on preparing risk assessments, protecting ecosystems, improving agricultural methods, managing water resources, building settlements in safe zones, developing early warning systems, instituting better building designs, improving social coverage, etc. In other words adaptation deals with strengthening human and natural systems to withstand the effects of climate change[2].

Mitigation: The Intergovernmental Panel on Climate Change (IPCC) defines mitigation as "an anthropogenic intervention to reduce the anthropogenic forcing of the climate system; it involves measures to reduce greenhouse gas sources and emissions and enhancing green house gas sinks". Mitigation deals with more efficient furnance systems, developing new low-energy technologies for industry and transport, switching to renewable forms of energy such as solar and wind power, etc. In simpler words mitigation is about reducing human impact on the climate system.

Disaster Risk Reduction:

Disaster risk reduction (DRR) is a systematic approach to identifying, assessing and reducing the risks of a disaster. The conceptual framework of this approach is based on minimising vulnerabilities and disaster risks throughout a society, avoiding (prevention) or limiting (mitigation and preparedness) the adverse impacts of hazards, within the broad context of sustainable development.

The disaster risk reduction framework includes the following fields of action:

- Risk awareness and assessment including hazard analysis and vulnerability/capacity analysis;
- Knowledge development including education, training, research and information;
- Public commitment and institutional frameworks, including organisational, policy, legislation and community action;
- Application of other measures like environmental management, land-use and urban planning, protection of critical facilities, application of science and technology, partnership and networking, and financial instruments;
- Early warning systems including forecasting, dissemination of warnings, preparedness measures and reaction capacities

In the disaster risk reduction, mitigation is the terms given to structural and non-structural measures undertaken to limit the adverse impact of natural hazards, environmental degradation and technological hazard[3]

2. Adaptation to Climate Change by Reducing Disaster Risks: Country Practices and Lessons: http://www.unisdr.org/files/11775_UNISDRBriefingAdaptationtoClimateCh.pdf.
3. IPCC Fourth Assessment Report: http://www.ipcc.ch/publications_and_data/publications_and_data_reports.shtml#SREX

Climate Change Adaptation vs. Disaster Risk Reduction (DRR)

Building up resilience to disasters for a sustainable development is the common aim of climate change adaptation and disaster risk reduction programmes. Disaster risk is accentuated by climate change in number of ways. It changes the magnitude and frequency of extreme events. This means that coping and response mechanisms and related economic planning for disasters as learnt from past vulnerabilities may not be sufficient. Average climatic conditions and climate variability gets changed altogether. Also altered are the underlying risk factors, as there are new and unforeseen threats. If climate change adaptation policies and measures are to be effective, they must be built on and expand existing DRR efforts. If DRR approaches are to be sustainable, they must account for the impact of climate change.

DRR can deal with current climate variability and be the first line defense against climate change, being therefore an essential part of adaptation. Conversely, for a successful DRR, understanding must focus on shifting risks associated with climate change and ensure that measures do not increase vulnerability to climate change in the medium to long-term[4].

Disaster Management:

"Disaster management" means a continuous and integrated process of planning, organizing, coordination and implementation measures which are necessary or expedient for:

- Prevention of danger or threat of any disaster.
- Mitigation or reduction of risk of any disaster or its severity or consequences.
- Capacity building including research and knowledge management.
- Preparedness to deal with any disaster.
- Prompt response to any threatening disaster situation or disaster.
- Assessing the severity or magnitude of effects of any disaster.
- Evacuation, rescue and relief.

(Source: Disaster Management Act, 2005, Govt. of India)

Institutional Mechanism for DM

On 23 December 2005, the Government of India (GoI) took a defining step by enacting the Disaster Management Act, 2005, which envisaged the creation of the National Disaster Management Authority (NDMA), headed by the Prime Minister, State Disaster Management Authorities (SDMAs) headed by the Chief Ministers, and District Disaster Management Authorities (DDMAs) headed by the District Collector or District Magistrate or Deputy Commissioner as the case may be, to spearhead and adopt a holistic and integrated approach to DM. *(Handout 1 - National Disaster Management Authority)*

Facilitator should mention DM mechanism at local level. It is also important to mention how school would get or send information to district office, what is the hierarchy and linkage between school and district disaster management authority.

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4. Training Module on Community Climate Change Adaptation : Facilitator's Handbook. Available for download: http://www.cdema.org/ccdrr/Draft_Facilitators_Handbook_for_the_Training_Module.pd

1.2.4.3 Group Activity (25 minutes)

- Divide participants state wise or in groups with common interests.
- Ask them to discuss within the groups and answer the following questions. Keep school as focal point and include areas around it.
    1. Hazards in their area and school
    2. What are the vulnerabilities in their area and of school
    3. What are the skills available with the community and school
    4. Action plan to reduce the vulnerability or risk in the school
- Give 10 minutes for discussion.
- Ask each group to present in front of the large group.
- Add if any point has been left out and thank participants for the good work!

1.2.5 Session Resources

Power Points

PPT 1 – Types of Disasters in India (based on HPC, 2001)

I. Water and Climate related disasters	**II. Geologically related disasters**
1. Floods and Drainage Management 2. Cyclones 3. Tornadoes and Hurricanes 4. Hailstorm 5. Cloud Burst 6. Heat Wave and Cold Wave 7. Snow Avalanches 8. Droughts 9. Sea Erosion 10. Thunder and Lightning 11. Tsunami*	1. Landslides and Mudflows 2. Earthquakes 3. Dam Failures/ Dam Bursts 4. Mine Fires **III. Chemical, Industrial and Nuclear related disasters** 1. Chemical and Industrial Disasters 2. Nuclear Disasters
IV. Accident related disasters	**V. Biologically related disasters**
1. Forest Fires 2. Urban Fires 3. Mine Flooding 4. Oil Spill 5. Major Building Collapse 6. Serial Bomb Blasts 7. Festival related disasters 8. Electrical Disasters and Fires 9. Air, Road and Rail Accidents 10. Boat Capsizing 11. Village Fire	1. Biological Disasters and Epidemics 2. Pest Attacks 3. Cattle Epidemics 4. Food Poisoning

* Tsunami was included later.

(Reference: Disaster Management in India, Ministry of Home Affairs, Government of India)

PPT 2- Type of Vulnerabilities

- **Physical Vulnerability:** pertaining to matters of location, proximity, structural and infrastructural conditions, frequently including agricultural assets as representing physical "plant.
  - (a) **Building** – considering their use, site, design, shape, proximate locations, and materials used state of maintenance, construction techniques and quality.
  - (b) **Infrastructure**- structurally-based systems and related processed necessary for the social and economic functioning of a society or a community, which in terms of their essentiality are sometimes referred to as 'lifelines'.

1. Transportations systems and component elements.
2. Telecommunication system (external and internal)
3. Public utilities services (water , electricity, drainage)
4. Essential public or community services and related facilities, (health, public administration, emergency or security services and facilities, essential economic structures, critical civil protection systems or measures, etc.)

(c) **Agricultural** – primarily considering physical assets related, but opportunity loss potential of essential natural resources, crops, trees, livestock, fisheries, also should be recognized.

- **Economic Vulnerability:** determined by evaluating the direct loss potential of economic assets and processes, indirect loss potential, and consequent secondary effects, generally derived from previous historical data applied to current conditions affected by a variety of disaster scenarios.
- **Social Vulnerability:** determined by the perception of risk and the ability of people to take measure to reduce that risk. Social vulnerability is more difficult to measure than either physical or economic vulnerability, but efforts can be made to identify those elements of society or social behaviour which may reflect a greater risk of adverse affect.
- **Environmental Vulnerability:** Extent of natural resource depletion, state of resource degradation, loss of resilience of ecological system, loss of biodiversity, exposure to toxic and hazardous pollutants.
- **Systemic Vulnerability:** Degree of networking, linkage and coordination among different agencies / departments / ministries; mechanisms for identifying gaps in the existing system and strengthening the weak areas.

Similarly, capacity is divided into various types like physical capacity, socio-economic capacity, natural capacity etc.

Handouts

Handout 1: Present Structure for Disaster Management in India

The institutional structure for disaster management in India is in a state of transition. The new set up, following the implementation of Disaster Management Act 2005, is evolving; while the previous structure also continues. Thus, the two structures co-exist at present. The National Disaster Management Authority (NDMA) has been established at the centre, and the SDMA at state and the district disaster management authorities at the district level are gradually being formalised. In addition to this, the National Crisis Management Committee, part of earlier set up, also functions at the centre. The nodal ministries, as identified for different disaster types, function under the overall guidance of the Ministry of Home Affairs (nodal ministry for disaster management)[5].

Disaster Management Act 2005

This Act provides for the effective management of disasters and matters connected therewith or incidental thereto. It provides institutional mechanisms for planning and monitoring the implementation of the disaster management[5].

National Level Institutions

National Disaster Management Authority (NDMA)

On 23 December 2005, the Government of India enacted the Disaster Management Act, which envisaged the creation of National Disaster Management Authority (NDMA), headed by the Prime Minister, and State Disaster Management Authorities (SDMAs) headed by respective Chief Ministers, to spearhead and implement a holistic and integrated approach to Disaster Management in India[6].

NDMA, as the apex body, is mandated to lay down the policies, plans and guidelines for disaster management to ensure timely and effective response to disasters. Towards this, it has the following responsibilities:-

- Lay down policies on disaster management ;
- Approve the National Plan;
- Approve plans prepared by the Ministries or Departments of the Government of India in accordance with the National Plan;
- Lay down guidelines to be followed by the State Authorities in drawing up the State Plan;
- Lay down guidelines to be followed by the different Ministries or Departments of the Government of India for the Purpose of integrating the measures for prevention of disaster or the mitigation of its effects in their development plans and projects;
- Coordinate the enforcement and implementation of the policy and plans for disaster management;
- Recommend provision of funds for the purpose of mitigation;
- Provide such support to other countries affected by major disasters as may be determined by the Central Government;
- Take such other measures for the prevention of disaster, or the mitigation, or preparedness and capacity building for dealing with threatening disaster situations or disasters as it may consider necessary;
- Lay down broad policies and guidelines for the functioning of the National Institute of Disaster Management.

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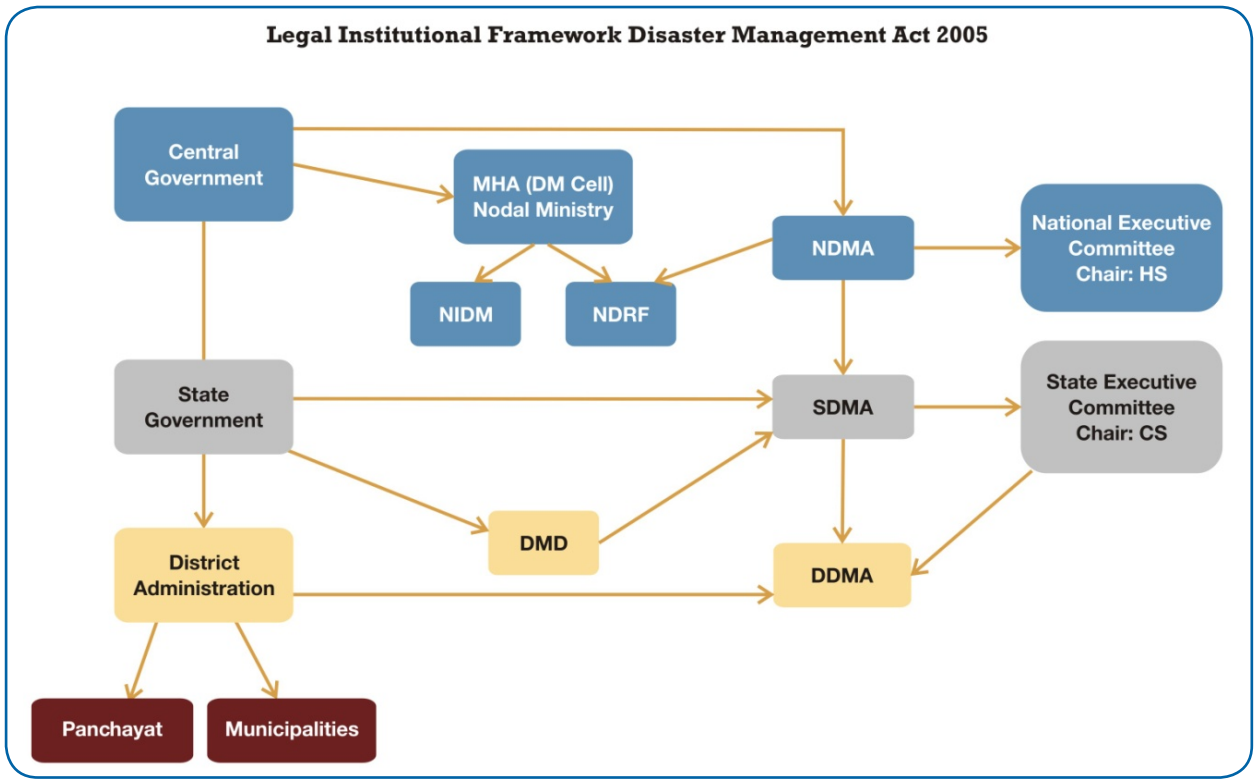
5. Disaster Management in India, 2011, Ministry of Home Affairs, GOI.



National Executive Committee (NEC)

A National Executive Committee is constituted under Section 8 of DM Act, 2005 to assist the National Authority in the performance of its functions. NEC consists of Home Secretary as its Chairperson, *ex-officio,* with other Secretaries to the Government of India in the Ministries or Departments having administrative control of the agriculture, atomic energy, defence, drinking water supply, environment and forest, finance (expenditure), health, power, rural development, water resources, science and technology, space, telecommunication, urban development.

The Ministry of Home Affairs (MHA)

The Ministry of Home Affairs (MHA) in the Central Government has the overall responsibility for disaster management in the country. For a few specific types of disasters the concerned Ministries have the nodal responsibilities for management of the disasters, as under:

Drought	Ministry of Agriculture
Epidemics & Biological Disasters	Ministry of Health and Family Welfare
Chemical Disasters	Ministry of Environment & Forests
Nuclear Disasters	Department of Atomic Energy
Air Accidents	Ministry of Civil Aviation
Railway Accidents	Ministry of Railways

National Institute of Disaster Management

National Institute of Disaster Management (NIDM) was constituted under DM Act, 2005 with a vision to play the role of a premier institute for capacity development in India and the region. NIDM has been assigned nodal responsibilities for human resource development, capacity building, training, research, documentation and policy

advocacy in the field of disaster management. NIDM has performed a crucial role in bringing disaster risk reduction to the forefront of the national agenda[7].

National Disaster Response Force

The DM Act has made the statutory provisions for constitution of National Disaster Response Force (NDRF) for the purpose of specialized response to natural and man-made disasters. Accordingly, in 2006 NDRF was constituted with 08 Bns (02 Bn each from BSF, CRPF, ITBP and CISF). As on date NDRF is having strength of 10 Bns. Each NDRF Bn consists of 1149 personnel. Union cabinet has also approved the conversion/up-gradation of 02 Bns from SSB[8].

State Level Institutions

State Disaster Management Authority (SDMA)

At the State Level the State Disaster Management Authority (SDMA), headed by the Chief Minister, lays down policies and plans for disaster management in the State. It is also responsible to coordinate the implementation of the State Plan, recommend provision of funds for mitigation and preparedness measures and review the developmental plans of the different departments of the State to ensure integration of prevention, preparedness and mitigation measures.

The State Disaster Management Department (DMD) which is mostly positioned in the Revenue and Relief Department is the nodal department.

State Executive Committee (SEC)

The Act envisages establishment of State Executive Committee to be headed by Chief Secretary of the State Government with four other Secretaries of such departments as the State Government may think fit. It has the responsibility for coordinating and monitoring the implementation of the National Policy, the National Plan and State Plan.

District Level Institutions

District Disaster Management Authority (DDMA)

Section 25 of the DM Act provides for constitution of DDMA for ever district of state. The District Magistrate/ District Collector/Deputy Commissioner heads the Authority as Chairperson besides an elected representative of the local authority as Co-Chairperson except in the tribal areas where the Chief Executive Member of the District Council of Autonomous District is designated as Co-Chairperson. Further in district, where Zila Parishad exist, its Chairperson shall be the Co-Chairperson of DDMA[5].

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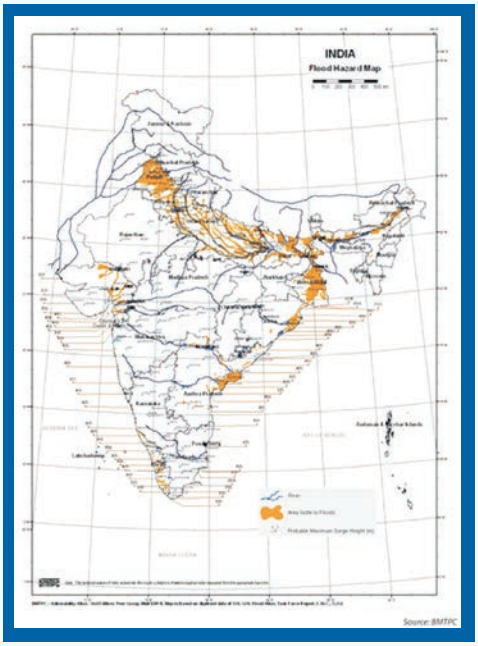
1. Disaster Management in India, 2011, Ministry of Home Affairs, GOI.
2. http://ndma.gov.in/
3. http://nidm.gov.in/
4. http://ndrfandcd.gov.in

Handout 2 – Hazard and Vulnerabilities of India

- The Indian subcontinent is highly vulnerable to various natural and man-made disasters. HPC (2001) has identified thirty one disasters in the country. These disasters have been categorised into five sub-groups.
- India is one of the ten worst disaster prone countries of the world. Adverse geo-climatic conditions topographic features, environmental degradation, population growth, urbanisation, industrialisation etc. are some of the factors which increase the vulnerability of the country.
- The geo-tectonic features of the Himalayan region and adjacent alluvial plains make the region susceptible to earthquakes, landslides, etc.
- The western part of the country, including Rajasthan, Gujarat and some parts of the Maharashtra are frequently face drought situation.
- The extreme weather conditions, glacial snow melt etc. are some of the factors which make the country prone to various kinds of disasters.
- Various human induced activities like demographic pressure, deforestation etc. are also responsible for increase in frequency of disasters*.

HAZARD MAP OF INDIA - FLOOD



- 40 million hectares out of geographical area of 3290 lakh hectares are prone to flood.
- On an average every year, 75 lakh hectares of land is affected, 1600 lives are lost due to flood.
- India can be divided into four regions for a study of flood hazards i.e. Brahmaputra, Gangetic, North- west, Central India and Deccan region.
- Andaman and Nicobar islands and Lakshadweep have particular characteristics, which result in flooding and erosion.

Source: BMTPC, 2006

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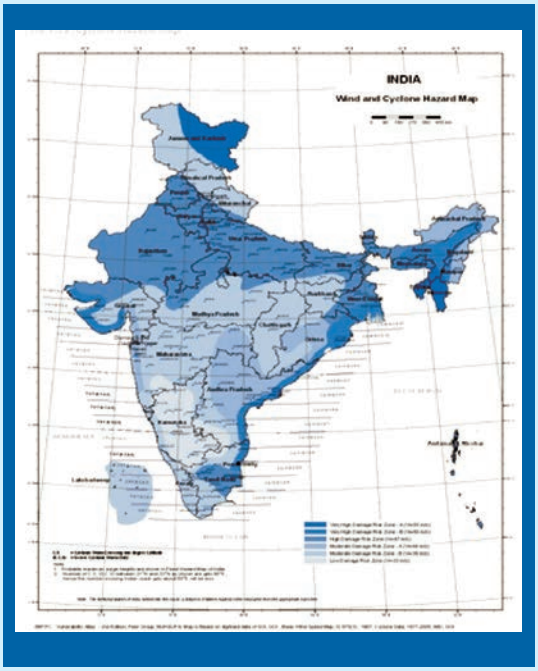
* Disaster Management in India, 2011, Ministry of Home Affairs, GOI.

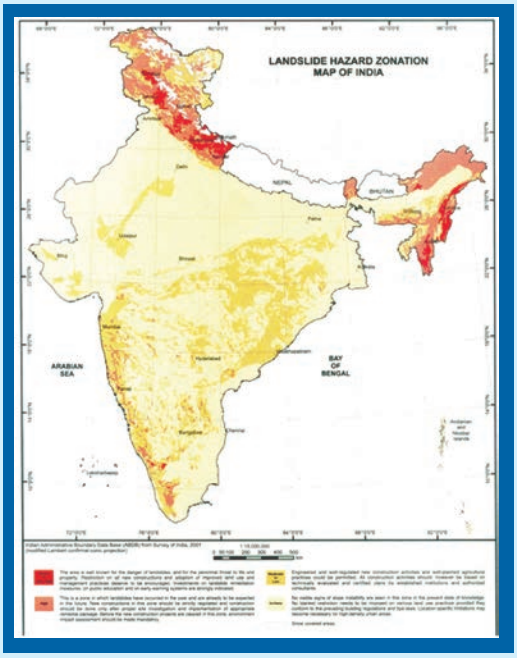
HAZARD MAP OF INDIA - CYCLONE



- India has 7,516 kms long coastline, of which 5,700 kms are prone to cyclones.
- ~8% of the country's area and one third of its population live in 13 coastal states UTs, encompassing 84 coastal districts, are vulnerable to cyclones.
- Tamil Nadu, Andhra Pradesh, Orissa, West Bengal and Puducherry on east coast and Gujarat on the west coast are more prone to cyclones.
- Cyclones occur in the months of May –June and October – November with their primary peaks in November and secondary peaks in May.

Source: BMTPC, 2006

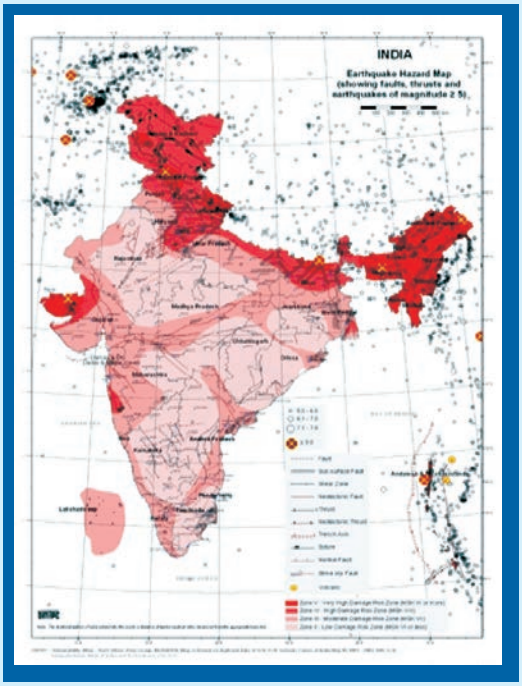
HAZARD MAP OF INDIA - LANDSLIDE



- About 15% of the land area of India- an area which exceeds 0.49 million km^2 is prone to landslides.
- In all, 22 states and parts of the Union Territory of Pudducherry and Andaman & Nicobar Islands are affected by this hazard
- Landslides of different types are frequent in geodynamically active domains in the Himalayan and Arakan-Yoma belt of the North-Eastern parts of the country as well as in the relatively stable domains of the Meghalaya Plateau, Western Ghats and Nilgiri Hills.

Source: BMTPC, 2006

HAZARD MAP OF INDIA - EARTHQUAKE



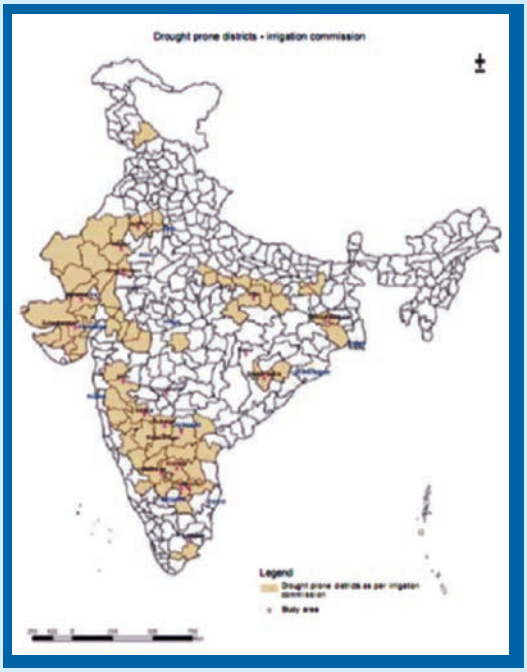
Geographic Areas in Seismic Zones

Seismic Zones	% of Geographical Area
II	41.40
III	30.40
IV	17.30
V	10.90

- The entire Himalayan region is considered to be vulnerable to high intensity earthquakes of magnitude ≥ 8 on Richter scale.

Source: BMTPC, 2006

HAZARD MAP OF INDIA - DROUGHT



- 68% of the net sown area in the country is prone to drought
- Out of this 33% is chronically drought prone, receiving rainfall less than 750mm per annum
- 35% drought prone that receive rainfall between 750-1125 mm per annum
- 102 districts are chronically drought Prone
- 2002 and 2009 were major drought years

Source: Ministry of Agriculture, 2009

1.2.6 References/Further Reading:

- Disaster Management Act, 2005, Government of India.
- Disaster Management in India, Ministry of Home Affairs, Government of India, 2011.

Session 1.3 Right to Education (RTE)

1.3.1 Session Objectives

- Linking school safety with whole school concept.
- Linkage to RTE, SSA and UNCRC.
- Education in Emergency.

1.3.2 Outline of Content

This session talks about the "whole school concept" and how it is integrated in the Sarva Shiksha Abhiyan (SSA). It also explains how RTE has given a right based approach to education in India and explains the salient features of the RTE Act.

1.3.3 Expected Outcome of the Session

By the end of the session, participants will be able to:

- Identify linkage between the whole school development planning and school safety planning and objectives of RTE.
- List the 10 components of RTE.

1.3.4 Detailed Session Plan

1.3.4.1 Question and Answer with Discussion (30 minutes)

- Begin with asking following question:
  - Have you heard about whole school concept?
- Ask participants to raise hands and see how many of them have heard about it. After the response pose another question:
  - What do you understand by "whole school concept"?
- Ask all the participants to share their view/perception.
- Encourage the quite participants to talk. Tell them there is no right or wrong question and answers because everyone can have a different way of looking at things.
- Write words/phrases mentioned by the participants on the board or flip chart.

1.3.4.2 Energizer (15 minutes)

Please refer Annex 1 for the list of energisers. Choose one depending on the availability of time and number of participants.

1.3.4.3 Note for the Facilitator (45 minutes)

What is the Whole School Concept?

Screen PPT1 – Keep it on while explaining the concept.

Explain that the concept of whole school is based on the following principles:

(i) ***Holistic view of education***, as interpreted in the National Curriculum Framework 2005, with implications for a systemic revamp of the entire content and process of education with significant implications for curriculum, teacher education, educational planning and management.

(ii) ***Equity***, to mean not only equal opportunity, but also creation of conditions in which the disadvantaged sections of the society – children of SC, ST, Muslim minority, landless agricultural workers and children with special needs, etc. can avail the opportunity.

(iii) ***Access,*** not to be confined to ensuring that a school becomes accessible to all children within specified distance but implies an understanding of the educational needs and predicament of the traditionally excluded categories – the SC, ST and others sections of the most disadvantaged groups, the Muslim minority, girls in general, and children with special needs.

(iv) ***Gender concern***, implying not only an effort to enable girls to keep pace with boys but to view education in the perspective spelt out in the National Policy on Education 1986 /92; i.e. a decisive intervention to bring about a basic change in the status of women.

(v) ***Centrality of teacher***, to motivate them to innovate and create a culture in the classroom, and beyond the classroom, that might produce an inclusive environment for children, especially for girls from oppressed and marginalised backgrounds.

(vi) ***Moral compulsion*** is imposed through the RTE Act on parents, teachers, educational administrators and other stakeholders, rather than shifting emphasis on punitive processes.

(vii) ***Convergent and integrated system of educational management*** is pre-requisite for implementation of the RTE law. All states must move in that direction as speedily as feasible.

Currently, ***Sarva Shiksha Abhiyan*** (SSA) is implemented as India's main programme for universalising elementary education. Its overall goals include universal access and retention, bridging of gender and social category gaps in education and enhancement of learning levels of children. SSA has adopted a more pragmatic approach to implementing the programme of inclusive education. SSA framework clearly states that "SSA will ensure that every child with special needs, irrespective of the kind, category and degree of disability, is provided education in an appropriate environment. SSA will adopt zero rejection policy so that no child is left out of the education system. It will also support a wide range of approaches, options and strategies for education of children with special needs".

In the present phase of SSA, it is mandatory to ensure that the approach and strategies for universalising elementary education are in conformity with the rights perspective mandated under the **RTE Act**. The RTE Act provides that *'Every child of the age of 6-14 years shall have a right to free and compulsory education in a neighbourhood school till completion of elementary education.*

The Rights perspective under the RTE Act has also brought in new monitoring mechanisms to ensure that child rights under the Act are protected. It also provides for children's right to an education that is free from fear, stress and anxiety *(for details refer to PPT2)*[1].

Whole School Development Plan (WSDP):

- It is a combination of educational plan that guides the infrastructure plan and its effective usage in the learning processes.
- It has to reflect the vision of a school and ways to achieve it.
- It is a master plan and base document for school's educational and infrastructure work as well as its development in phases.
- Its planning is seen as an evolving process rather than one time activity.

Vision of WSDP: To develop each school's built environment as ecosystem for learning.

- The school is envisioned as child development friendly, inclusive and educationally rich, sustainable ecosystem, safe and secure from hazards, incorporating elements of green architecture, optimum resource utilization through culturally and environmentally sustainable practices.

Whole School Development Planning and School Safety:

Draft guidelines for whole school development planning under SSA March 2010 discusses in detail about **Incorporation of appropriate 'safety features' and reducing vulnerability in school designs.** Hazard resistant construction for (Earthquake, Cyclone, Flood**,** Man-made hazards, Sewage discharge, High tension wire, Stagnated water), Fire safety and incorporation safety features for disaster management in the structural design of the school buildings of are an integral part of WSDP. A safe, inclusive and accepting school environment is a necessary condition for student's success. Students cannot be expected to reach their potential in an environment where they feel insecure and intimidated[2].

PP2 - Salient Features of the RTE Act, 2009

The RTE Act, 2009 provides for:

(i) The right of children to free and compulsory education till *completion* of elementary education in a neighbourhood school.

(ii) It clarifies that 'compulsory education' means obligation of the appropriate government to provide free elementary education and ensure compulsory admission, attendance and completion of elementary education to every child in the six to fourteen age group. 'Free' means that no child shall be liable to pay any kind of fee or charges or expenses which may prevent him or her from pursuing and completing elementary education.

(iii) It makes provisions for a non-admitted child to be admitted to an age appropriate class.

(iv) It specifies the duties and responsibilities of appropriate governments, local authority and parents in providing free and compulsory education, and sharing of financial and other responsibilities between the Central and state governments.

(v) It lays down the norms and standards relating *inter alia* to Pupil Teacher Ratios (PTRs), buildings and infrastructure, school-working days, teacher-working hours.

(vi) It provides for rational deployment of teachers by ensuring that the specified PTR is maintained for each school, rather than just as an average for the state or district or block, thus ensuring that there is no urban-rural imbalance in teacher postings. It also provides for prohibition of deployment of teachers for non-educational work, other than decennial census, elections to local authority, state legislatures and parliament, and disaster relief.

(vii) It provides for appointment of appropriately trained teachers, i.e. teachers with the requisite entry and academic qualifications.

(viii) It prohibits (a) physical punishment and mental harassment; (b) screening procedures for admission of children; (c) capitation fee; (d) private tuition by teachers; and (e) running of schools without recognition.

(ix) It provides for development of curriculum in consonance with the values enshrined in the Constitution, and which would ensure the all-round development of the child, building on the child's knowledge, potentiality and talent and making the child free of fear, trauma and anxiety through a system of child friendly and child centred learning[3].

Education in Emergency:

During emergencies, access to a significant right and resource – education – is usually very restricted. However, education can play an important role in helping the affected population to cope with their situation and to regain normalcy in their lives.

At the same time, it is often more difficult to organise education activities during emergencies, and there is a possibility that vulnerable groups, female teachers and girls in particular, will be subjected to physical or psychological dangers on the way to and from school and within the learning environment itself.

In providing education services, the government, communities and humanitarian organisations have an obligation to make sure that every individual has access to relevant, quality education opportunities, and that learning environments are safe, secure, and promote protection as well as mental, emotional and physical well-being of learners. Therefore, as part of the emergency response, education authorities and key stakeholders should develop and implement an education plan that takes into account national/state education policy, upholds the right to education, and is responsive to the learning needs of affected populations. In emergency situations, education should be coordinated within the larger initial humanitarian response of food, education policy and coordination shelter, health, and water and sanitation intervention[4].

1.3.6 Reference/Further Reading:

1. Sarva Shiksha Abhiyan : Framework for implementation.
2. Draft guidelines for whole school development planning under SSA March 2010.
3. Right to Education Act 2009.
4. Minimum Standards for education in emergencies, chronic crises and early reconstruction. Available at http://www.unicef.org/violencestudy/pdf/min_standards_education_emergencies.pdf
5. Model Child Protection Policy Statement Procedures and Guidelines Developed on behalf of, and for, the Children and Young People's Voluntary and Community Sector Organisations within the Bradford District by Debbie Cordingley VCS Safeguarding Children's Development Work.

Session 1.4 Hazards, Vulnerability, Capacity and Risk (HVCR) Assessment- Tools and Techniques

1.4.1 Session Objectives

- HVCR Assessment in schools-tools and techniques

1.4.2 Outline of Content

This session talks about identifying and analysing hazards, vulnerabilities, capacity and risks specifically in the context of a school. Identification and assessment of HVCR is the first step towards school safety and disaster risk reduction. This exercise should be conducted in every school on a regular basis to keep the children safe and studies uninterrupted.

1.4.3 Expected Outcome of the Session

By the end of the session, participants will be able to use the tools (hazard, capacity and risk) for conducting HVCR Assessment.

1.4.4 Detailed Session Plan

1.4.4.1 Question and Answer with Discussion (30 minutes)

- Begin with asking the following questions:
  1. Have you heard about HVCR tools and techniques?
  2. Have you done any of kind of HVCR in your respective schools?
- Encourage the participants to share their views/experience about HVCR tools and techniques.
- If participants are not aware of HVCR, elaborate – hazards, vulnerability, capacity and risk.
- Write down comments on the white board/flip chart.
- The identification and analysis should be done with participation from students.

1.4.4.2 Note for the Facilitator (40 minutes)

This session consists of following components:

a) Hazard Assessment.
b) Vulnerability and Capacity Assessment.
c) Risk Assessment.

a) Hazard Assessment:

Hazard Assessment includes:

- Identification of main hazards that may affect the school and its surroundings.
- Understanding their characteristics.
- Assessment of trends, as the frequency, intensity and severity of some disaster types is increasing.

Hazard assessment also determines the:

- Geographical area affected by the hazard.
- Season when the hazard is most likely to appear.
- Any warning signs which precede its appearance etc.

Objectives of Hazard Assessment:

- To assess the nature and behaviour of potential hazards and their threats in the school and its surroundings.
- To prioritise between different hazards.

To determine the nature and behaviour of hazards, one can use the following questionnaire:

Hazard Assessment Table

Questions	Hazard 1	Hazard 2	Hazard 3
1. **TYPE:** What hazards/disasters commonly affect your community/ locality/school?			
2. **SIGNIFICANCE:** Which would you consider to be the most serious hazard, in terms of impact upon the community/ locality/school? (do a ranking exercise)			
3. **HISTORY:** What was the last significant disaster event to affect this community/locality/school, and when was it?			
4. **FREQUENCY**: How often does this hazard occur (e.g. every year, one year, in three years, etc...)			
5. **DURATION:** How long does the hazard persist (hours, days, weeks)?			
6. **LOCATION/AREA:** Which parts of the community/locality/school are worst affected? (could show on map)			
7. **SIGNS:** Any early warnings, traditional or scientific? How quickly (or slowly) does the hazard appear?			
8. **SEVERITY**: How do you measure the severity of the hazard (e.g. depth of water, wind speed, lack of rain, damage)? What would you observe in a good year and a bad year?			
9. **FOREWARNING**: Estimate the time from the signs and actual occurrence of the hazard			
10. **TRENDS:** What changes are happening to the frequency, duration or severity of the hazard? Any new hazards?			

(Source: Participatory Disaster Risk Assessment Training Pack and Assessment Tools. Available at http://www.disasterriskreduction.net/fileadmin/user_upload/drought/docs/Participatory%20Disaster%20Risk%20Reduction%20Assessment%20Tool%20and%20Training%20Pack.pdf).

It is important to know that some hazards also induce secondary hazards. For example cyclones can cause landslides, drought may cause epidemics and pest infestation and earthquakes can cause landslides/ fires.

Methodology:

The most commonly used tools/ methods for hazards assessment are:
Hazard map: Drawn to define the probable area covered by different degrees of hazards.
Historical profile: Can make us understand how hazards have changed over time, which hazards have happened in the past.
Seasonal calendar: Visualises the time, frequency and duration of common hazards with respect to their season of occurrence, particularly valid for seasonal disasters like hot and cold waves.
In addition to this, **transect walk** for hazard assessment is also useful tool.

(Note: Share handout 1- Class Room Hazard Hunt and divide the participants in groups and ask them to discuss and fill the desired information)

b) Vulnerability and Capacity Assessment:

- A disaster occurs when a hazard meets vulnerable elements and cause damage to life, livelihoods, property, economy, environment etc. These are called '**elements at risk'.**
- **Vulnerability assessment** is the process of estimating the degree of weakness of "elements at risk" (people, school children, faculties, etc.) to various hazards and analysing root causes for damage and loss.
- Different elements vary significantly in their susceptibility to damage or disruption and vulnerability also differs according to the magnitude and characteristics of hazards.

The relationship between impact and vulnerability can be illustrated by the following example:

Hazard –Flash Flooding

Possible element at risk	Impact on element at risk	Vulnerability conditions which allow this impact
School buildings	Damage to school buildings	• Schools located close to river, in low lying areas or in river bed. • Weak school building design or weak foundations. • No protective wall, embankment or trees.
Water supply (well)	Contamination of wells	• Wells close to river. • Wells not capped or protected from contamination.

(adapted from: Participatory Disaster Risk Assessment Training Pack and Assessment Tools. Available at http://www.disasterriskreduction.net/fileadmin/user_upload/drought/docs/Participatory%20Disaster%20Risk%20Reduction%20Assessment%20Tool%20and%20Training%20Pack.pdf,)

Vulnerability Assessment Considerations:

1. Need to focus on degrees of loss, damage.
2. Focus attention on important elements, concentrate analytical resources on critical or significant items:
   a) People;
   b) Lifelines;
   c) Economic activity, resources;
   d) Areas of developmental importance;
   e) Production facilities etc.
3. Essential to consider relationships of factors that determine social and economic systems and processes, over time.

Variations in vulnerability: Vulnerability can vary considerably from community to community. Even within one state, some schools may be highly vulnerable to disaster – depending on location or type of school building and many more such factors. (Types of vulnerabilities have been discussed in detail in the previous section.)

- In addition to vulnerabilities, a disaster prone area will always possess some capacities at various levels (community, family or individual levels).
- **Capacity assessment** is about determining the strengths and coping mechanisms of the community.
- It is therefore important that, when conducting vulnerability analysis, all those positive attributes, that may contribute to prevent or mitigate the effects of a disaster, or which may strengthen a community's ability to respond effectively to disaster also needs to be taken care off.

Tables below give some examples of a) Natural vulnerabilities and capacities, b) Physical vulnerabilities and capacities.

Natural vulnerabilities vs. capacities

Vulnerability	Capacity
Absence of trees due to human activity or climatic factors.	Presence of trees or bamboo for building, shelter or fuel.
Surface water not consistently available throughout the year.	Adequate surface water available for the whole year.
Soil impoverished, for example through mono-cropping and / or soil erosion.	Soils fertile and productive.
No emergency flotation devices available.	Emergency flotation aids available – e.g. coconuts, banana trees.
Emergency 'famine foods' in bush absent or Inaccessible.	'famine foods' available in the bush – roots, berries, etc.

Physical vulnerabilities vs. capacities

Vulnerability	Capacity
School buildings and structures not strong enough to resist common hazards.	Many school buildings include cyclone or earthquake resistant design features.
Roads and bridges not usable by motor vehicles for some months of the year.	Road surface and bridges allow vehicles to pass for whole year, including disaster season.
No protected wells or water hand-pumps.	Hand-pumps elevated on platforms above potential flood water level; springs and wells have protective caps.
No landline telephone communication, and/or poor signal for mobile phones.	Landline telephone and/or mobile phone communication good in all weather conditions.

(Source: adapted from Participatory Disaster Risk Assessment Training Pack and Assessment Tools. Available at http://www.disasterriskreduction.net/fileadmin/user_upload/drought/docs/Participatory%20Disaster%20Risk%20Reduction%20Assessment%20Tool%20and%20Training%20Pack.pdf).

Objectives of Vulnerability and Capacity Assessment:

- To establish the unsafe conditions and coping mechanism within the disaster-prone community.
- To prioritise target groups or areas for prevention or response activities.

Methodology:

The assessment of vulnerabilities and capacities is done with focus groups, using participatory tools and question sets.

Useful tools include:

- Seasonal calendar (showing hazard seasons, activities, migration, festivals, livelihoods period of stress, diseases, etc.).
- Social Venn diagram (showing social groups and influences).
- Natural resource map (showing rivers, ponds, forest, grazing, etc).
- Community resource map (showing buildings, bridges, roads, dams, etc).
- Hazard hunt – to see hazards on ground in the school.

- Role play – to show what happens during disaster and why.
- Problem tree and ranking – to linkage of vulnerabilities and enables the school to express important vulnerabilities to address.

A facility/resource map showing the various facilities existing within and outside the school and their relative location with respect to the school, name of the contact person with contact details can be prepared.

c) Risk Assessment:

Risk is defined as probability of harmful consequences — casualties, damaged property, lost livelihoods, disrupted economic activity, and damage to the environment — resulting from interactions between natural or human-induced hazards and vulnerable conditions. Risk assessment is a process to determine the nature and extent of risk by analysing potential hazards and evaluating existing conditions of vulnerability that together could potentially harm to exposed people, property, services, livelihoods and the environment on which they depend" (reference: UNISDR terminology).

Methodology:

- There are no fixed rules how a general risk assessment should be carried out.
- Five step approaches to risk assessment has been discussed here:

Step 1: Consider the hazards –refer-hazard assessment. *(It is advised here that the hazards (dangers) that are threatening to strike the school should be identified through discussion).*

Step 2: Identify elements at risk and assess their vulnerabilities – refer- vulnerability assessment.

Step 3: Evaluate the risks and decide whether the existing precautions are adequate or whether more should be done. Description of additional steps to take (if necessary), in the form of an action plan, Measures to be taken if things go wrong – an emergency action plan.

Step 4: Record your findings with date of the assessment and Signatures of assessor(s) and stakeholders involved.

Step 5: Review your assessment periodically and revise if necessary.

- It is important to evaluate or rate the risk and deal with the highest risk first.
- Listing the past disasters of the area or locality will be useful to address the most recurring danger.
- Members of the school disaster management committee/members of the nearby community/ staff member of the school may have the knowledge and experience of the dangers faced by the school. They can recall their past experiences; information obtained from them can be useful in risk assessment.
- Finally, a risk map can be prepared by showing the various problems outside the school and their relative location with respect to the school. This risk map can be displayed in the school. The map may be sketched by hand. The map should be orinted in a direction so that the teachers and students can easily understand the map. The North direction may be marked on the map.

- Participatory Disaster Risk Assessment Training Pack and Assessment Tools. Available at http://www.disasterriskreduction.net/fileadmin/user_upload/drought/docs/Participatory%20Disaster%20Risk%20Reduction%20Assessment%20Tool%20and%20Training%20Pack.pdf
- Risk Assessment Guidance notes for Schools. Available at http://www.bexley.gov.uk/CHttpHandler.ashx?id=1703&p=0
- Guidelines for Hazard Assessment and Vulnerability Analysis. Disaster Management edited by Vinod K.Sharma. Pp. 268-274

1.4.4.3 Group Activity (20 minutes)

- Divide participants in 3-4 focussed groups with common interest or state-wise.
- Ask groups to discuss within the groups and identify the following:

  1. Day to day problems/issues of children
  2. Underlying cause of vulnerability
  3. Risks
  4. Capacities

- Ask each group to present in front of the larger groups
- Add if any important point is missing

Handout 1

Classroom Hazard Hunt- Checklist

(Source: School Disaster Management Plan, Seeds)

Instructions

- Identify and take appropriate steps for each of the tasks mentioned in the list.
- As you complete each of the tasks, put a tick mark against it.
- Check your classroom safety score at the end.

☐ 1. We have discussed disaster management plan with our teacher and classmates.

☐ 2. We have identified possible disasters that can affect our school and its surroundings:

Disasters	Probability of Occurrence		
	High	Medium	Low
Earthquake			
Flood			
Cyclone			
Landslide			
Industrial disaster			
Fire accident			
Road accident			
Others			

☐ 3. We have learnt about dos and don'ts to be followed before, during and after any disaster.

☐ 4. We have identified hazards around our school. (Put a tick mark against the applicable category).

Hazards	Very close to our school (less than 1 km away)	Close to our school (1-2 km away)	Far from our school (more than 2 km away)
Hazardous factory			
Busy road			
High-rise building			
Shop selling and/or selling inflammable material			
Open/blocked/unclean drains			
Others			

5. We have complete details about the following:

	Name and Address	Distance from School	Telephone Numbers
Emergency control room (State/District/Taluka)			
Helpline (public utility lines)			
Local hospital			
Nearest chemist store			
Fire station			
Police station			
Others			

☐ 6. We will follow road safety rules.

☐ 7. We know where to assemble in our school in case of an emergency.

☐ 8. In case of an emergency we know that we have to evacuate the school building by walking fast and covering our heads with our hands instead of running to avoid stampede.

☐ 9. We know the location of safest staircase in our school which can be used in case of emergency.

☐ 10. While using the staircase we should move in a queue and to an open ground.

☐ 11. We have identified safe escape routes from our classroom.

☐ 12. We have identified the safest places in the class (away from windows, large and heavy objects that can fall).

☐ 13. We have a first aid kit ready with the following materials for our classroom. (We check the expiry date of the medicines and change them from time to time).

- ☐ Cotton.
- ☐ Bandage.
- ☐ Emergency medicines.

14. We have an emergency kit ready with the following materials for our classroom. (We check the expiry dates of the objects for effective usage).

- ☐ Torch with batteries
- ☐ Medicines and bandages
- ☐ Dry food material like biscuits

15. We have completed hazard hunt and mitigated hazards from our schools:

- ☐ We have removed heavy objects from high walls.
- ☐ We have placed objects (like cupboards and almirahs) away from the doors so that they don't fall and create obstruction in the exit.
- ☐ We have secured material in our laboratory to prevent breakage or leak of chemicals.
- ☐ We have secured books and cupboards in our library to prevent them from falling and causing damage or injuries in case of a disaster.
- ☐ We have fastened all loose movable objects properly.

☐ 16. We know how to turn off electricity of our classroom.

☐ 17. We have learnt to practice "Duck, Cover, Hold" in case of an earthquake.

☐ 18. We have learnt how to practice "Stop, Drop and Roll" in case of fire.

☐ 19. We spread awareness on disaster management wherever we go.

Name _____

Class _____

School _____

Address _____

Date _____

Safety Score of My Classroom:

Count the total number of tick marks and check how safe your class is:

15 and above	**10-15**	**Below 10**
Our class is well equipped to face any disaster. We are a safe class!	We are learning about safety. We need to work hard to make ourselves, our classroom and school safe!	Our class has a long way to go. We need to work much harder to make ourselves and our school safe!

1.4.6 References/Further Reading:

- Child-led disaster risk reduction: a practical guide, Save the Children. Available at http://preventionweb.net/go/3820
- "Disaster Preparedness for School Safety, Course Module, August 2011, AIDMI"
- Disaster Mitigation in Asia and the Pacific, Asian Development Bank, Technical Background Paper by Ian Davis and Satyendra P. Gupta, pp. 25-41.
- Australian Emergency Manual: Community Emergency Planning Guide, National Disaster Office.
- A.W. Coburn, R.J.S. Spence, A. Pomonis, DMTP Vulnerability and Risk Assessment, Cambridge Architectural Research Limited for NUDP, UNDRO.
- W. Nick Carter, Disaster Management: A Disaster Manager's Handbook Chapter 2, pp, 9-23, Appendix A, pp.345-55.

Day2: Mitigation and Preparedness for School Safety

Session 2.1 Structural and Non-Structural Safety

2.1.1 Session Objectives

Structural and non-structural safety issues in schools.

2.1.2 Outline of Content

This session talks about structure and non-structural risk and vulnerabilities. These go beyond school premises. Structural safety is mainly related with the building and its construction and non-structural safety is related with all things present in and outside the school.

2.1.3 Expected Outcome of the Session

By the end of session participants will be:

- Sensitized to structural risks and to know where to look for solutions.
- Equipped to identify the non-structural hazard and the know how to address them.

2.1.4 Detailed Session Plan

Materials required for the day: Flip chart/white board, chart papers, markers and meta cards

2.1.4.1 Recap from previous day (10 minutes)

- Ask participants to tell one new thing they learnt yesterday.
- Encourage each participant to talk.
- Briefly mention all the topics covered during previous day.

2.1.4.2 Question and Answer with Discussion (15 minutes)

- Begin with asking the following questions:
  1. What do you understand by "structural and non-structure safety"?
  2. Whether participated in any such assessment?
- Write down questions on the board.
- Give one Meta card to each participant and ask them to write their answer on it.
- Give them 5 minutes to complete the job.
- After that ask each of them to read out their answer to the group.
- If necessary facilitator should ask participants to elaborate on their answers for the benefit of the group.

2.1.4.3 Note for the facilitator (50 minutes)

All buildings consist of **structural and non-structural elements** and structural elements form a part of the overall **STRUCTURAL SYSTEM.** The term **'structural system'** in building construction refers to a particular method of assembling load carrying members and constructing structural elements of a building so that they support and transmit the applied loads safely to the ground. Structural system of a building is designed to cope with the vertical gravity loads and lateral loads caused by ground shaking (earthquake), wind, flood water, landslide activity etc. **In a building the structural system consists members designed to carry the loads**, **all other members in the building are referred to as non-structural** (example: false ceiling, fixtures, furniture etc.).

Building Structural System and Safety:

Statistics reveal that a large number of school-going children and school staff are exposed to damage and collapse of structures caused by events such as earthquake, cyclone, flood, tsunami, landslide and fire events. One of the key reasons is the poor performance of the building structural system to hazard events.

Box: Did you know that failure to implement building code and safety parameters resulted in:

- In 1995, a school prize-giving ceremony in Dabwali (Haryana) turned to tragedy when a fire broke out, killing nearly 400 people, many of them were children and teenagers.
- 31 teachers died and 95 were injured, 971 students perished (910 in primary schools, 37 in secondary schools, 3 in colleges and 21 in technical schools) and 1,051 were injured in the Bhuj earthquake, (2001, Gujarat).
- In the Bhuj earthquake (2001, Gujarat) 1,884 school buildings collapsed, resulting in a damage of 5,950 classrooms. In addition, 11,761 school buildings suffered major to minor damages, rendering an additional 36,584 rooms unfit for holding instruction sessions.
- Fire swept through the Lord Krishna Middle School in District Kumbakonam (2004). 94 children aged between eight and ten years were charred to death while over 27 others received serious burns.
- The Jammu and Kashmir earthquake (2005) killed at least 17,000 students in schools and seriously injured another 50,000, leaving many disabled and over 300,000 children affected. Moreover 10,000 school buildings were destroyed; in some districts 80% of schools were destroyed.
- The Super Typhoon Durian (2006) in the Philippines caused $20m USD damage to school, including 90-100% of school buildings in three cities and 50-60% of school buildings in two other cities.
- Cyclone SIDR in Bangladesh (2007) destroyed 496 school buildings and damaged 2,110 more.
- Sichuan earthquake (2008), China killed more than 5,335 children in their schools and an estimated 7,000 classrooms collapsed.

A large number of school buildings across the country do not adhere to the design and construction procedures laid down in the '**Building Codes** (*Building codes are a body of rules which specify the minimum requirement a building must meet to ensure the safety and well-being of its occupants. In India, Building Code and Indian Standard Code of Practice is brought out by Bureau of Indian Standards*). It is important to remember that incorporating hazard resistant features in school buildings (during site selection, structural design, and construction) is one of the top most components of a safe school.

Making New Buildings Hazard-Safe: When it comes to new buildings it is essential to ensure that the construction site is appropriately chosen, proper architectural layout, building and related amenities are properly designed and constructed. This can be achieved by meeting the requirement of the prevailing guidelines, codes and standards for construction (for details refer to handout 2).

Upgrading existing structure to become resistant to the damaging effect of hazard: A large number of existing buildings in the country (including school buildings) are found to be unsafe from the hazard point of view (earthquake, tsunami, flood, wind and cyclone, landslide, fire, building element collapse and stampede incident). This is primarily because the buildings are not planned, designed and constructed as per the Building Code. In some cases lack of maintenance (water seepage, rusting of reinforcement bars in concrete, thermal cracking, settlement of the building) causes weakness in load carrying members resulting in failure of structural element or collapse.

Box: It is important to distinguish between the terms retrofit, repair and rehabilitation

Please remember, all the terms refer to the modifications carried to a building, but in different contexts.

Repair: is loosely used to describe any intervention. Here, interventions are minor and non-structural in nature. This includes, repair of thermal cracks by re-plastering, eliminate seepage of water in the building (rainwater or internal plumbing leaks), removal of cracked tiles and fixing new tiles etc.

Retrofit: is a structural intervention and is aimed to strengthen the building. A typical definition of a retrofit is "the reinforcement or upgrading of existing structures to become more resistant and resilient to the damaging effects of hazards". Retrofit aims to strengthen the building to satisfy the requirements of the current codes of hazard resistant design. The building which is intervened for retrofits programme may not be damaged or deteriorated. In case the building has undergone damage in a hazard event, the building needs to be first assessed by a competent engineer and based on the result, a suitable retrofit strategy shall be prepared.

Rehabilitation: is also a structural intervention. The aim here is to regain the original strength of the building, which may have been damaged or deteriorated. This includes strengthening the weakest members through appropriate construction technique.

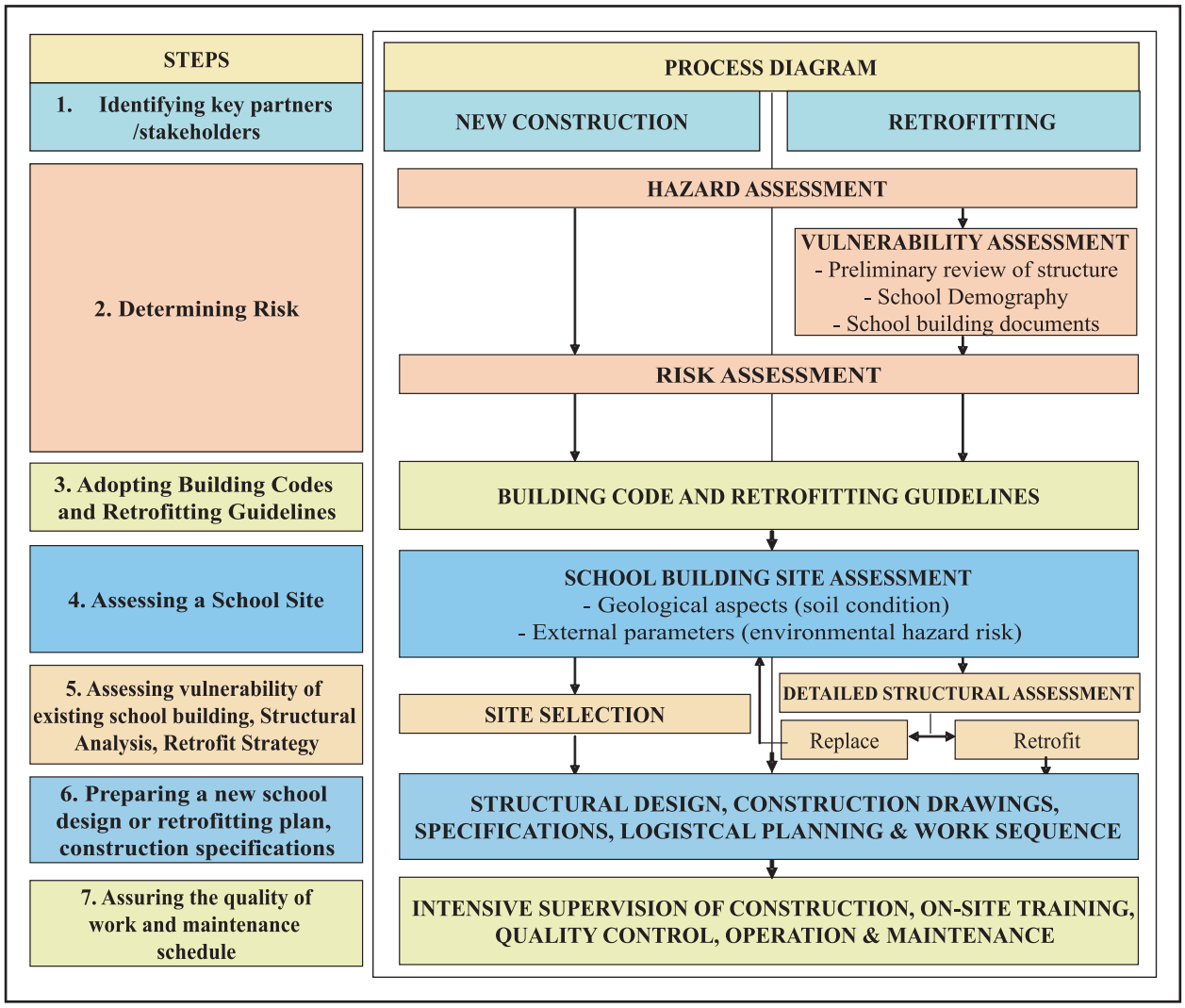
Guidance note on construction of NEW hazard resilient schools and RETROFITTING of existing schools

The following suggested steps provide guidance on both *the construction of new hazard resilient schools* and *retrofitting of existing schools to higher safety levels*. Majority of the steps identified in this table apply to design and construction of both new construction and retrofitting. However, as these processes differ at various stages of the project *(new building and for existing building)*, certain steps may apply solely to the case of new construction or retrofitting. Although the steps have been organized sequentially, many of the activities can be conducted simultaneously. This quick reference guidance note proposes seven steps:

Step	Key questions to be answered?	Description
1. Identifying key partners / stakeholders	*Who can contribute to the initiative? How are local buildings constructed? What materials and skilled resources are locally available?*	Key stakeholders can include: School Management, Parents Teachers Association, Education Department, Local Government, Engineering Department, Subject Experts, Architects, Engineers (Structural, Civil), Contractor/Builder, Disaster Management Professionals (Fire & Emergency Services, Medical Care) & Local Community. It is important to assess availability of construction materials, the skill/ competence of the engineer/architect/contractor/construction artisans to be employed for construction.
2. Determining risk	*What hazards pose risk to existing and prospective schools and where is that risk the greatest?*	Undertake risk screening through identification of key hazards and their assessment, vulnerability assessment, determine possible scenarios, determine the maximum amount of damage or disruption, existing school building documents and drawings (in case if it is not available, building drawings can be prepared), weakness in building plan (shape, architectural features, space issues), strength and structural weakness, external threats (that may arise outside the school premises such as - narrow roads, low lying areas, dangerous buildings etc), disaster management concerns, risk screening report.
3. Adopting building codes and retrofit guidelines	*What guidance and standards exist to ensure a new school or retrofitting plan can meet the performance under the action of the hazard?*	Based on the prevailing hazard and hazard assessment, relevant building codes (National Building Code 2005, Indian Standard Code of Practice published by the Bureau of Indian Standards – BIS) and hazard resistant design guidelines should be adopted for design and construction of the building (new/retrofit) and allied facilities.
4. Assessing a school site	*What makes a site more or less vulnerable to hazards? What other hazards pose a risk? Are there any conditions that make a site particularly vulnerable?*	School site should undergo geotechnical investigation which in turn will identify the selection of the foundation type. In addition local hazards *(such as liquefaction, ground instability, weak and expansive characteristics of soil, high water table, slope instability)* will have to be analyzed as part of the investigation. If the site is inappropriate and the building cannot be shifted to another site, the site must be stabilized by ground improvement methods. School location should also be assessed from the point of highest flood level, water logging, and environmental/chemical hazards in and around the vicinity. Protection works need to be undertaken in case of landslide prone areas *(engineered retaining walls etc.)* and flood prone areas *(flood defence measures etc.)*. The site has to be secured/prepared before start of any construction activity.

Step	Key questions to be answered?	Description
5. Assessing vulnerability of existing school buildings, Structural Analysis, Retrofit Strategy	*What is the condition of the existing school? Should it be retrofit or rebuilt? What measures can be taken to strengthen the building?*	Conditional Assessment describes the process of assessing the actual condition of the structure in relation to the code and use requirement. This technical assessment (to be done only by qualified and experienced engineer) indicates whether the structural requirements are satisfactory, or whether it has to undergo repair, rehabilitation and retrofitting. In case the building qualifies for a seismic retrofit, the initial assessment step is **Rapid Visual Screening** (RVS). The RVS is form of a survey to identify the buildings which are expected to be more vulnerable under an earthquake and need further seismic evaluation (to determine areas of deficiencies through detailed analysis). Based on detailed analysis (Detailed Vulnerability Assessment - DVA), retrofit strategy is undertaken. It is important at this step to determine level of resistance of school building design to various hazards (Fully Operational, Immediate Occupancy, Life Safety, Collapse Prevention).
6. Preparing a new school design or retrofitting plan, construction specifications	*What are the design considerations for a new school or retrofit plan? Who should be involved in the design process? Any special considerations when retrofitting a school?*	The architectural and structural design drawings will have to be made available to the construction team and the client. In case of a retrofit, retrofitting plan and design has to be undertaken by competent organization. Material and Construction specifications should be laid down for execution. Experienced professionals and construction workers shall be identified for execution.
7. Assuring the Quality of work, Building Operations and Maintenance Schedule	*What are the strategies for developing a transparent construction project? What are the approaches to train builders & construction artisans to use hazard resilient techniques? What mechanisms can be adopted to encourage compliance to the hazard resilient design? What should be considered when setting up building operations and maintenance program?*	The construction work on site should meet to the specifications given in the design and construction drawings. The materials used in the construction activity should comply with the code requirements of BIS. Construction procedure should meet to the code requirements given in the Indian Standard Code of Practice. In case the work requires special skills (especially to undertake retrofit activity); training needs to be provided to the construction workers or else a specialized team with the right skills should be employed for construction/retrofitting of the building. Quality control should be adhered on site and should meet the work specifications and the code requirements. Test of raw materials (bricks, sand, aggregate, cement, steel etc) and finished elements (concrete) must be undertaken as per the requirements given in the code. A comprehensive maintenance programme shall be outlined and financial resources shall be allocated for annual repair and maintenance works.

Figure: The seven steps and corresponding process flow diagram for construction of new hazard resilient schools and retrofitting of existing schools



Non-Structural Elements (NSEs) and its Mitigation

As stated above, structural elements in the buildings carry the gravity load and the inertia forces generated in the buildings down to the foundation. On the other hand, non-structural elements are those which are attached to or housed in a building or building system, but are not part of the main load-resisting structural system of the building.

NSEs can be classified under three groups based on their use and function, namely:

1. Contents of buildings: Items required for functionality enabling the use of spaces, such as (i) furniture and minor items, e.g., storage shelves, (ii) facilities and equipments, e.g., refrigerators, washing machines, gas cylinders, TVs, multi-level material stacks, false ceilings, generators and motors, and (iii) door and window panels and frames, large-panel glass panes with frames (as window of infill walling material), and other partitions in buildings.

2. Appendages to buildings: Items projecting out of buildings or attached to their exterior surfaces, either horizontally or vertically, such as chimneys projecting out from buildings, glass or stone cladding used as facades, parapets, small water tanks rested on top of buildings, sunshades, advertisement hoarding affixed to the vertical face of the buildings or anchored on top of the building, and small communication antennas mounted atop buildings. Thus, some of these are architectural elements, while the rest are functional.
3. Services and utilities: Items required for facilitating essential activities in the buildings, such as plumbing lines (e.g., water supply mains, sanitary pipelines, rainwater drain pipes and gas pipelines), electricity cables, and telecommunication wires from outside to inside of building and within the building, air-conditioning ducts, elevators, fire hydrant systems (including water pipes through the buildings).

NSE's are popularly referred as **non-structural hazards** as they have been the cause of a huge number of avoidable injuries and deaths during disasters. Typical examples of non-structural damage include: brick chimneys and parapets falling away from the building; ceiling tiles and light fixtures falling; exterior glass windows cracking; spilling contents of shelves; breakage and leakage of pipes, including sprinkler pipes, gas pipes, water pipes and sewerage; building utility equipment sliding off from their supports or overturning etc.

There are many ways that risks posed by NSE's can be reduced. These range from simple solutions that one can do oneself to complex solutions that require professional help. The process of risk reduction of NSE's is called **Non-Structural Mitigation (NSM).** Though there is very less or scope for the teachers and students to work directly on structural issues but has a major stake in dealing with non-structural elements.

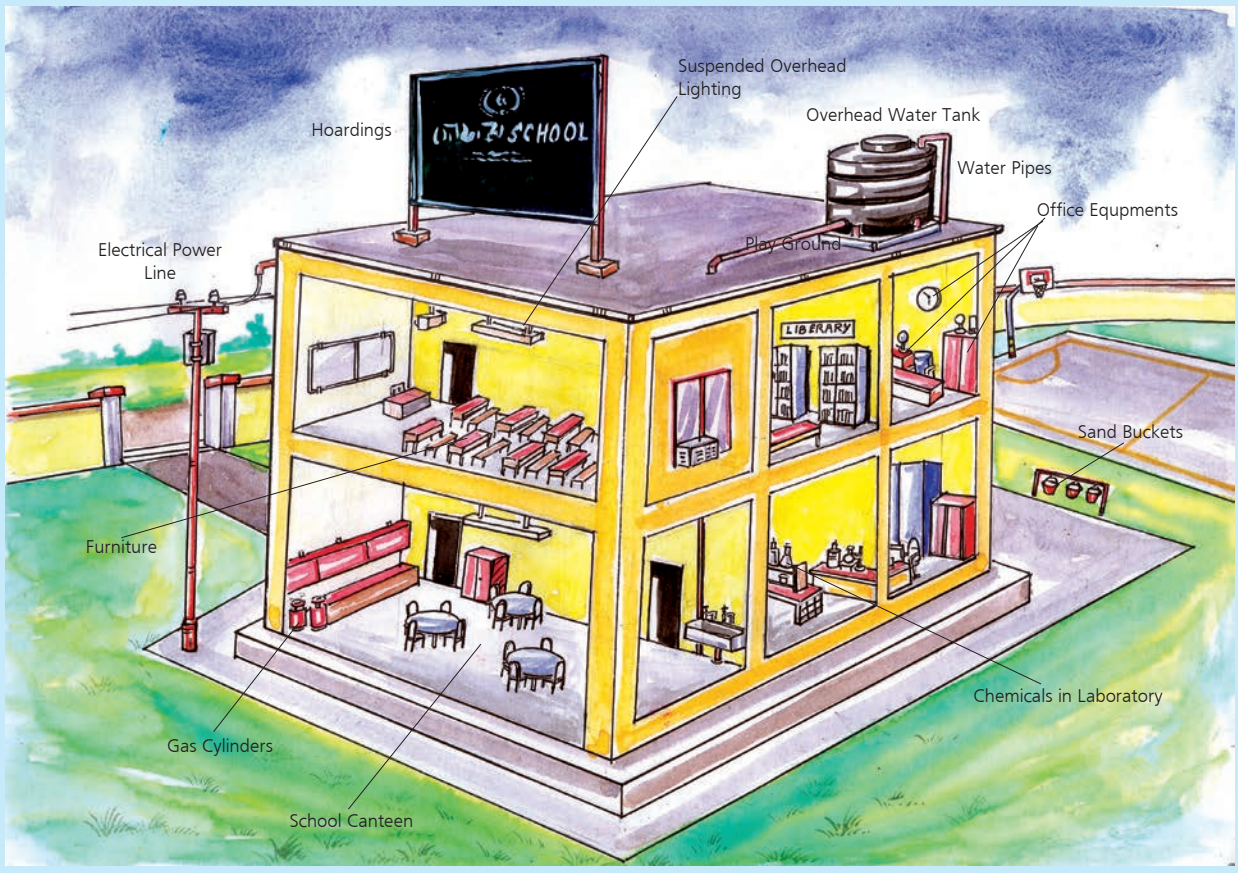
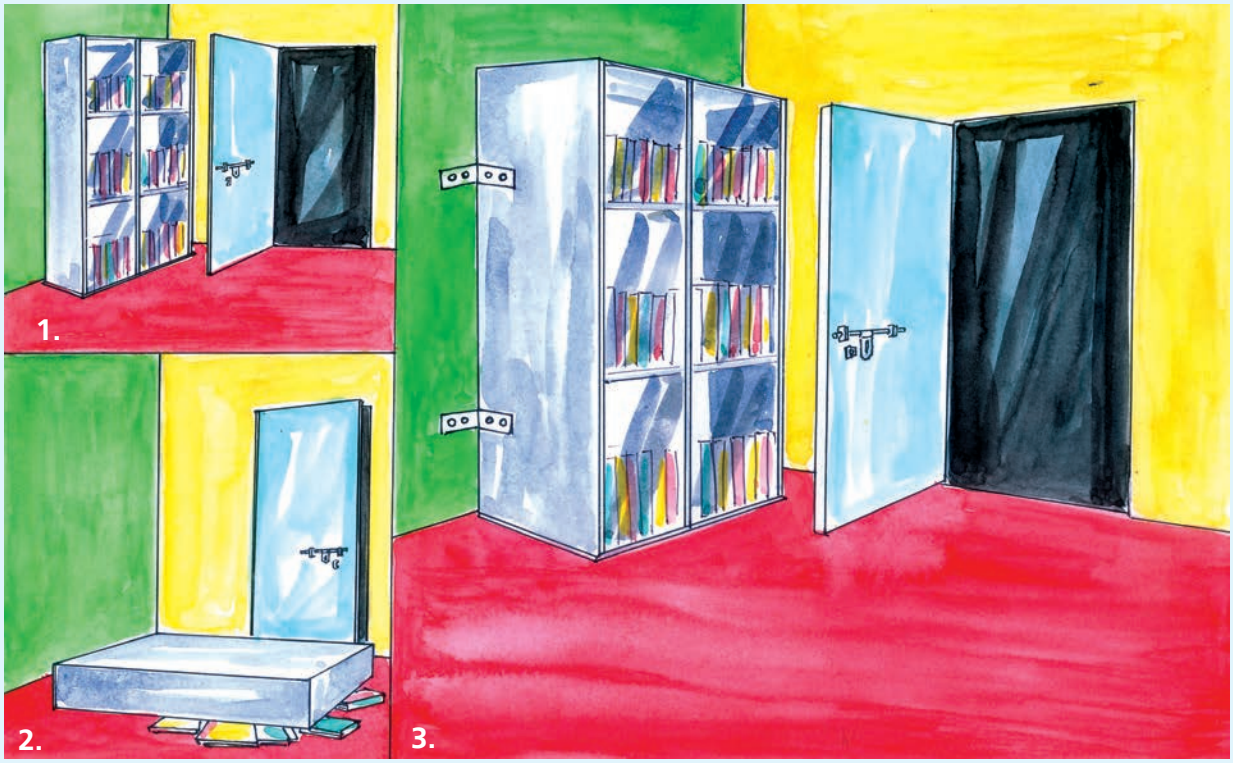


Figure showing typical Non Structural Elements (NSEs) in the school building

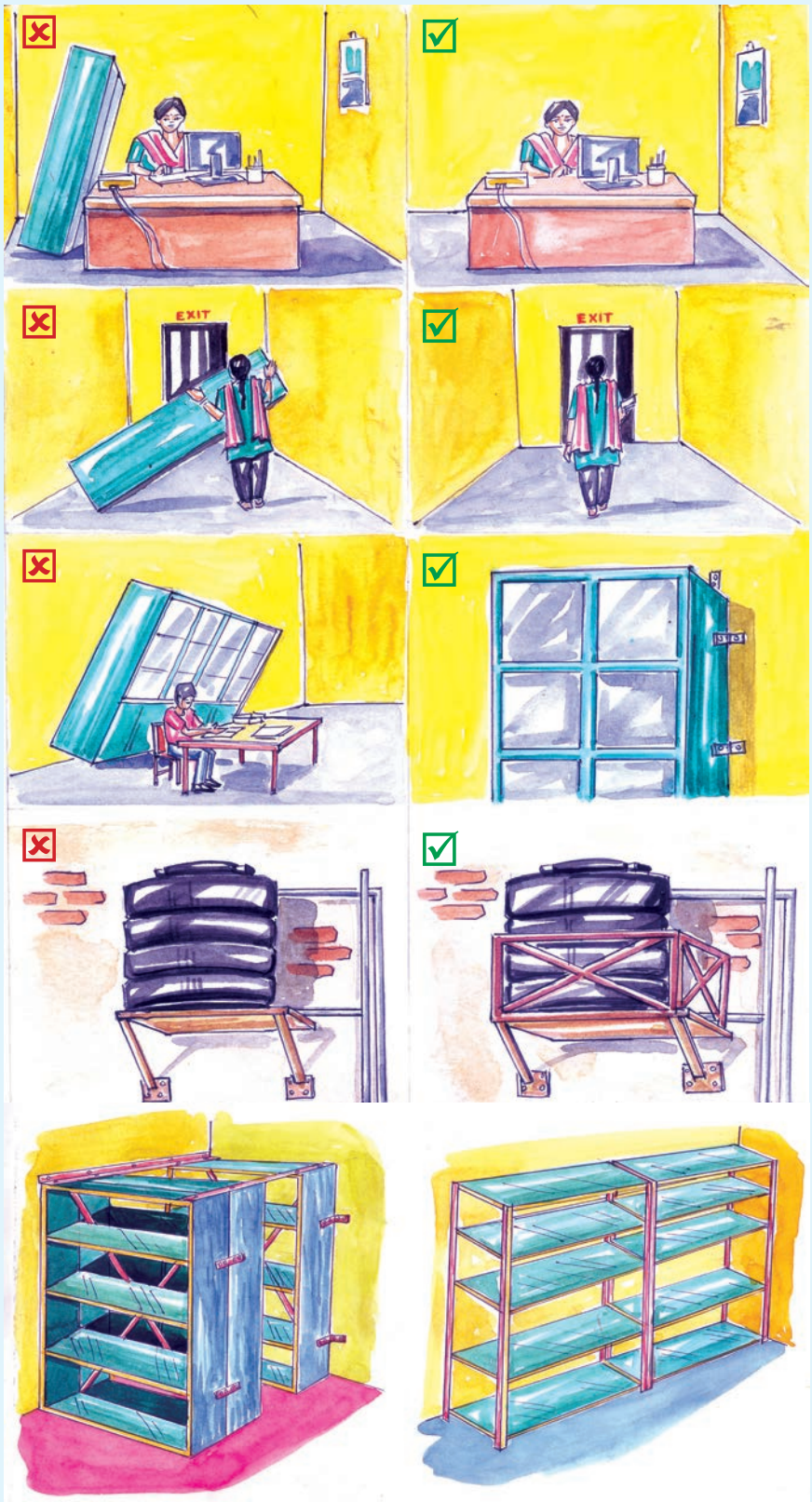
Sketch showing collapse of false ceiling in a school. Poor performance of NSE's in earthquake is avoidable through design.

Anchoring of the book shelves to the floor or top bracing of the book shelves could have easily prevented this falling.



In an earthquake, items (1) inside a building can fall harming people and blocking exits (2). Securing such items (3) with simple devices can prevent them from falling and thus can save lives, prevent injuries and save the resources.

A few examples of NSM methods are cited below for reference:



The simplest way to reduce risks is to move some furniture items so they will not hit anyone or block exits.

Relocate or repositions items that cannot be secured, so that they do not block exit corridors

Use brackets or nylon strap options to secure furniture to wall

If you need to secure very large or heavy objects, get help from both a professional engineer who can design a solution, and maintenance personnel who can implement the solution together. Water tanks and similar items should be secured not only vertically, to be prevented from failure due to gravity, but also to be prevented from being shaken off the side.

Non-structural risks reduced through a series of steps and every step is important.

Non-structural techniques for preventing flood damage include land-use planning, floodplain management, stream corridor protection, flood proofing of existing structures, removing flood-prone development, storm water management, watershed management, flood warning, soil bioengineering, insurance and flood response etc. To withstand flood impacts, regulations may prescribe the building codes for different zones of flood plains.

The non-structural measure requires first the establishment of criteria for the determination of flood plain zones. It can be done either by using the flood risk or it can be done by the type vulnerability of zones to flood damage or the danger of the loss of human lives.

Basic Approach to Floodproofing: Flood proofing is a process for preventing or reducing flood damages to the structure and/or to the contents of buildings located in flood hazard areas. For the most part, it involves altering or changing existing properties. However, it can be incorporated into the design and construction of new buildings.

<table>
<tr>
<td>  </td>
<td>  </td>
<td>Raising (elevation) or Moving (relocation) the Structure
• In areas where flooding is likely to have high velocities, elevate the building on piles or columns without enclosing the lower area.
• In high hazard areas where continued occupancy is unsafe, relocate the building to another location where flood waters can not reach it.
(Source: Design Guide for Improving School Safety in Earthquakes, Floods, and High Winds) FEMA P-424/December 2010)</td>
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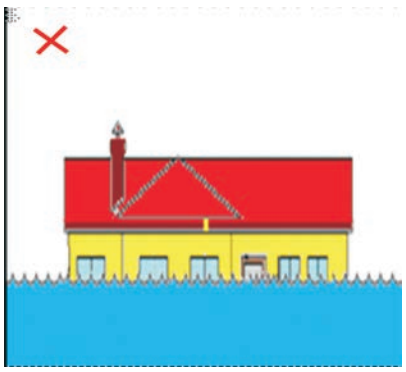
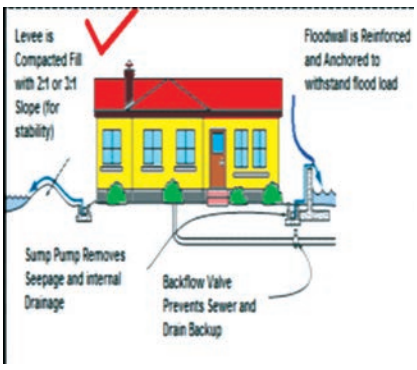
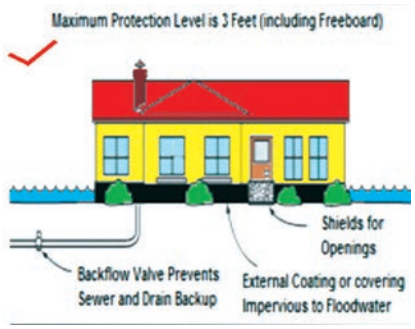
<td>  </td>
<td> 
</td>
<td>To protect the structure from inundation, construct barriers.
(adapted from Homeowner's Guide to Retrofitting- Six ways to Protect Your Home From Flooding, FEMA P-312, Second Edition/December 2009)</td>
</tr>
<tr>
<td>  </td>
<td> 
</td>
<td>To make the building watertight to floods of limited duration (a few hours) and depth (typically less than 3 feet), use dry floodproofing measures.
(adapted from Homeowner's Guide to Retrofitting- Six ways to Protect Your Home From Flooding, FEMA P-312,Second Edition/December 2009)</td>
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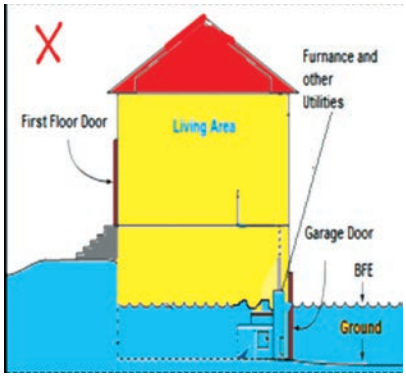
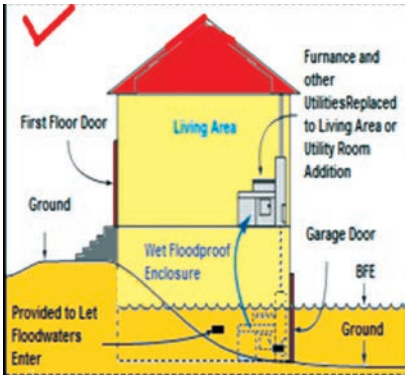
</table>





Wet Floodproofing

Wet floodproofing involves modifying a structure to allow floodwaters inside, but ensuring that there is minimal damage to the building's structure and to its contents.

schools situated in **high wind areas:**

- Poles, towers and tress with considerable trunks diameter should be located away from access roads so that these do not block access if toppled as high wind/Thunderstorms often topple trees, poles, towers.
- Exterior-mounted mechanical equipment (e.g., exhaust fans, rooftop ductwork), electrical equipment (e.g. light fixtures), and communication equipment (e.g. antennae) are often damaged during high winds.
- Damaged equipment can impair the operation of the facility, the equipment can detach and become wind-borne missiles, and water can enter the facility where the equipment was displaced.
- The most common problems typically relate to inadequate equipment anchorage, inadequate strength of the equipment itself, and corrosion.

(Source: Design Guide for Improving School Safety in Earthquakes, Floods, and High Winds) FEMA P-424/December 2010)

Handout 1

National Disaster Management Authority
Checklist for Non-Structural Elements in Schools
Under National School Safety Programme

S. No.	Potential hazard	Check if item is present	Does item need to be moved/anchored?		Total items
	Architectural/ Outside:				
1.	Stone wall cladding	☐	☐	☐	
2.	Spelling of cracked cement plaster	☐	☐	☐	
3.	Broken sun shade	☐	☐	☐	
	Furniture and Equipment:				
4.	Bookshelves	☐	☐	☐	
5.	Storage cabinets	☐	☐	☐	
6.	Display cupboards/ almirah	☐	☐	☐	
7.	Filing cabinets	☐	☐	☐	
8.	Laboratory equipments	☐	☐	☐	
9.	Computer equipments	☐	☐	☐	
10.	Black/ green Boards	☐	☐	☐	
11.	Ceiling fans	☐	☐	☐	
12.	Fire extinguishers	☐	☐	☐	
13.	Storage cabinets	☐	☐	☐	
14.	Sound equipments	☐	☐	☐	
15.	Kitchen equipment	☐	☐	☐	
16.	Computer/ printer/ photocopy Machines	☐	☐	☐	
17.	Moveable wooden partitions	☐	☐	☐	
18.	Standing wooden sinage	☐	☐	☐	
	Ceiling and Overhead:				
19.	Light fixtures	☐	☐	☐	
20.	Coolers	☐	☐	☐	
21.	Water tanks	☐	☐	☐	
22.	Flower pots	☐	☐	☐	
	Wall Mounted Items:				
23.	Shelves	☐	☐	☐	
24.	Pictures frames	☐	☐	☐	
25.	Wall-mounted cabinets	☐	☐	☐	
26.	Wall- mounted gadgets	☐	☐	☐	
27.	Equipment, LCD TV	☐	☐	☐	
28.	Air conditioners	☐	☐	☐	
29.	Aquaguard wall mounted	☐	☐	☐	
	Other:				
30.	Aquarium	☐	☐	☐	

Handout 2

National Building Code (NBC) & Indian Standard (IS) Code of Practice: School buildings and other structures must strictly follow standard engineering technical specifications as mentioned in the 'The National Building Code of India 2005' and 'Standard Code of Practice' (Bureau of Indian Standards). NBC 2005 and Standard Code of Practice bring in specific actions for general construction, structural design and aspects such as site requirements; material specifications to be used in building; basic requirements of school buildings; general construction, design for loads/forces of earthquake, wind load/wind effects, snow loads; fire safety; structural safety; building services among others.

Box: Did you know Bureau of Indian Standards (BIS) have the following IS Code of Practice? Please remember, they are applicable for School Buildings.

Basic Requirements and Design of School Building

- IS 8827:1978 Recommendations for basic requirements of school buildings
- IS 8338:1978 Recommendations relating to primary elements in the design of school library buildings

General Structural Safety

- IS: 456:2000 Code of Practice for Plain and Reinforced Concrete
- IS: 800-1984 Code of Practice for General Construction in Steel
- IS: 801-1975 Code of Practice for Use of Cold Formal Light Gauge Steel Structural Members in General Building Construction
- IS 875 (Part 2):1987 Design loads (other than earthquake) for buildings and structures Part 2 Imposed Loads
- IS 875 (Part 3):1987 Design loads (other than earthquake) for buildings and structures Part 3 Wind Loads
- IS 875 (Part 4):1987 Design loads (other than earthquake) for buildings and structures Part 4 Snow Loads
- IS 875 (Part 5):1987 Design loads (other than earthquake) for buildings and structures Part 5 Special loads and load combination
- IS: 883:1966 Code of Practice for Design of Structural Timber in Building
- IS: 1904:1987 Code of Practice for Structural Safety of Buildings: Foundation
- IS1905:1987 Code of Practice for Structural Safety of Buildings: Masonry Walls
- IS 2911 (Part 1): Section 1: 1979 "Code of Practice for Design and Construction of Pile Foundation

For Cyclone/Wind Storm Protection

- IS 875 (3)-1987 "Code of Practice for Design Loads (other than Earthquake) for Buildings and Structures, Part 3, Wind Loads"
- Guidelines *(Based on IS 875 (3)-1987)* for improving the Cyclonic Resistance of Low rise houses and other building

For Earthquake Protection

- IS: 1893-2002 "Criteria for Earthquake Resistant Design of Structures (Fifth Revision)"
- IS:13920-1993 "Ductile Detailing of Reinforced Concrete Structures subjected to Seismic Forces - Code of Practice"
- IS:4326-1993 "Earthquake Resistant Design and Construction of Buildings - Code of Practice (Second Revision)"
- IS:13828-1993 "Improving Earthquake Resistance of Low Strength Masonry Buildings - Guidelines"
- IS:13827-1993 "Improving Earthquake Resistance of Earthen Buildings - Guidelines",
- IS:13935-1993 "Repair and Seismic Strengthening of Buildings - Guidelines"

For Protection of Landslide Hazard

- IS 14458 (Part 1): 1998 Guidelines for retaining wall for hill area: Part 1 Selection of type of wall.
- IS 14458 (Part 2): 1997 Guidelines for retaining wall for hill area: Part 2 Design of retaining/breast walls
- IS 14458 (Part 3): 1998 Guidelines for retaining wall for hill area: Part 3 Construction of dry stone walls
- IS 14496 (Part 2): 1998 Guidelines for preparation of landslide – Hazard zonation maps in mountainous terrains: Part 2 Macro-zonation

For Fire Safety

- National Building Code (NBC, 2005), Part IV Fire and Life Safety
- IS 8827:1978 Recommendations for basic requirements of school buildings
- IS 1642: 1989 Fire Safety of Buildings (General) – Details of Construction
- IS 1643: 1988 Fire Safety of Buildings (General) - Exposure Hazard
- IS 1644: 1988 Fire Safety of Buildings (General) – Exit Requirements and Personal Hazard
- IS 1646: 1997 Fire Safety of Buildings (General) - Electrical Installations

Please consult an experienced Structural Engineer and check if your school building complies with the Building Codes.

Session 2.2 School Disaster Management Plan (SDMP)

2.2.1 Session Objectives

- Introduction of School DM plan-Model template.
- Management of schools as relief centre

2.2.2 Outline of Content

This session will introduce the SDMP-Model template to the participants. Session will also explain: how to identify key stakeholders; and what roles they are suppose to play; it will also discuss about the importance of School Disaster Management Plan (SDMP).

2.2.3 Expected Outcome of the Session

By the end of this session participants will be able to:

- Identify the key stakeholders and their role in SDMP preparation
- Develop skills to prepare the SDMPs

2.2.4 Detailed Session Plan

2.2.4.1 Introduction (five minutes)

Introduction of Resource Person by Course Coordinator

2.2.4.2 Question and Answer with Discussion (15 minutes)

Ask participants the following questions:

- Have you heard about school disaster management plan?
- If yes, have you been part of any such exercise?

Ask all the participants to share their experience on SDMP.

2.2.4.3 Note for the Facilitator (40 minutes)

What is "school disaster management plan"?

"School Disaster Management Plan" is a document prepared by the schools themselves for their own **school disaster management**. School disaster management is the process of assessment and planning, physical protection and response capacity development designed to:

- Protect students and the staff from physical harm;
- Minimize disruption and ensure the continuity of education for all children;
- Develop and maintain a culture of safety[1].

This document provides:

- Details of the school including geographic location of the school, number of students, teachers, etc.;
- Details of the hazards, vulnerabilities, capacities and risk assessment including identification of hazards and vulnerable locations, with in the school and outside the school campus, structural and non-structural assessment of that particular school; database of past disasters etc.;
- Details of school disaster management committee and other stakeholders including task force members, government authorities etc.;
- This document also describes key roles and responsibilities of each stakeholder during different phases including who will be responsible for coordination, control and communication when responding to an emergency;
- It also outlines the process by which school can reduce and manage the impact of disasters;
- Not all emergencies can be prevented. Therefore, the school disaster plan also describes arrangements for responding to those emergencies that do occur/are at a greater chance of occurring;

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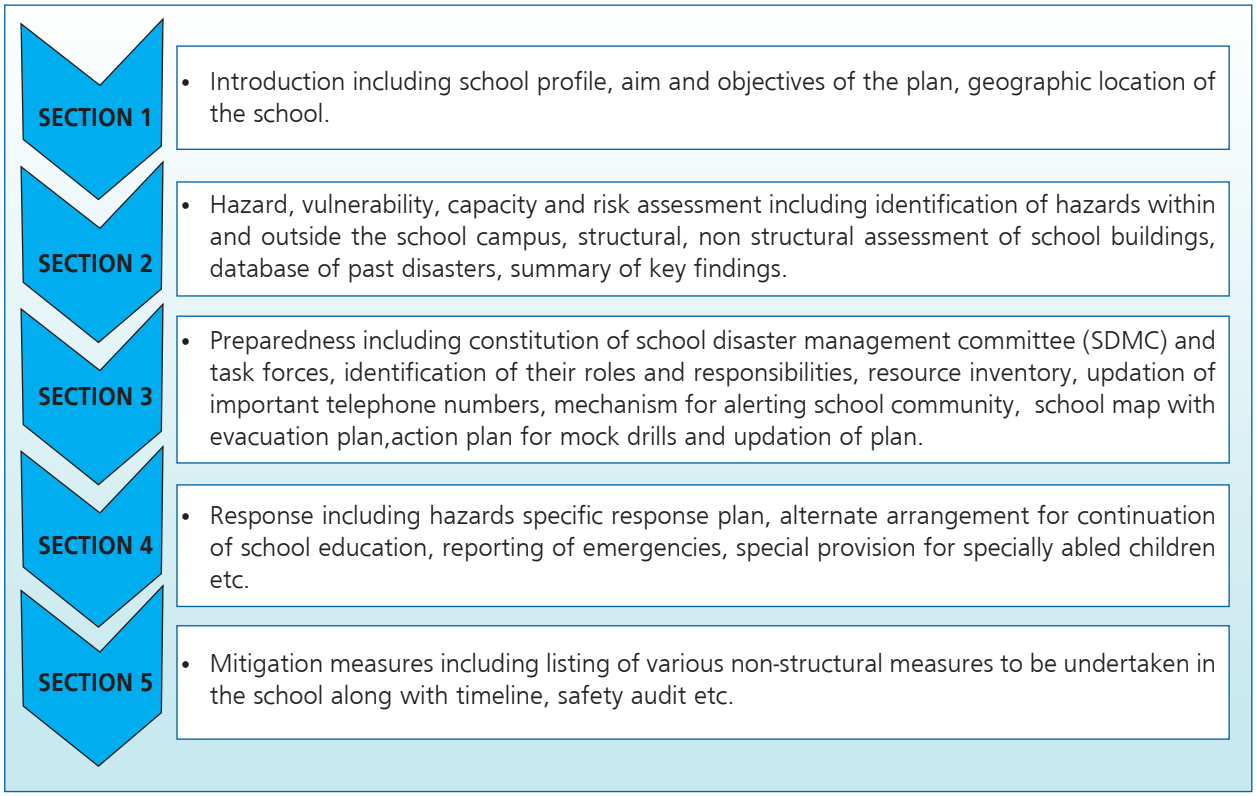
1. Disaster and Emergency Preparedness: Guidance for Schools. Available at http://www.ifc.org/wps/wcm/connect/8b796b004970c0199a7ada336b93d75f/DisERHandbook.pdf?MOD=AJPERES.

- It also lists down the important emergency numbers;
- It also discusses about the conduct of mock drills.

Under National School Safety Programme (NSSP), **School DM plan model template,** with following sections has been developed:



Section 1: Introduction: This section of the plan provides information relating to the school like school profile, geographical location of the school, number of teachers, students and differentially able students etc. Information like aim and objective of the plan, stakeholders who will be using the plan, members who would be responsible for implementing, reviewing and updating the plan should also be provided here. Demographic details of the buildings and surrounding environment should also be provided here.

Section 2: Hazard Risk and Vulnerability Assessment: This is one of the crucial steps in SDMP development. This section of the plan will focus on Identifying:

- Hazards (dangers) threatening the school and in the vicinity of the school.
- Vulnerable elements, areas etc. within the school building.
- Probable risks arising out of structural and non-structural elements.
- Past disasters that had affected the school or in the vicinity of the school.

For identifying non-structural and structural weakness in the school building, a committee can be constituted, comprising members of school administration, officer from nearest fire station, civil defense post warden, police station, engineers from PWD, SSA, Municipal Corporation/Zilla Parishad etc. Likewise this committee can also identify hazard outside the school campus particularly the hazard related to road/traffic outside the school building, industrial (chemical hazard) which may be due to location of such an industry in vicinity of the school. This section will include:

- Nonstructural assessment (can be done practically by all teachers and select students in a group exercise).
- Structural assessment (to be done by a Civil Engineer, Licensed Building Surveyor).
- Identification of hazards outside the school campus (road safety, industrial hazard, chemical hazard, open drain flooding etc.).
- Database of past disasters/accidents which has affected the schools.
- Identification of vulnerable locations within the school campus
- Summary of the key findings and identifications of action for mitigation.

Section 3: Preparedness: To ensure better preparedness and response in disasters, it is recommended that every school should constitute a "**School Disaster Management Committee**" along with various sub committees/ task forces. The recommended structure for a School Disaster Management Committee is as follows:

- Chairperson: Principal
- Vice Principal, heads of primary and middle sections
- Education Officer / Deputy Education Officer for the zone
- Parent Teacher Association President
- Students (NCC, NSS, Scouts and Guides, Head Boy and Head Girl]
- Representative of Relief/ Revenue/ Disaster Management Department/ District / Administration/ Municipal Corporation
- Representative of the Fire Services (from Closest Fire Station] or Civil defense personnel.
- Representative of Police (from Closest Police Station)
- Representative of Health Department (Local Doctor)
- A Warden from Civil Defense.

The sub committees mentioned below will work under overall supervision of school DM Committee (SDMC) following sub committees can be constituted:

- Awareness generation and warning and information dissemination team.
- Evacuation team.
- Search and rescue team (only teachers to be member of this team)
- Fire safety team
- First aid team.
- Bus safety team (for each bus).
- Site security team.

For first aid and site security team the representative of nearest Police Station, Hospital/health services and fire station may be identified. The roles and responsibilities of these committees during disaster as well as peace time need to be defined clearly.

To ensure orderly and complete evacuation of school buildings whenever an emergency occurs, or the alarm sounds, the SDMP- Model template recommends, preparation of floor wise **evacuation plan.** The evacuation plan will be displayed prominently at the notice board at each of the floor. An evacuation map shows safest and shortest exit routes from each room of the school building. The evacuation plan may be discussed by the evacuation team with the teachers and students to generate awareness to help conduct mock drill.

For more information on Emergency Evacuation Plan, refer to PPT.

In addition to above, this section of SDMP should have:

- Resource Inventory i.e. listing of resources (which could be used during any disaster situation for effective response) available inside the school campus and outside the school within vicinity of one-five kilometers.

- Critical health problem record of each child.
- Updating of important telephone numbers in Principal's room.
- Mechanism for alerting students and teachers during school time including installation of alarm.
- Annual calendar for conducting various preparedness activities along with plan to implement it.
- Action plan for conducting mock drills and development of a checklist to identify the gaps.
- Steps for updation of DM plan-indicating the timeline and the process of doing it along with the roles of teachers and other non teaching staffs.
- Action plan for training of teachers, non teaching staffs and students on DM including all the task force constituted.
- Annual calendar of events for awareness generation and sensitization activities.

Section 4: Response: This section of the plan should be very precise, crisp indicating the various roles and responsibilities of teachers, non teaching staff and students during disaster situation. The plan should clearly mention the steps to be followed in case of an earthquake, fire, flooding, cyclone or such emergent situation like stampede or health problems faced by any student. The plan should include all the steps to be taken up by the school management to ensure safety of the child including their safe evacuation from the affected site till the child is handed over to the parents. It will also include all other steps to be taken up by the management to ensure supply of essential services in the school like power, water and food and basic first aid during a disaster and immediately after it. This section will include:

- Hazards specific response plan including crowd management to avoid stampede on special days like annual functions, sport day etc.
- Alternate arrangement for continuation of school education. (Delivery of education during and post disaster situation particularly in cases where the school will be used as relief shelters).
- Reporting of Emergencies/Disasters to the Government.
- Special provision for specially- abled children.

Section 5: Mitigation measures: This section of the plan will focus on various mitigation measures to be undertaken by the school. Mitigation planning is a long term exercise and hence it is essential to divide the strategy prioritizing the actions along with with definite timeline. It is also necessary to prioritise the actions based on the nature of threat and its potential to cause injuries and loss of life. As a part of mitigation action, school should also undertake periodic fire and electrical safety checks, testing of drinking water and hygienic conditions in school etc. This section will include:

- Listing of various Non-structural measures to be undertaken in the school along with timeline.
- Safety audit.

Who can prepare School Disaster Management Plan (SDMP)?

The school disaster management committee (SDMC) can prepare school disaster management plan. Development of SDMP by school disaster management committee ensures ownership and reflects local condition. The plan should be prepared through the participatory approach. If needed, external agency, such as an NGO working in the field of school safety and disability issues, can facilitate the school in developing the plan. The School Disaster Management Plan should be reviewed every year. Schools should use NSSP-school DM template for the preparation of their own school disaster management plan.

Management of Schools as Relief Centre

During emergency, often schools act as shelters for the communities affected by disasters. In areas prone to disaster it is a common practice. While making the plan for disaster management, it should be kept in mind as how

School DM plan model template. Available at http://ndma.gov.in/ndma/nssp.html.

school can act as shelter in the time of any disaster. School facilities should be planned accordingly. It is also one of the major points to be integrated in the school disaster management plan, and village disaster management plan.

2.2.4.4 Energizer

Please refer Annex 1 for the list of energisers. Choose one depending on the availability of time and number of participants.

2.2.5 Session Resources

PPT1

Emergency Evacuation Plan

Identifying the evacuation assembly area and the evacuation route is critical in a school emergency and disaster preparedness plan.

PPT2

An evacuation route map showing the site and neighbourhood map with identified evacuation routes and locations should be posted in strategic and conspicuous places (preferably in each room with the room marked on the map)*.

- Depending on the hazard, the school should identify safe evacuation areas.
- Open areas for earthquake and fire.
- Shelter for windstorms, heavy rainfall, etc.
- Higher ground for floods and flash floods.

Evacuation routes should avoid potentially hazardous conditions and elements.

- Avoid routes where there are objects like toppled cabinets, broken glass, fallen trees, cut electrical wires) which may hinder evacuation.
- Avoid flooded areas.
- Avoid storage areas of combustible or hazardous chemicals.

PPT 3

Steps for preparing school map with evacuation plan:

- Take the layout of the school building.
- Prepare a line-drawing of the school layout.
- Separate each floor plan of the building into separate drawings.
- Identify and mark on the map safe spots depending on the hazard.
- Mark the classrooms and the exits from the school building in the map.
- Identify safest and shortest exit routes for each room in the building.
- Depending on the number of students and the number of exit routes divide the number of students equally. Each exit points should have the same flow of students to avoid bottlenecks and stampede during evacuation.
- On the drawing, mark the exit route from each room to the assembly area by arrow sign
- Allocation of the flow of students should be timed so that the students reach the safe spots at the quickest possible time. The first floor occupants should evacuate first followed by the second floor occupants if

they are evacuating from the same staircase. Likewise, the occupants of the classroom next to the staircase should evacuate first followed by occupants of the next farthest classroom. This flow of occupants should be monitored by the teachers or the class captains of the respective classrooms during the actual evacuation.

- Mark locations of fire extinguishers, rescue and first aid equipment.
- Mark accessible evacuation route along with accessible/appropriate signage.
- Display the evacuation map showing the evacuation route at strategic locations so that children can see the same often and understand the evacuation route.
- Mark clearly all the emergency routes with the help of signage on the walls of the school building.
- Periodically inspect and update the emergency tool kits for example inspect whether fire-suppression or extinguishing equipments are updated or not.
- Plan two ways out of the building from different locations throughout the school as a backup plan.
- Reach out to the local community for assistance. Sometimes students will need to be evacuated to a further safer location for care or safety until parents can pick them up.
- Install accessible and appropriate signage that will indicate accessible evacuation route.

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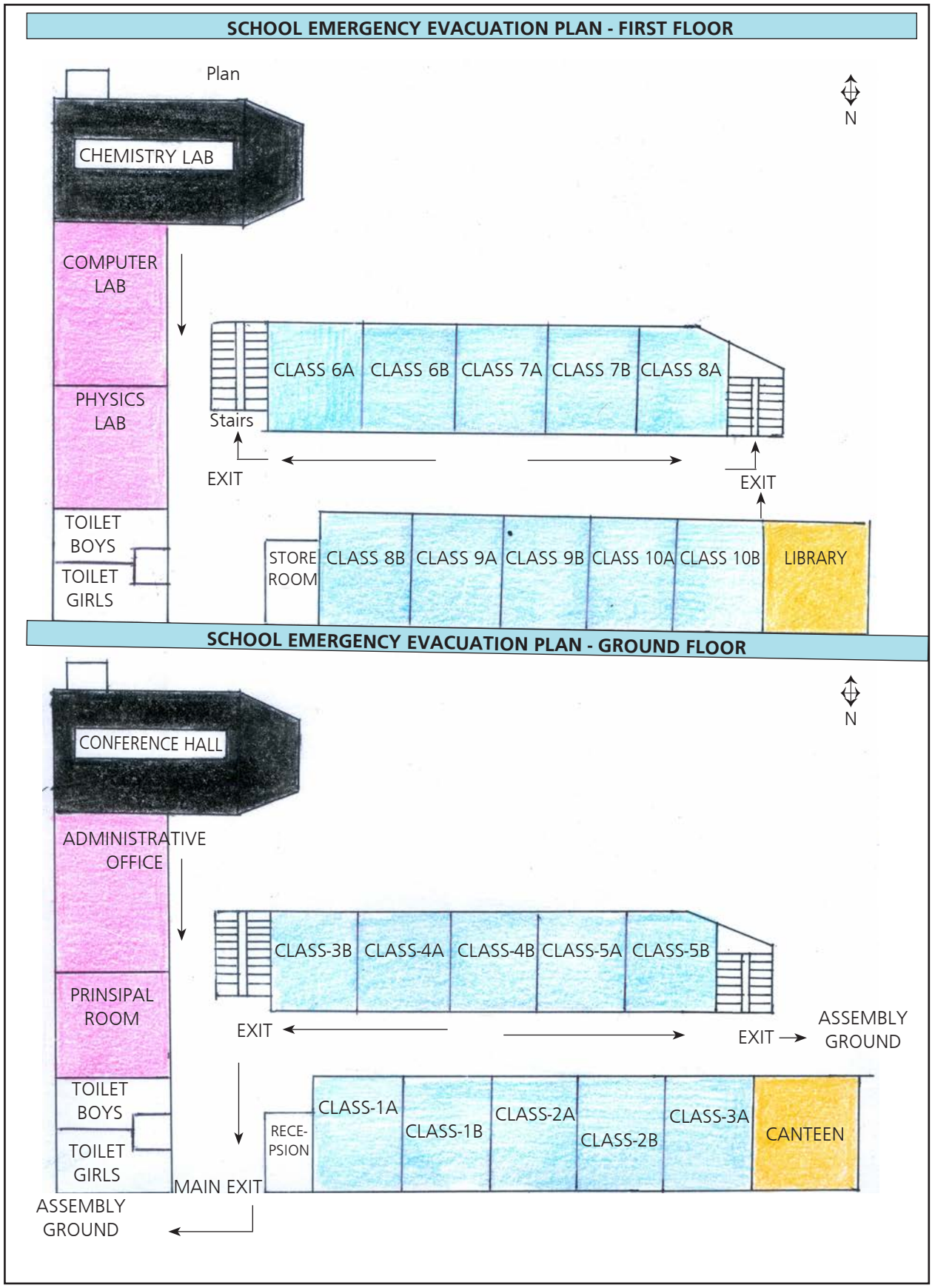
* Guidance notes: school emergency and disaster preparedness. UNISDR Asia and the Pacific 2010. Available at http://www.unisdr.org/files/15655_1msshguidenotesprefinal0313101.pdf.

** Guidelines for conducting Earthquake and Fire Mock Drills in Schools/Educational institutions, Disaster Management Cell, Department of Revenue, H.P. Secretariat, Shimla available at http://hpsdma.nic.in.

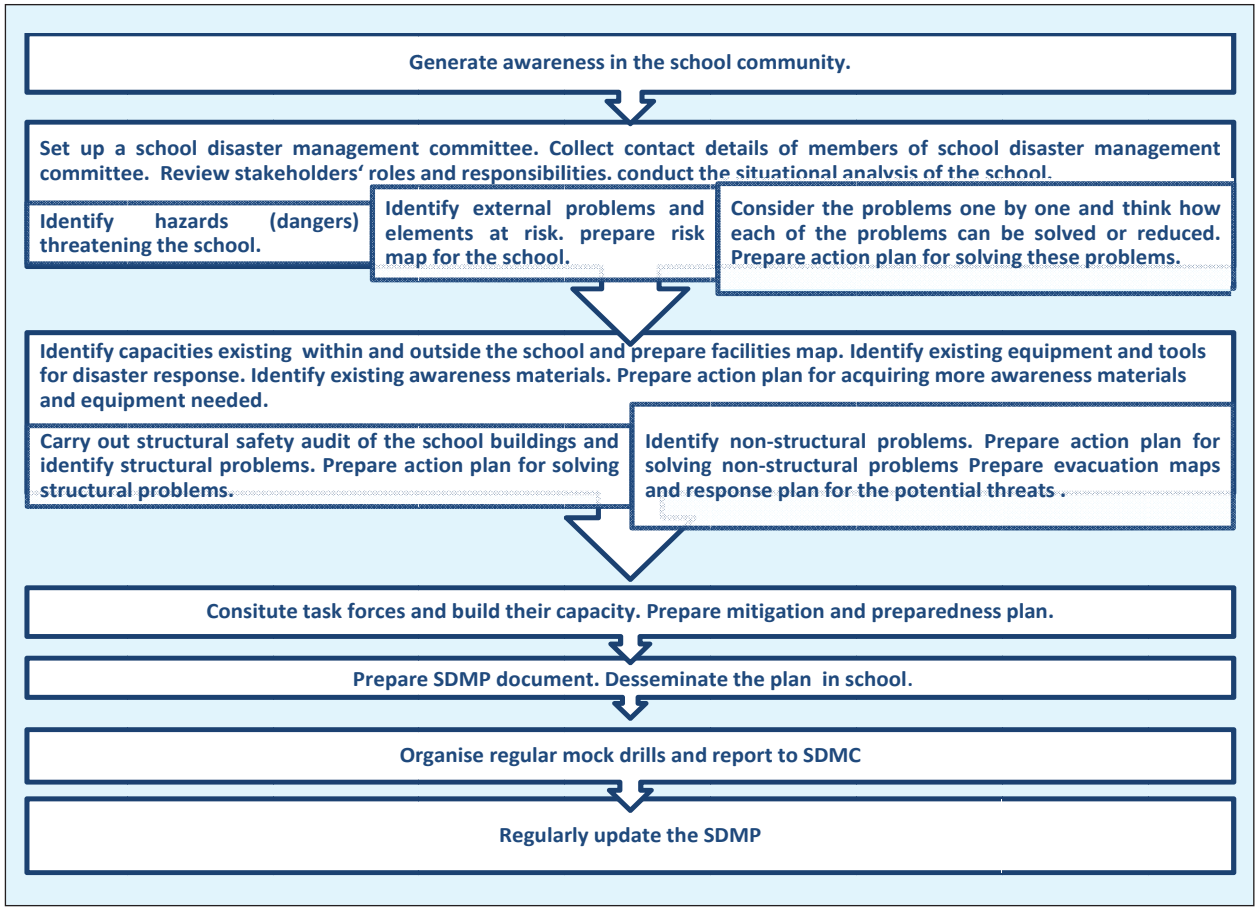
Preparing Schools For A Safer Tomorrow-a multi-hazard approach manual on school safety in Bangladesh. Available at http://www.preventionweb.net/files/17501_16793schoolsafetymanualseptemberver.pdf


SCHOOL EMERGENCY EVACUATION PLAN - FIRST FLOOR
Plan
N
CHEMISTRY LAB
COMPUTER LAB
PHYSICS LAB
TOILET BOYS
TOILET GIRLS
CLASS 6A
CLASS 6B
CLASS 7A
CLASS 7B
CLASS 8A
Stairs
EXIT
EXIT
STORE ROOM
CLASS 8B
CLASS 9A
CLASS 9B
CLASS 10A
CLASS 10B
LIBRARY
SCHOOL EMERGENCY EVACUATION PLAN - GROUND FLOOR
N
CONFERENCE HALL
ADMINISTRATIVE OFFICE
PRINSIPAL ROOM
TOILET BOYS
TOILET GIRLS
CLASS-3B
CLASS-4A
CLASS-4B
CLASS-5A
CLASS-5B
EXIT
EXIT
ASSEMBLY GROUND
RECE-PSION
CLASS-1A
CLASS-1B
CLASS-2A
CLASS-2B
CLASS-3A
CANTEEN
MAIN EXIT
ASSEMBLY GROUND

Handouts

How to make School Disaster Management Plan?

The following steps are suggested to make disaster management plan for the school.



2.2.6 Reference/Further Reading:

1. http://tdma.nic.in/pdf/n127.pdf.
2. http://www.riskred.org/schools/ifc2.pdf.
3. Disaster Management in Education- National Perspective, GoI – UNDP, DRM Programme.
4. Right to Education in Emergency situations Report of the Special Rapporteur on the Right to Education, Vernor Muñoz.
5. Guidelines for Safety from Natural Disasters for Schools and Other Educational Institutions by Dr. V. K. Sharma.
6. Disaster and Emergency Preparedness: Guidance for Schools. Available at http://www.ifc.org/wps/wcm/connect/8b796b004970c0199a7ada336b93d75f/DisERHandbook.pdf?MOD=AJPERES.

Session 2.3 Task Force

2.3.1 Session Objectives

- Roles and responsibilities of various task forces (fire safety in schools, first aid skills, search and rescue techniques in disasters, early warning etc.),
- Team members and training required by task forces.

2.3.2 Outline of Content

This session details out importance of task forces in school disaster management. What kind of task forces should be formed in the school, who should be the members, what should be the criteria for selection of these members, training and information required by the members etc. The session also mentions the roles and responsibilities of each task force as well.

2.3.3 Expected Outcome of the Session

- To enable the participants to identify the need for task forces, criteria for selection and their roles and responsibilities.
- Able to identify that, which all technique the children to be trained upon and what all to be avoided with children

2.3.4 Detailed Session Plan

2.3.4.1 Question and Answer with Discussion (20 minutes)

Begin with asking the following questions:

a) What is task force?
b) Do you have any task force in your school to deal with emergencies?
c) Are you part of any task force in your school?

On getting the answer in affirmative, ask participants to elaborate on their answer.

2.3.4.2 Note for the Facilitator (25 minutes)

This session would speak on task force in general and not on any explicitly on designated task forces (search and rescue, first aid, etc). Explain that fellow students, teachers, staff and common people in the vicinity of the school are first to react to any disaster. If we want to protect our children, we will need to form task force on local level and train them so that they are able render services in any emergency situation. It is important for the success of any DM plan that children are part of the plan and are active participants in all the activities as well. Various persons and institutions can help to prepare schools for disaster events and emergencies.

Following aspects may be talked upon:

If it is middle school and above:	**If it is primary school**:
– Task forces will be created at schools. – Members will be children, school staff and teachers. – Coordinators are senior teachers. – Children should be of VIII and above or above the age group of 13-14 years. – Trainee should be from std VIII and above. – Training should be in accordance to learning and retaining capacity of a child. – Members' consent to be taken before nomination and no enforcement. – Gender balance should be checked. – Inclusion (CWD as a member of TF and other inclusion). – Adequate refresh training. – Practice session compulsory during training session by each member.	– Task forces will be created around school. – Members will be youth and those people who are present during the school hours and residing in the vicinity of the school. – Coordinators are senior teachers. – Members consent to be taken before nomination and no enforcement. – Gender balance should be checked. – Inclusion (PWD/CWD, SC, ST, minorities). – Adequate refresh training. – Practice session compulsory during training session by each member. – Criteria of nomination of task force.

If it is middle school and above: – Focus on safety of a rescuer. – Criteria of nomination of task force. – Reason behind the usage of specific technique to be given. – Once the children master in basic than the specialized training can be provided to them. – Training to be provided at their own location (school).	

Main task forces needed in the school, suggested team members, material and training required for the capacity building of these sub teams are given in the table below: *(for roles and responsibility see handout 1):*

Main task forces needed in the school	Suggested team members	Materials required	Training required
Awareness Generation, Warning and Information Dissemination team	Teachers (disaster management, art and craft, music, computer, electronics, geography, in-charge and members from HAM club, parents, students preferably from std. VIII to std. XII	IEC material**,** map of the school, SDMP, computer with internet access, 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 like district magistrate, police, fire services, health department, Red Cross, etc.	A thorough orientation on different phases of disaster management, training in the operation of VHF wireless equipment, familiarity with the internet and disaster information websites
Evacuation team	Class teachers, administrative staff and senior students with the parents consent preferably from NCC, NSS, Scouts and Guides.	A detailed map of the school with the different exits, stairs, doors, and windows clearly marked, SDMP with evacuation plan, master keys, siren, signs to post and writing materials, special equipment for mobility-impaired students.	training in evacuation procedures through local fire services/civil defence etc.
Search and rescue team	Sports teachers, staff, NCC, NSS, scouts and guides instructors, civil defence trainer, fire Service representative, 1-2 parents (preferably from the armed / paramilitary forces / police / fire services / civil defense), able-bodied students (Preferably teachers to be member of this team).	detailed map of the school with the different exits, stairs, doors, and windows clearly marked, SDMP, torches with spare batteries, master keys**,** hard hats**,** stretchers, ropes and ladders etc.	Training through local civil defence / fire services in basic search and rescue techniques.
First aid team	School doctor/nurse, volunteers (Civil Defence/Red Cross/ St. John's Brigade etc.), 1-2 parents (preferably from the medical / paramedical profession), students interested in health issues, teachers and staff.	First aid kit for the entire school, classroom first aid kits, health cards with information on special medicines being regularly taken by any student(s) / employees, emergency cards with information on medical resources in the area.	Training through local civil defence / fire services / St. John's Brigade / Red Cross / health department on basic first aid techniques.
Fire safety team	Teachers, staff, 1-2 parents (preferably from fire services / civil defence),Students with the consent of parents	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 through local civil defense / fire services in basic fire fighting and fire safety techniques.

Handout 1

Awareness Generation, Warning and Information Dissemination Team

Role and responsibilities include:

Before 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, neighbouring areas in coordination with the RWA representatives, the local police station, and any local NGOs.
- Organise demonstrations on fire safety, first aid, search and rescue etc. organise mock drill exercises.
- Orientation on disability including accessible warning messages e.g. whistle and loud hailer for children with visual impairment, flags for children with hearing impairment, assistance required for children and teachers with physical disabilities who may use wheelchairs, crutches etc.
- Monitor and take regular updates from media on the potential hazards that school can face, e.g. weather forecast of heavy rains, cloud burst, cyclones, etc.
- Inform the school authorities of any impending hazardous situation.
- Assist Principal to maintain contact with district authorities.
- Display warning signs.
- Disseminate information to all classrooms, teachers and other stakeholders.
- Coordinate with other task forces and inform them the weather situation.

During Disaster:

- Depending on the type of disaster do the necessary action as practised during the drill e.g. "**Duck, cover and hold** "for earthquake, move to the upper floor / higher ground for flood etc.
- Give warning messages to the school in case of an emergency.
- Reporting to the school disaster management committee about the disaster in the school building.
- Reporting to the government emergency response departments (Fire, SDM, Police etc.)
- In case of the school being used as a shelter, inform the shelter staff about the latest updates and weather reports.
- Assist Principal to report to the government response departments (SDM, fire station, police).
- Assist evacuation team in evacuation of the school building.

After Disaster

- Continue monitoring the various information sources.
- Keep reporting on the disaster situation to all concerned task forces and coordinate with them.
- Disseminate safety tips in coordination with the Awareness Generation Team.
- Cooperate with district administration in preparing updates and disseminating information.
- Work with the Incident response team from the district administration in preparing updates and disseminating information.

School disaster management plan. Available at http://tdma.nic.in/pdf/n127.pdf.

Preparing schools for a safer tomorrow - a multi-hazard approach manual on school safety in Bangladesh. Available at http://www.narri-bd.org/documents/training/School%20Safety%20Manual.pdf.

Handout 2

Evacuation Team

Roles and Responsibilities include:

Before Disaster:

- Participate in trainings on disaster awareness.
- Buy / collect necessary equipment and tools for evacuation.
- Conduct and participate in evacuation trainings.
- Test special procedures for evacuating children and teachers with disabilities
- Participate in mock drill exercises.
- Check the exits. Identify evacuation area.
- Make sure there is no non-structural problems etc. present on the evacuation routes.
- Make sure that necessary supplies are accessible.
- Be prepared for special equipment needs for students with disability.

During Disaster:

- Depending on the type of disaster do the necessary action as practised during the drill.
- Evacuate in an orderly manner (check evacuation route and safe evacuation place identified before evacuation).
- Assist children and teachers with disabilities as required.

After Disaster

- Ensure that emergency assembly area is accessible and safe.
- Determine if any additional assistance is required for evacuation.
- Do head count of students who have been evacuated; determine the missing students and inform the search and rescue task force.

School disaster management plan. Available at http://tdma.nic.in/pdf/n127.pdf.

Preparing schools for a safer tomorrow - a multi-hazard approach manual on school safety in Bangladesh. Available at http://www.narri-bd.org/documents/training/School%20Safety%20Manual.pdf.

Handout 3

Search and Rescue Team

Roles and Responsibilities include:

Before Disaster

- Make sure needed supplies are on site.
- Make sure task force members are up-to-date with their training.
- Search and rescue taskforce should ensure active participation of children with disabilities and the evacuation activity will equally benefit to all.

During Disaster

- Depending on the type of disaster do the necessary action e..g. 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

- All members of the task force to assemble at a pre-identified location.
- Collect the equipment and materials needed by the task force.
- 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 Administrator (EOC).

If students are included in search and rescue (SAR): things to remember for children task force:

- Training should be in accordance to learning and retaining capacity of a child.
- Only basic techniques to be given, like:
  - Fireman lift method, crawl, to drag, blanket drag, pick a bag, stretchers (2 hand, 3 hand, 4 hand seat method, blanket, rope, bamboo, etc).
  - Training should be with free hand and materials available locally at schools.
- No training on – rope (knots), rappelling, climbing, water rescue, pulley, high rise and other difficult techniques.
- Hailing search method to be taught as it would help the experts to identify the location and reduce time.

School disaster management plan. Available at http://tdma.nic.in/pdf/n127.pdf.

Preparing schools for a safer tomorrow - a multi-hazard approach manual on school safety in Bangladesh. Available at http://www.narri-bd.org/documents/training/School%20Safety%20Manual.pdf.

Handout 4

First Aid Team

Roles and Responsibilities

Before 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

- Depending on the type of disaster do the necessary actions, e.g. duck, cover and hold first sign of earthquake. Hold on to furniture legs if furniture moves. If outside, move away from buildings.
- Assist children and teachers with disabilities as required

After Disaster

- All members of the task force to assemble at a pre-identified location
- Collect the equipment and materials needed by the task force
- Administer first aid to the rescued persons, tag the patients and record all cases and treatments
- Determine the need for further medical assistance and coordinate requests for assistance through the Principal
- Assign first aid team members to accompany search and rescue teams during their search operations.

First aid (FA): Things to Remember for Children Task Forces:

- Training should be in accordance to learning and retaining capacity of a child.
- Only basic techniques to be given, like:
  - Technique to use gloves, mask, etc and its disposal.
  - Knowledge on ABC, Bandaging, wound, sling, splint, fracture, burn.
  - Local medical conditions like, snake bite, dog bite, etc.
- **For children less than 15 year of age, no training on – CPR etc.**

School disaster management plan. Available at http://tdma.nic.in/pdf/n127.pdf.

Preparing schools for a safer tomorrow - a multi-hazard approach manual on school safety in Bangladesh. Available at http://www.narri-bd.org/documents/training/School%20Safety%20Manual.pdf.

Handout 5

Fire Safety Team

Roles and Responsibilities:

Before Disaster

- Make sure fire-fighting equipment (extinguishers, etc.) is in working order and that staff has received training in its use.
- Ensure that all fire-prone areas such as chemical laboratories, canteen, kitchen etc. are properly protected.
- 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

- Depending on the type of disaster do the necessary actions e.g. drop, cover and role if a person catches fire.

After Disaster

- Check and confirm the existence of fire. Report location to principal /administrator (EOC).
- In case of electrical fire, turn off electric main switches.
- 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.

Things to Remember for Children Task Forces

- Training should be in accordance to learning and retaining capacity of a child.
- Focus to be more on precaution than dealing Fire.
- Practice by children and not only demonstration by expert.
- Clubbing is recommended with SAR team.
- Training on use/operation of fire extinguisher and appropriateness.
- Locally available fire extinguishing mechanism in absence of fire extinguisher cylinder.
- 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.

2.3.4.5 Reference/Further Reading:

1. School Disaster Management Plan Guidelines by SEEDS.
2. National Disaster Management Guidelines: Management of Landslides and Snow Avalanche, 2009, National Disaster Management Authority, Government of India
3. Safe learning – safe citizens: Education today for a safe tomorrow.
4. School Disaster Planning, Produced and edited by: Rajat Chhabra (DPO South).
5. A Practitioner's Handbook on School Safety, Save the Children.

Session 2.4 Fire Safety / First Aid / Search and Rescue Techniques

2.4.1 Session Objectives

Techniques of fire safety/ search and rescue /first aid

2.4.2 Outline of Content

This session provides basic information about the first aid, search and rescue and fire safety and how it should be used in emergency situations.

2.4.3 Expected Outcome of the Session

By the end of session, participants are:

- Participants are able to identify fire safety, search and rescue techniques and methodologies and are able to conduct Children with Disability (CWD) perspective rescue.
- Able to impart necessary training to children.
- Familiar with first aid techniques, their roles and responsibilities as first responders.

2.4.4 Detailed Session Plan

2.4.4.1 Question and Answer with Discussion (15 minutes)

Begin with the following questions:

- Are you aware about fire safety systems?
- Write down answers on the board or flip chart and sum up common ones.
- Ask next question:
- Have you used any fire safety equipment?
  - Ask participants for the name of and write down on the board or flip chart.
- Ask next question:
- Do you know what first aid is and what it includes?
  - Let some of the participants who know elaborate for the entire group.
- Ask final question:
- Are you aware of any search and rescue techniques?

Encourage everyone to talk and share their experience related to fire safety, first aid and search and rescue.

2.4.1. Fire Safety

2.4.4.2 Lecture (30 minutes)

What is Fire?

Fire is a chemical reaction between oxygen in the air and some kind of fuel, like gas or wood. For a fire to take place, one has to heat up the fuel to a high-enough temperature for it to ignite (burst into flames)[1].

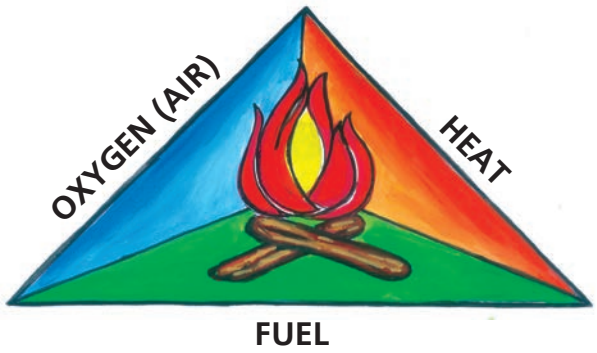
"Fire Triangle"

It has been seen that for occurrence of the fire three factors are essential; heat, oxygen (or air) and a combustible substance (or fuel). Fire or combustion will continue as long as these three factors are present[2].

1. How does fire work? Available at http://kids.discovery.com/tell-me/curiosity-corner/earth/how-does-fire-work.
2. Handbook on Building Fire Codes by G.B. Menon. Available at http://www.iitk.ac.in/nicee/IITK-GSDMA/F05.pdf

Take a look at the following diagram, called the "**Fire Triangle**"

- ✓ **Enough Oxygen to sustain combustion,**
- ✓ **Enough Heat to raise the material to its ignition temperature, and**
- ✓ **Some sort of Fuel or Combustible Material.**



Removal of one of them leads to the collapse of the triangle and the combustion process stops.

PRODUCTS OF FIRE AND THEIR EFFECTS*:

Fire produces: smoke; toxic gases; heat and light.

	Products	Effects
1.	Smoke	Poor visibility, asphyxiation, death, panic, stampede etc.
2.	Fire Gases (CO, HCN, CO_2, etc.)	Toxic and explosive gases, explosions and fire spread, abnormal respiration, asphyxiation, death, panic, stampede etc.
3.	Heat	Radiation, injuries/ death, prevents escape, burns and scalds, damage to lungs and respiratory system, panic etc.
4.	Flame	Fire spread, burns/death, damage to physical/material resources/ important documents etc.

CLASSIFICATION OF FIRE*:

Fire is classified into 5 categories namely: Class A, B, C, D and E depending on the burning substance/material.

Class	Material involved	Management of fire	Materials/Equipments used
A	Burning of solid (paper, wood, cloth, carpet, plastics, etc.)	Cooling (Removing heat)	water, sand, water/ABC Extinguishers
B	Burning of liquid (oil, kerosene, petrol, diesel, paint, thinner, etc.)	Smothering (Cutting off access to Oxygen/Air)	CO_2 and Dry Chemical Powder (DCP) Extinguishers
C	Burning of gases, LPG, CNG, Acetylene, Hydrogen, Methane etc.)	Starvation (Removing the gaseous fuel)	DCP, CO_2 Extinguisher
D	Burning of metals (Magnesium, Uranium) this occurs very rarely.	Starvation	Only DCP
E	Electrical short circuit, overheating (transformers)	Smothering/ Cooling (First to shut off the main switch)	CO_2, dry chemical powder (DCP) and BC or ABC extinguisher.

Note: Electrical fires involving equipment such as electrical circuits or electronic equipment are sometimes accidentally referred to as Class-E fires, although the category does not officially exist. After cutting off the main electric supply, one can treat it as "Class – A Fire.

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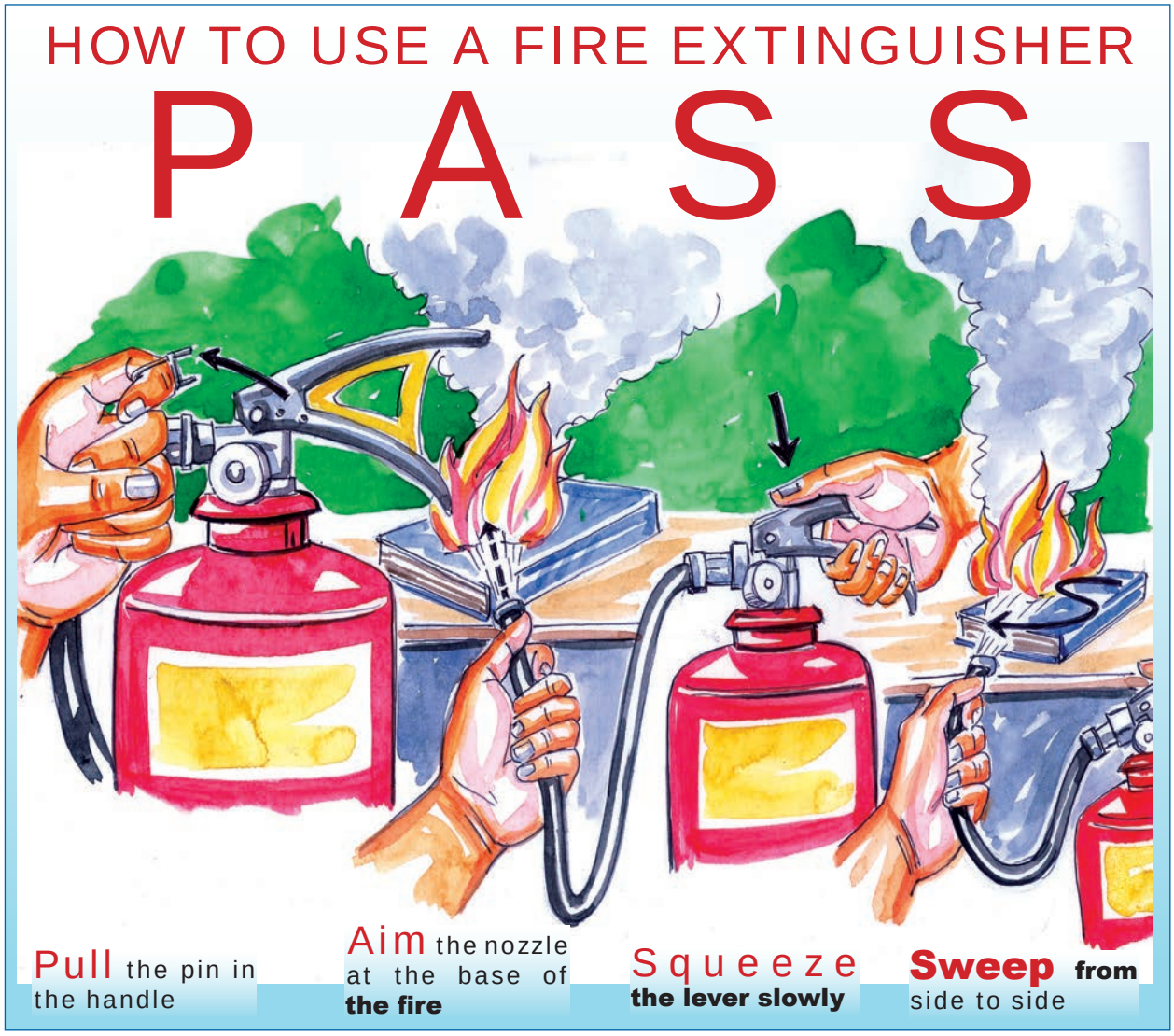
* Disaster preparedness training of trainers- resource book by Focus Humanitarian Assistance, India.

Handout 1

How to use a Fire Extinguisher

It's easy to remember how to use a fire extinguisher if you can remember the acronym **PASS,** which stands for **Pull, Aim, Squeeze, and Sweep**[*].



- **Pull the pin:** This will allow one to discharge the extinguisher.
- **Aim the nozzle at the base of the fire**: If one aim at the flames (which is frequently the temptation), the extinguishing agent will fly right through and do no good. One needs to hit the fuel[*].
- **Squeeze the trigger**: In a controlled manner, squeeze the trigger to release the agent.
- **Sweep from side to side**: Until the fire is completely out. Start using the extinguisher from a safe distance away, and then move forward. Once the fire is out, keep an eye on the area in case it re-ignites.

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* Fire Extinguisher Training. Available at http://www.ehs.okstate.edu/modules/exting/Howto.htm.

** How to Use a Fire Extinguisher by Brett & Kate Mckay. Available at http://www.artofmanliness.com/2013/01/23/how-to-use-a-fire-extinguisher.

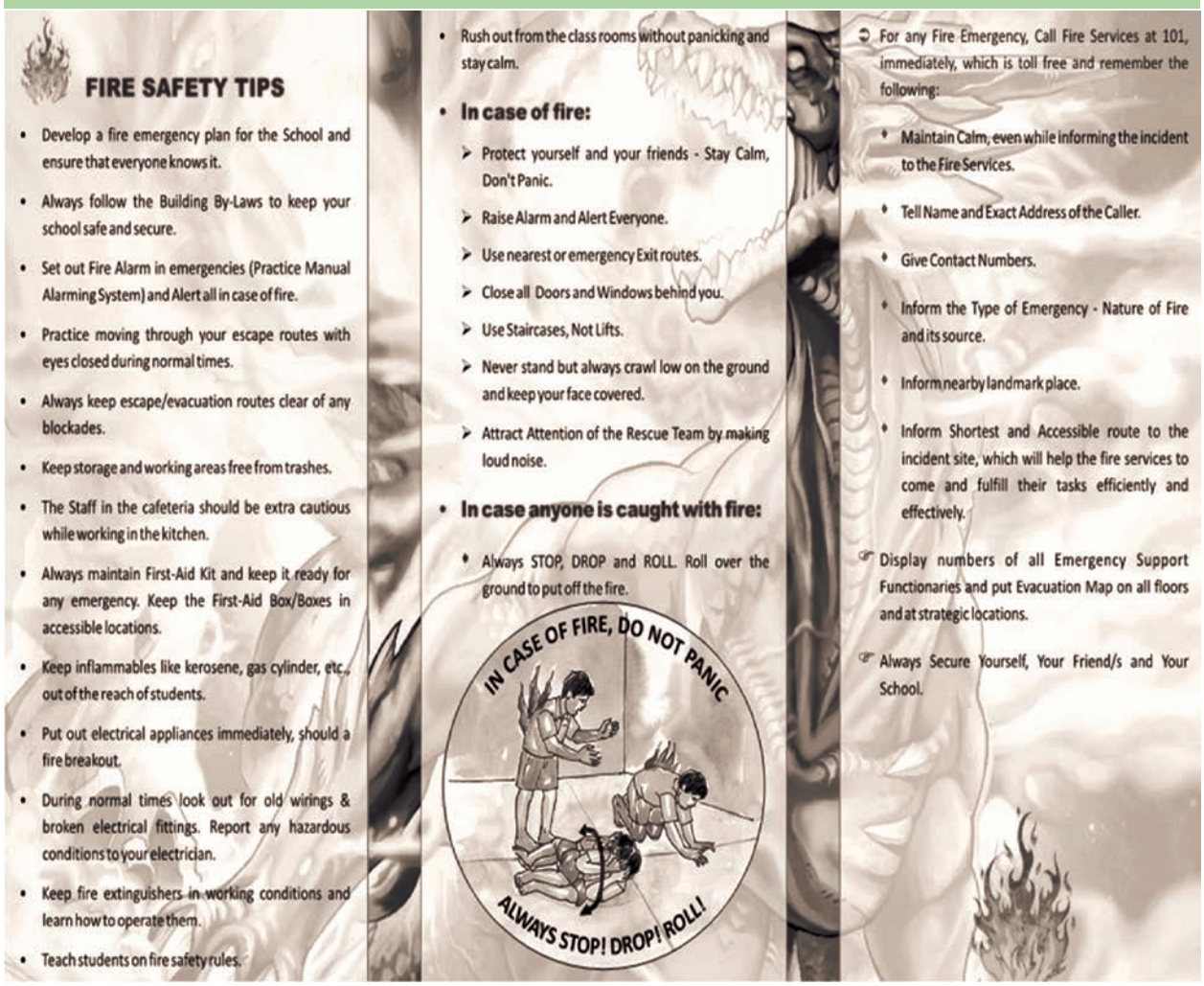
Handout 2

IN CASE OF FIRE

1. Protect yourself and your friends!
2. If you notice a fire, raise alarm and alert everyone. Shout, "fire! Leave the building right now!"
3. Rush to the nearest fire extinguisher and use it from a safe distance.
4. Be cool and calm. Do not panic.
5. Try to hit the jet of the extinguisher at the seat of fire.
6. Use nearest staircase /exit routes (Do not use elevators).
7. Close doors and windows behind you but be ensure that no one remain inside.
8. Never stand-up but always crawl low on the ground and keep your face covered.
9. Be attentive to listen for any announcement relating to fire on public address (PA) system.
10. If you remain in side, attract attention of the rescue team by making loud noise.
11. If possible switch off the electric supply of the affected area.

Handout 3

FIRE SAFETY TIPS FOR SCHOOLS*



* National Institute of Disaster Management, Ministry of Home Affairs, India.

2.4.2 FIRST AID

First aid is the immediate help given to the victim of injury or sudden illness by a bystander until appropriate medical help arrives or the victim is seen by a healthcare provider. First aid is generally not all the treatment the person needs, but it helps the victim for the usually short time until advance care begins*.

What is the aim of first aid?

The key aims of first aid can be summarised in three key points:

Preserve life is the overriding aim of all medical care, including first aid, is to save lives.

Prevent further harm also sometimes called preventing the condition worsening; this covers both external factors, such as moving a patient away from a cause of harm, and applying first aid techniques to prevent worsening of the condition, such as applying pressure to stop a bleed becoming dangerous.

Promote recovery - first aid also involves trying to start the recovery process from the illness or injury, and in some cases might involve completing a treatment, such as in the case of applying a plaster to a small wound**.

First aid training often also incorporates the prevention of initial injury and responder safety, as well as the treatment phases.

What are the Key Skills Required***?**

Certain skills are considered essential to the provision of first aid and are taught universally. Particularly, the "ABC"s of first aid, which focuses on critical life-saving intervention, must be rendered before treatment of less serious injuries. ABCD stands for Airway, Breathing, Circulation, and disability in the form of neurological status.

- Attention must first be brought to the airway to ensure it is clear. Obstruction (choking) is a life-threatening emergency.
- Following evaluation of the airway, a first aid attendant would determine adequacy of breathing and provide rescue breathing if necessary.
- In Breathing: It is look, listen and feel for chest wall movement, air from mouth, any audible sounds of respiration and then feel for pulse.
- If pulse is absent, proceed for CPR.
- If pulse is present look for circulation signs i.e. pulse in hand, any bleeding point requiring compression bandage and limb elevation.
- D stands for disability in the form of neurological status i.e. conscious level of patient and the reaction of pupils to light.D can also hint towards deformity (bony).

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* NSC first aid. Available at http://www.nsc.org/safety_home/FirstAidCPR/Pages/Firstaid_CPR.aspx.
** First Aid Medical Information. Available at http://www.disabled-world.com/medical/first-aid/.
*** Delivering First Aid. Available at http://www.tshwane.gov.za/Services/HealthandMedical/Pages/Delivering-First-Aid.aspx.

FIRST RESPONDER HANDOUTS

Handout 1

CAUSES OF INJURIES IN SCHOOL CHILDREN, FIRST AID KIT AND TYPES OF EMERGENCIES:

A major time of children with their peer group is spent in schools for learning and various other playful activities. The safety of this environment needs adequate attention and prepared to face any kind of event/casualty. Below is the list of common causes of injury in children :

- Fall
- Sports injury
- Assault
- Trap door injuries
- Stampede
- Medical conditions as Fainting
- Drowning
- Burns
- Stab

First aid kit: first aid kit should constitute the following basic material:

- Bandage roll 6inches/4inches
- Scissors/Blade
- Cotton/Swabs
- Cleaning solution as Betadine /Savlon/Normal Saline
- Adhesive tape
- Rubber tubing/Tape roll (to be used as tourniquet)
- Ointment as Neosporin/Soframycin

In addition to this, a checklist with regard to *preparation *what to do *whom to call for help and *where to go should remain available to one and all.

Emergencies

- **Medical emergencies:** breathing problems, choking, heart attack, fainting, stroke, seizure, allergy etc.
- **Injury emergency:** bleeding (external and internal), head, neck, extremities and spine injury etc..
- **Environmental emergency:** bites and stings etc.

Handout 2

ABCD OF FIRST AID:

Basic principles to be followed in case of conscious/unconscious casualty:

- A AIRWAY
- B BREATHING
- C CIRCULATION
- D DISABILITY (neurological status – eye movement/movement of limbs/ verbal response)

A= Airway:

The airway is the path the air takes from nose to lungs.

To make sure that the casualty is not conscious; Ask his/her name or Are you OK?

If there is no response:

- Shake, pinch and splash water on his/her face.
- If the casualty is unconscious, he/she will fail to respond.

If the casualty is unconscious then one must determine:

- If the airway is open (then see if casualty is breathing / is the respiration adequate?).

If the airways are blocked: try to open the airways.

Techniques available to open the airway are:

Chin lift / Jaw thrust maneuver (for health care workers)

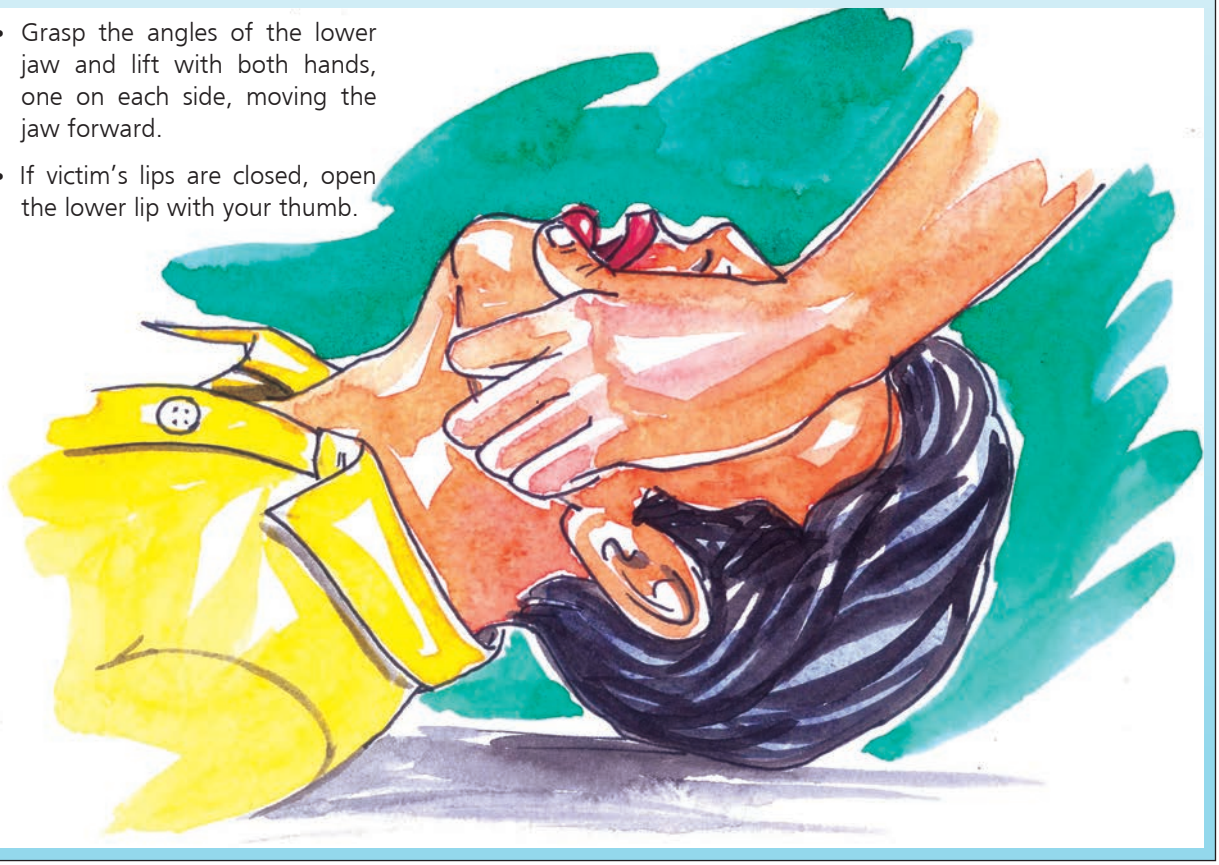
To accomplish the **chin lift maneuver**,

- Place the fingers of hand under the bony part of the lower jaw near the chin.
- Lift the jaw upward to bring the chin forward.
- This maneuver supports the jaw and helps opening the airway.

Note: 1. Do not press deep into the soft tissue under the chin.

2. Do not use thumb to lift the chin.

- Grasp the angles of the lower jaw and lift with both hands, one on each side, moving the jaw forward.
- If victim's lips are closed, open the lower lip with your thumb.



Once the airways is cleared casualty may begin breathing.

If casualty does not breathe, begin artificial give mouth to mouth respiration with 2 rescue breath.

B = Breathing

To assess breathing:

- Place your ear near the victim's mouth and nose while **maintaining an open airwa**y;
- Look for the chest to rise and fall;
- Listen for air escape during exhalation;
- Feel for the flow of air;
- This should not take more than ten seconds.

If the chest does not move and air is not exhaled- the casualty is not breathing.

If the casualty does not breath, begin artificial respiration/ rescue breathing.

(Some victims will make weak, inadequate attempts to breathe. In addition, reflex gasping respiratory efforts (agonal respirations) may occur early in the course of primary cardiac arrest. Treat the victim who has occasional gasps as if he or she is not breathing and give two rescue breaths over one second each to produce visible chest rise. If the victim resumes breathing during or after resuscitation continue to help him maintain an open airway until he or she is sufficiently alert to protect his or her own airway.

Methods of Rescue Breathing:

Mouth – to – Mouth Breathing: Mouth – to – Mouth rescue breathing providers oxygen to the casualty. To provide rescue breaths:

- open the casualty's airway, swipe a finger in the mouth (avoid self bite);
- pinch the nose and create an airtight mouth-to-mouth seal; Remove only visible obstructions.
- Give a breath over one second, take a regular breath and give a second breath over one second.
- The most common causes of ventilation difficulty are improperly opened airway.
- If the chest does not rise with the first breath, perform a **chin lift – jaw thrust maneuver** and give the second rescue breath.

Precautions during rescue breathing:

- Deliver each breath over one second;
- Give sufficient volume (by mouth-to-mouth or bag-mask ventilation)to produce visible chest rise;
- Avoid rapid or forceful breaths;
- No infection is transmitted by mouth-to mouth breathing;
- Even a handkerchief/tissue paper can be used as a barrier.

In some cases when mouth cannot be opened, (mouth is bleeding or profusely burnt, then mouth to mouth respiration is not possible then mouth to nose respiration technique can be used. Procedure is the same as mouth to mouth breathing, except pushing air through casualties' nostrils instead of his/ her mouth.

C = Circulation

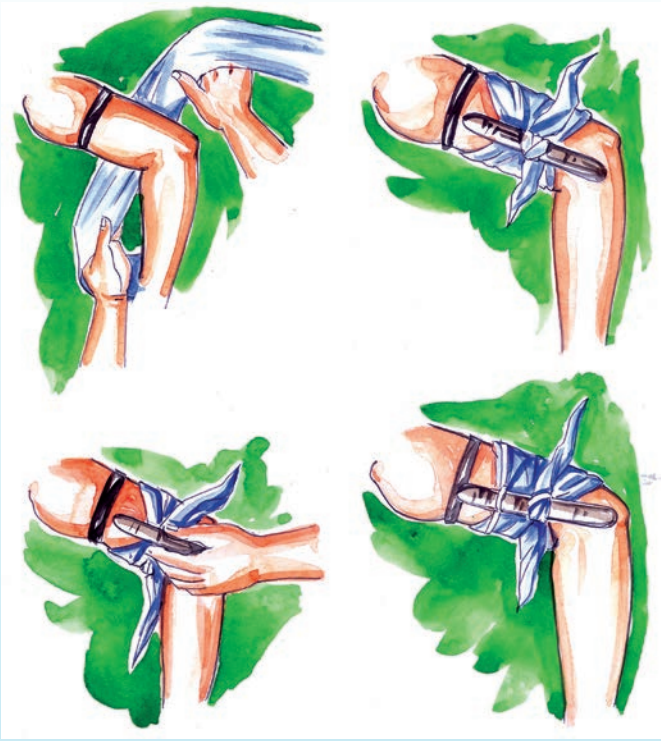
This is done by feeling the pulse. To locate the carotid artery pulse, maintain head tilt with one hand on the victim's forehead and locate the trachea, using two or three fingers of the other hand. Slide these fingers into the groove between the trachea and the muscles at the side of the neck, where the carotid pulse can be felt. This technique is often easier and requires less pressure to perform on the side nearer to the rescuer.

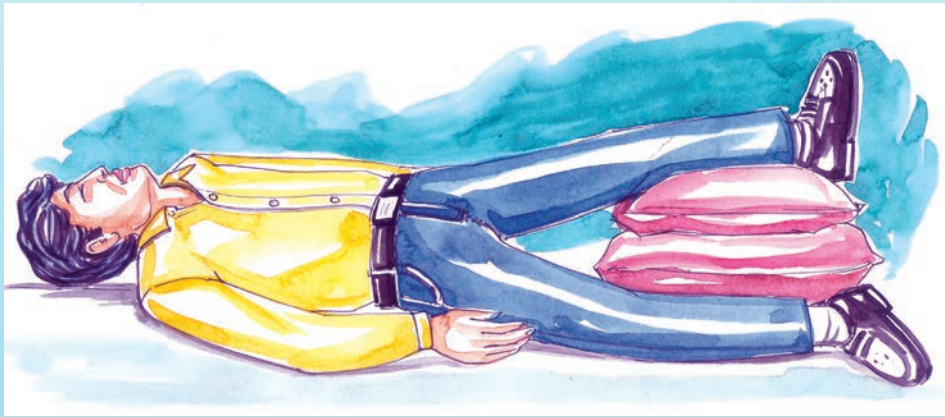
- Signs of circulation include normal breathing, coughing or movement in response to the rescue breaths.
- Cardiac arrest results in the absence of signs of circulation, including the absence of a pulse.
- **If the victim does not show signs of circulation, immediately begin chest compressions.**
- Never check the pulse on both sides of the neck together

In a trauma victim

- After opening the airway, deliver two rescue breaths.
- If there are no signs of circulation, **start CPR.**

If there are signs of circulation, look for overt bleeding and try to control it by direct compression which can be applied by using a cloth or a tourniquet. Elevation of limb can reduce bleeding..





CARDIO-PULMONARY RESUSCITATION (CPR): Cardiopulmonary resuscitation (CPR) is a procedure to support and maintain breathing and circulation for a person who has stopped breathing (respiratory arrest) and/or whose heart has stopped (cardiac arrest).

Chest Compressions: Chest compressions consist of rhythmic application of pressure over the lower half of the sternum. These compressions increase intrathoracic pressure and create blood flow or directly compress heart. When rescue breathing is provided and blood is circulated to the lungs by chest compressions, the victim receives enough oxygen to maintain oxygenation of brain and other vital organs for several minutes till defibrillation can be performed

Proper Compression Technique

1. The victim must be in the horizontal position
2. The rescuer's elbows are locked in position, arms straightened and the rescuer's shoulders positioned directly over his or her hands so that the thrust for each chest compression is straight down on the sternum.
3. The compressions should depress the victim's sternum approximately 1.5 to 2 inches (4 to 5 cm).
4. Release pressure on the chest to allow blood to flow into the chest and heart. The pressure must be released completely and the chest allowed to return to its normal position after each compression (although the rescuer's hands should continue to touch the victim's sternum to maintain proper hand position).
5. Chest compressions should be performed at the rate of 100 compressions per minute.
6. To maintain correct hand position, do not lift your hands from the chest and do not change hand position during compressions. Allow the chest to return to its normal position after each compression and allow approximately equal compression and relaxation times.
7. A ratio of 30 compression to 2 ventilations at the rate of 100 compression per minute is recommended.
8. Count loud & clear while performing CPR

1 and 2 Rescuer CPR

It two rescuers are present, one person is positioned at the victim's side and performs chest compressions. The other rescuer remains at the victim's head, maintains an open airway and provides rescue breathing and monitors the carotid pulse for adequacy of chest compressions. The compressor and ventilator should change roles every two minutes five cycles of 30:2 to prevent compressor fatigue and deterioration in quality and rate of chest compression. The compression rate for one-and two-rescuer CPR is approximately 100 compressions per minute.

Summary

<table>
<tr><td colspan="2">No movement or response.</td></tr>
<tr><td colspan="2">Call for help.</td></tr>
<tr><td colspan="2">Open AIRWAY, check BREATHING</td></tr>
<tr><td colspan="2">If not breathing, give 2 BREATHS that make chest rise</td></tr>
<tr><td rowspan="2">If no response, check pulse:
Do you DEFINITELY feel pulse within 10 seconds?</td><td>Definite Give 1 breath every 5 to 6 seconds</td></tr>
<tr><td>Pulse Recheck pulse every 2 minutes</td></tr>
<tr><td colspan="2">Give cycles of 30 compressions/ 2 breaths until help comes. Minimize interruptions in compressions</td></tr>
</table>

Note: School Children less than 15 year of age should not taught CPR techniques.

Infant CPR

Child and adult CPR

D = Disability (Neurological examination)

Throughout all interventions, assess response and monitor closely for signs of deterioration. The response can be remembered as:

- A = Alert patient; V=Responds to verbal commands; P=Responds to pain; U=Unresponsive patient

E= Extremity Injury and Environment

- After ABCD evaluation and management, look for any extremity injury.
- To define the extent of the injury, remove the victim's clothing.
- Use splint in case of obvious deformity. A stick or even a rolled news papers/cloth can be used as splint. When the injury assessment is complete, cover the patient to prevent hypothermia.

Handout 3

DROWNING:

- The rescuer should provide CPR, particularly rescue breathing, as soon as an unresponsive submerged victim is removed from the water. The rescuer should give five cycles (about two minutes) of CPR before leaving the victim to activate the EMS. mouth ventilation in the water may be helpful when administered by a trained rescuer.
- Only victims with obvious clinical signs of injury or alcohol intoxication or a history of diving, waterslide use or trauma should be treated as a "potential spinal cord injury," with stabilization and possible immobilization of the cervical and thoraco-lumbar spine.

HYPOTHERMIA (EXPOSURE TO COLD):

- In an unresponsive victim with hypothermia, a health – care provider should assess breathing to confirm respiratory arrest and assess the pulse to confirm cardiac arrest or profound bradycardia for 30 to 45 minutes. If the victim is not breathing, initiate rescue breathing immediately. If the victim does not have a pulse, begin chest compressions immediately. Do not wait until the victim is rewarded to start CPR. Remove wet clothes, insulate or shield the victim, cover with any sheet/ newspaper.
- Avoiding rough movement, safely transport the victim to a hospital as soon as possible. For the hypothermic patient in cardiac arrest, continue resuscitative efforts until the patient is evaluated by advanced care providers. In the out-of-hospital setting, passive warming should be continued until active warming is available.

Pregnancy

- Place the victim in left lateral position
- Do CPR at midsternum

Electrocution

- Immediately switch off the main electric output. Evaluate and perform the resuscitation.

Handout 4

ADULT FOREIGN BODY AIRWAY OBSTRUCTION (FBAO):

Universal Choking Signs:

Ask the victim if he or she is choking; if the victim indicates 'yes' by nodding his head without speaking:

Perform **HEIMLICH MANEUVER/ABDOMINAL THRUST/SUBDIAPHRAGMATICABDOMINAL THRUST / CHEST THRUST or go for SELF ADMINISTRATION OF HEIMLICH MANEUVER**

If the person becomes unresponsive & no puls start CPR.

If the person becomes unresponsive & no pulse start CPR.

Handout 5

MUSCULOSKELETAL TRAUMA:

- Injury to skin, soft tissue and bones is a common associated injury. May be life threatening if blood vessel injury is also present.
- ABCD priorities remain the same.
- Skin and soft tissue injury needs through washing and cover with clean sheets.
- Splinting of injured part.
- Avoid applying antibiotic creams /lotions.

Handout 6

BURNS:

The burn is a type of injury to the skin caused by heat, electricity, chemical, light, radiation or friction.

Types of burns: Thermal, chemical, electric, lighting, inhalation of smoke

Rescuing the victim from the burning premises:

- First priority - Move casualty to a safe place.
- STOP and DROP "policy" - Prevent the victim from running.
- Ask victim lie down on the floor.

Once the fire has been extinguished:

- Remove all the burnt clothes and ornaments.
- Cool the body with Tap water
- Fabric that has melted and is stuck to the burn wound should be left in place.
- Do not break any blisters.
- Recognition of the associated injuries (Injuries to head, spine, upper and lower extremity, chest and abdomen.)
- Immobilization and prevention of secondary injury.
- Safely transport to the hospital/burn speciality.

Chemical burn: The process of tissue damage in chemical burns stops only when the chemical is either neutralised by the tissues/antidote or is sufficiently diluted/washed away by irrigation with tap water. Brush off dry chemical powder before pouring water.

Electric burn:

- Turn off the source of electric supply.
- Victim should be removed with a non-conducting material like a dry wooden stick/pole/wooden chair.
- Look for Airway, Breathing and Circulation

Lightning injuries:

- Lightning burns are often superficial and present with a spidery/arbores cent pattern markings which rapidly disappear.
- Cardiopulmonary arrest is the most common cause of death in lightning victims.

Inhalation burns:

- An inhalation injury occurs in those patients with history of being burned/trapped in an enclosed smoke filled space. Features include head and neck burns, singeing of nasal vibrissae, agitation/anxiety, hoarseness of voice, stridor/wheeze, dyspnoea, carbonaceous (sooty) sputum, brassy cough, impaired visual acuity.
- Move to safe place and give humidified oxygen.

Handout 7

SPLINTING:

Principles:

- Prevent Further Damage.
- Reduce Pain.
- Stabilize And Strap The Injured Bone.
- A Joint Above And A Joint Below Is Included To Splint.
- Bandaging Is Started From Below Upwards(Towards The Heart).
- No Tight Dressing Except when it is bleeding/snake bite.

(Source: AIIMS manual for first responders by Sushma Sagar and Hardeep Kaur)

Handout 8

SPINE BOARD IS A SAFE TRASPORT:

Handout 9

DURING MASS CASUALTIES: HOW TO DO TRIAGE:

Triage: (to filter/to sort out the needy)

Are you ok?

Move to a safe place - follow me.

Raise your arm/leg.

Color code the patients/victims

- Green – walking, wounded.
- Yellow – less serious (can listen and respond to you/moves arm or leg).
- Red - very serious.
- Black - dead/unsalvageable

THE CHAIN OF SURVIVAL:

1. EARLY recognition of warning signs
2. ACTIVATION of emergency medical services
3. EARLY C P R.
4. SAFE transportation

2.4.3 SEARCH AND RESCUE TECHNIQUES

In natural or technological disasters, people can be trapped in the wreckage of their homes or places of work. Many of them can die unless rescued quickly. Although specialized teams and sophisticated listening devices are available to help search for trapped people, local responders such as fire, ambulance, and police personnel, who are trained and certified, do the bulk of rescue work: The general public often assists the responders; but it takes more than just willing hands to save lives. Untrained, unorganized people may endanger themselves and those they are trying to rescue.

What is search and rescue?

'Search and rescue' is a process to locate, stabilize, extract and provide aid to people who are in distress or imminent danger. The search involves locating casualties and documenting location whereas rescue involves removal of casualties and debris etc.

The **objectives** of search and rescue are:

- To search for missing persons.
- To rescue the victims trapped under the debris.
- To provide first aid, protection to survivors and dispatch them for medical care in the shortest amount of time.

Various steps to be taken during the search*

- Call out loudly, if necessary. If you get an answer from under the debris, request the casualty to wait and gather information about the situation.
- Rescuers should always work in groups. This makes communication and sharing of information easier.
- Be alert to all kinds of sounds.

Duty of a rescuer*

- Proper assessment of the event helps save time and increase work efficiency. Collect detailed data about the losses, about roots leading to the impacted area, and about possible losses.
- The rescuers prepare plans after assessing the data collected during observation. The rescuers can achieve success if they work in groups planning according to the circumstances and utilizing properly the available manpower, equipment and methods.
- The rescuers should thoroughly check the equipment to be used in the rescue work. They should wear clothes suitable for the rescue work and carry essential safety equipment.

Five steps of rescue work*

1. Examine the site. Deal with surface casualties. Gather all possible information about the other occupants of the buildings. The rescued casualties should be immediately provided first aid and sent to the nearby hospital.

2. Search immediately accessible areas for casualties who can be rescued with minimal effort. Maintain contact with casualties inside who can be seen or heard but who cannot be moved immediately.

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* Training of trainers-Resource book by Focus humanitarian needs.

* Basic rescue skills. Available at http://www.publicsafety.gc.ca/prg/em/gds/brs-eng.aspx.

* Search and rescue. Available at http://sdmassam.nic.in/download/searchandrescuemanual.pdf

3. Search the ruins and rescue (specialized rescue) all persons who can be seen or heard. This may include a calling and listening period.

4. Search farther into the ruins (specialized rescue) where the chances of trapped people remaining alive seem remote. This may include removing debris from the most likely places where casualties may be located.

5. Search the entire debris (specialized rescue) until all supposed casualties are accounted for. This includes removal of the dead and body parts.

Note: The special rescue force carries out the last three steps.

In all rescue methods ensure children with special needs have equal participation and their needs are addressed. Talk with them to understand what support they require, they may help you in the rescue process. Including children with disabilities in the task force can lead to insight into what their needs and capacities are and how to address and utilise them.

Remember that:

1. Rescuer safety is always the topmost priority.
2. Disaster rescue, by its very nature is considered to be a high-risk activity.
3. While early response is vital to the survival of disaster victims but entry into damaged school buildings/ structures by untrained, uncertified individuals is not recommended.
4. The reading of this alone cannot be considered adequate training for a rescuer. Knowledge must be linked with rigorous training, practical experience and strict adherence to safety etc.

Handout 1

Emergency Methods of Rescue

There may be occasions when a stretcher is not available or it is impossible to use a stretcher. Therefore, some other means must be used to lift and move the casualty. There are various methods by which a casualty can be moved. These are known as **"emergency methods of rescue"**.

Choice of Methods: it depends upon:

- Nature of causality's injuries i.e. slight or serious, conscious or unconscious.
- Position in which casualty is found i.e. ample space, narrow void, limited head room.
- Number of rescuers.

Methods suitable for one rescuer: Pick-a-back, Pick-a-back (reverse), Fireman's lift, Fireman's crawl, Bowline Drag, Toe Drag etc.

Methods suitable for more than one rescuer: two-handed seat, three-handed seat, four-handed seat, two-man human crutch, "S" method etc.

Multi-rescuer methods: blanket lift, clothes lift, rope lift, improvised stretcher, Three-person lift and carry etc.

2.4.6 References/Further Reading:

1. A complete manual for school fire safety & evacuation plan, DGCD (fire project cell) http://sdmassam.nic.in/download/searchandrescuemanual.pdf.
2. Guideline for School Disaster Management Plan, SEEDS.
3. Disaster Preparedness- Training of Trainers-Resource Book. Developed by-Focus Humanitarian Assistance, India.
4. Basic rescue skills. Available at http://www.publicsafety.gc.ca/prg/em/gds/brs-eng.aspx#a05.

Session 2.5 Mock Drill Framework

2.5.1 Session Objectives

Introduce participants to the mock drill framework.

2.5.2 Outline of Content

This session will outline framework used for mock drill in schools. What are the components of a mock drill, who conducts and how it is conducted in schools. What can be the involvement of community in a drill?

2.5.3 Expected Outcome of the Session

By the end of the session, the participants will be able to identify components for conducting a mock drill in school.

2.5.4 Detailed Session Plan

2.5.4.1 Introduction (five minutes)

Introduction of the resource person by the course coordinator.

2.5.4.2 Question and Answer with Discussion (15 minutes)

Begin with asking the following questions:

- Do you know what a mock drill is?
- How many of you have either conducted or participated in a mock drill?
- Give participants meta cards and pens.
- Ask all participants to write what they think is a mock drill.
- Give them five minutes to do this task.
- Ask them to pin up their cards on the pin board or stick on the white board.

2.5.4.3 Note for the facilitator (25 minutes) :

Under NSSP **"Framework on school safety mock exercise"** with following salient feature has been developed.

- Mock exercise is one of the important activities under NSSP to be concucted in all identified schools.
- Each school is mandated to have school disaster management plan.
- To test the efficacy of school disaster management plan and also, to find the gaps, schools should conduct mock drill exercises every six months on the perceived disasters.
- It is a participatory method to practice taking various life saving measures during the occurrence of disasters and evacuation of a building after an emergency situation.
- To ensure proper execution of a mock drill exercise, the roles and responsibilities of the concerned staff, teachers and students as well as the departments like fire services, home guards and civil defence should be precisely defined and the standard operating procedures (SOPs) should be clearly understood by everyone.
- In order to avoid mishap facilitator should conduct the mock drill with the help of mock drill specialist.
- Mock exercise should be conducted in two steps:

Step 1:

On the given date, a coordination meeting be organised in the school premises by the mock exercise coordinator. Following points need to discussed here:

- A brief description on the type of disaster, on which exercise is being conducted.
- Salient features of school DM plan.
- Name and roles and responsibilities of incident commander, members of warning and information dissemination team (will act as control room staff).
- Classes/whole school which will take part in mock drill.
- Assembly area, recounting of evacuation plan, trigger mechanism etc.
- Briefing of observers for each class/section.
- Open house discussion would take place thereafter.

Step 2:

it is actual conduct of mock drill exercise. The start of mock exercise is stimulated by:

- Sounding of siren for one minute for earthquake, tsunami and cyclone mock drill exercise; bursting of crackers for terrorist activities; creating smoke for fire thereafter sounding the fire alarm for fire mock exercise.

The sequence of events would be:

1. during the initiation of trigger for the start of mock exercise the whole school/affected class would take life saving precautions.
2. after the trigger alarm, the intimation is sent from Principal's office to all classes, to carry out full/ partial evacuation of building. For avoiding panic, reasons of evacuation needs to be given.
3. accordingly, each class/floor/whole school would carry out evacuation as per instructions, under respective class teachers' who would be taking class at that time. The observer would declare some students as injured and left in the class, the classes would assemble at designated assembly area. Head count would be carried out by the class teacher and report sent to the school control room. The observers and class teachers would note down the time of evacuation.
4. The Principal/Vice Principal would assume the role of incident commander with warning and information dissemination team leader as deputy incident commander and would activate the teams. The warning and information dissemination team also informs the external agencies like fire, police etc.
5. the search and rescue team, first aid team would assemble at school control room during evacuation and given the required equipments.
6. After the status report received from all classes and after analysing the enormity of casualty reported; the search and rescue team, first aid team are directed to various class rooms and other areas where injured are reported.
7. Once all injured have been brought to the first aid area and given first aid, those requiring hospitalization are evacuated.
8. The school control room also receives the police, fire services and other first responders. Brief them about the situation and render help as required by them in managing the disaster.
9. Once the observers are satisfied with the outcome of the mock exercise, they shall report to the Mock Exercise Coordinator, who will call off the mock exercise after informing the Principal. Calling off is done by sounding the siren/ringing of bell.

Debriefing: the observers, teachers and students would thereafter assemble at the central place for debriefing and would share the experience and lesson learnt. The coordinator shall note down all the points and make an "after action report". The school DM plan would accordingly, be reviewed and revised.

The school after the mock exercise can also arrange for demonstration by fire and emergency services etc.

Simple rules for building evacuation which teachers must stress upon the students:

- Do not push, run, talk or go back during the evacuation.
- Create a Buddy System to ensure safety of the children with disabilities.

School administration must pay attention to the needs of children with physical disabilities (especially during an emergency situation). Persons with disability may not be able to evacuate without any assistance. Therefore, it is strongly advised that each student with disability is accompanied by a physically-fit student. This practice is known as 'buddy system'. Ideally, the school administration should arrange to get such children (with disabilities) make several acquaintances with their fellow classmates at the time of the beginning of the academic session, so that they can get build up trust and friendship between themselves. Teachers must also keep motivating the students to assist their physically challenged colleagues during an emergency situation**.

The facilitator needs to contextualise and link the session with the type of drill that would be conducted in school next day.

Following is a reference to the earthquake drill:

- Alarm - continues for one minute.
- Duck, cover and hold where ever you are.
- Incidental commander takes charge of situation.
- Ready for evacuation.
- Teachers evacuates with attendance register.
- Assemble at safe evacuation point.
- Head count by teachers through attendance register.
- In case of absence of attendance register, count through partner student.
- Head count of teachers and non teaching staff.
- Missing person list to be reported and handed over to incident commander.
- Incident commander calls coordinator of SAR, FA and fire safety.
- All three task force takes up their station.
- Coordinator of SAR along with other members chalks out plan to enter the building if the building is safe.
- Fire safety team assist SAR.
- Coordinator of FA prepares medical first aid responder (MFR) station.
- SAR moves into building and evacuates victims and bring them to MFR station.
- FA task force provides first aid to victims and arranges to move them to nearest hospital.
- Second alarm goes for fire.
- Incident commander calls upon fire safety team to ambush fire.
- Fire occurs in oil (class B) and class A.
- Fire safety team extinguish fire.
- SAR prepares to search victims of NO GO building through hailing search method.
- Expert reaches collapse building site and evacuates victim through chair knot.
- Incidental commander ends the drill as successful evacuation of all students and other school community.
- SAR, FA and Fire safety team share their experience.

Soon after the drill is over; call upon the entire stake holder and have a feedback session. This session would provide base and need for change in disaster management plan.

**Framework on school safety mock exercise. Available at http://ndma.gov.in/ndma/nssp.html.

Handout 1

ORGANIZING FIRE SAFETY DRILLS FOR SCHOOLS

2.5.6 References/Further Reading:

- Framework on school safety mock exercise. Available at http://ndma.gov.in/ndma/nssp-projects/framework0001.pdf.
- Guidelines for conducting Earthquake and Fire Mock Drills in Schools/Educational institutions, Disaster Management Cell, Department of Revenue, H.P. Secretariat, Shimla available at http://hpsdma.nic.in.

Day 3: Planning for School Safety

Session 3.1 SDMP Planning

3.1.1 Session Objectives

Preparation of a typical school DM plan by participants.

3.1.2 Outline of Content

This session focuses on use of the information being shared on school safety and disaster management plan so far. Participants will be asked to prepared school disaster management plan (SDMP) in their specific context. This will be achieved through a group exercise. **SDMP template will serve as a guideline**.

3.1.3 Expected Outcome of the Session

By the end of this session, participants are able to prepare a school disaster management plan (SDMP) of their own schools.

3.1.4 Detailed Session Plan

Materials required for the day: Flip chart/White board, Chart papers, Markers

3.1.4.1 Group Exercise (120 minutes)

- Divide participants in state wise groups or on the basis of common interest/area.
- Ask participants to prepare a SDMP.
- Ask each group to present their plan in front of the large group.
- Q and A by other groups on the presentation.

Session 3.2 Mock Drill in a Nearby School

3.2.1 Session Objectives

To impart practical training, in a school environment.

3.2.2 Expected Outcome of the Session

Participants will learn to conduct a mock drill in a school.

3.2.2.1 Note for the facilitator (180 minutes)

Guiding Note to Observer:

A briefing on mock drill and of school should be provided to observer beforehand, about its hazard, vulnerability, risk, capacity, strength of school and sequence of the drill, etc. The institute must make available a copy of evacuation plan to the observer.

Do's:

1. Participants should reach at least one hour before the drill starts.
2. You should all be wearing Ids provided by training institute and it should be very visible.
3. Participants should maintain silence in the school.
4. Participants should be polite and courteous to students and other staff.

Don'ts:

1. Participants should not disturb the ongoing class.
2. Participants should not reveal the reason of your visit to the school to any student as the drill may be done without flowing information to students.
3. Participants should avoid criticising school but you may place your recommendation to them.
4. Participants should avoid indulging into handling mock drill or suggesting ideas when the drill is ongoing.

Points to remember:

1. Observer should check all the location of the school building as well campus before the drill starts.
2. Choose your location from where you would like to observe the drill. Later after the evacuation is over, you can proceed to different location to observe the skill of search and rescue, first aid, fire safety or any other task formed by task forces.
3. Avoid location where you could be a hindrance to evacuation route.

Things to focus upon:

1. Record followings
   a. Timing of the siren/bell.
   b. Timing of evacuation of all students.
   c. Scope of improvement.
   d. Points where clarification is required.
2. Discipline of the students while conducting mock drill.
3. Involvement of teachers and other staff.
4. Sequence of action.
5. Listen to messages given by incident commander/principal.
6. Closure call for drill.

Day 4: Planning for School Safety and Addressing Special Needs

Session 4.1 Mock Drill - Lessons Learnt

4.1.1 Session Objectives

Discussion and feedback on mock drill observed in a nearby school to clear their doubts and ways to improve SDMP.

4.1.2 Outline of Content

This session will focus on feedback on the mock drill observed a day before to bring in clarity on drill as well SDMP. The sequence and its component will be discussed in length to provide clarity and need of drill.

4.1.3 Expected Outcome of the Session

- The participants will have a practical knowledge on mock drill and its linkage with SDMP.
- To avail clarity on any component of drill.
- Importance of feedback sessions or evaluation session after a drill to improvise on SDMP.

4.1.4 Detailed Session Plan

Materials required for the day: Flip chart/white board, chart papers, markers etc.

4.1.4.1 Recap from previous day sessions (15 minutes)

Begin with asking the following:

- What did they learn from SDMP?
- How was their mock drill experience?
- Encourage all the participants to talk.

Session 4.2 INCLUSIVE APPROACHES

4.2.1 Session Objectives

Inclusive approach (gender, CWD, HIV, other inclusion as per RTE) and disaster safety in schools.

4.2.2 Outline of Content

This session basically talks about inclusive approach to school safety and disaster risk reduction/disaster risk management. Children are the most vulnerable section of the society but among them also there are even more vulnerable groups e.g. children with special needs, differently-abled students, HIV affected children, etc.

4.2.3 Expected Outcome of the Session

By the end of this session, participants will be able to:

- Identify and prepare an inclusive SDMP.

4.2.4 Detailed Session Plan

4.2.4.1 Question and Answer with Discussion (15 minutes)

Ask participants the following questions:

1. What do you understand by "inclusive approach"?
2. Do we value all children equally?
3. Is inclusion a culturally relevant process?

- Ask one question at a time and give time for response and then move on to the next question.
- Make note of relevant comments from the participants.
- Encourage participants to share their experience and information.

4.2.4.2 Note for the Facilitator (25 minutes)

What is inclusive approach?

An inclusive approach is an umbrella term that specifically determines mainstreaming of all sections and ensuring no scope for marginalisaton based on age, gender, disability, HIV positive status or any other status per se. Therefore, inclusion of those people, groups and issues in the standard pattern of response strategy is crucial for disaster management planning to establish a safe-school practice. This approach strengthens a feeling of safety, equal opportunity for participation and expression with dignity for everyone in the target population. This section explores the gender, children with disability concerns for strengthening safe-school practice.

The term 'gender' refers to the social differences between females and males throughout the life cycle that are learned, and though deeply rooted in every culture, are changeable over time and have wide variations both within and between cultures. "Gender" determines the roles, power and resources for females and males in any culture*. Gender based behaviours and stereotypes about what men and women can and cannot do, or should and shouldn't do, can further contribute to gender differences.

The combined effect of these differences and inequalities means that women and girls, and men and boys face different types and levels of exposure and vulnerability to natural hazard risks and disaster impacts**. Yet, attention to gender is consistently one of the weakest areas of humanitarian response (active learning network for accountability and performance in humanitarian action, 2005).

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* IASC, gender handbook in humanitarian action, (women, girls, boys and men, different needs-equal opportunities) December 2006.

** A practical guide to gender-sensitive approaches for disaster management.

In the context of safe school practice understanding the gender role is most crucial to develop the inclusive practice based on gender analysis, gender equality and gender mainstreaming (IASC, gender handbook in humanitarian action).

- Gender analysis examines the relationships between females and males. It examines their roles, their access to and control of resources and the constraints they face relative to each other. A gender analysis should be integrated with the humanitarian needs assessment and in all sector assessments or situational analyses.
- Gender equality, or equality between women and men, refers to the equal enjoyment by women, girls, boys and men of rights, opportunities, resources and rewards. Equality does not mean that women and men are the same but that their enjoyment of rights, opportunities and life chances are not governed or limited by whether they were born female or male.
- Gender mainstreaming is a globally recognized strategy for achieving gender equality. The Economic and Social Council of the United Nations defined gender mainstreaming as the process of assessing the implications for women and men of any planned action, including legislation, policies or programmes, in all areas and at all levels. It is a strategy for making women's as well as men's concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programmes in all political, economic and societal spheres so that women and men benefit equally and inequality is not perpetuated.

Women and girls generally tend to be the main victims of natural disasters. A few commonly recorded reasons for higher death tolls among women and girls include:

- Cultural constraints on female mobility which hinder self-rescue, for example, women may not leave the home without male permission; they may be reluctant to seek shelter.
- Lack of skills such as swimming or tree climbing, which are traditionally taught to males.
- Less physical strength than males, in part due to biological differences but, in some countries, also due to the effects of prolonged nutritional deficiencies caused by less access to food than men and boys.

At the same time, gender-based behaviours and stereotypes can also have negative effects on men and boys. For example, the majority of the victims of Hurricane Mitch in 1998 in El Salvador and Guatemala were men. Some researchers attributed this to societal concepts of masculinity that compelled men to feel they had to take very high risks in order to protect family, community lives and property (Smyth in A Dimitrijevics, 2007).

Gender in safe school practice: It is essential that a framework for gender equality programming is being developed within the safe school programme.

- Analyse gender differences: In the school the number of girls, boys, women, men to be analysed and their specialized skills capacity, experiences, interest to be noted for better planning and implementation of safe school programme.
- Design services to meet needs of all: An adequate designing to be developed that everyone in the school could be supported and accommodated with required job responsibilities in the programming and implementation.
- Access for women, girls, boys and men: To ensure a practice of safety all the required materials to be equally assessed by the every member of the group as designed. There also should be adequate gender segregated arrangements to ensure equal accessibility of materials and services.
- Participate equally: In the planning phase the utmost important fact is to ensure equal participation for both the gender. In doing so, if the girls need to have more training that needed physical practice, should be arranged accordingly.
- Train women and men equally: As per the plan training should be done equally for all.

Children with disability (CWD)

It is a shocking reality that 80% of the children with disability (CWD) live in developing countries (Promoting the rights of Children with disabilities, UNICEF, 2007). Having said that, CWD are four times more vulnerable to violence against them (WHO, 2012). This is due to the following stigma attached to them –

- Disabled,
- Discrimination that CWD face,
- Ignorance amongst general public regarding the intensity and forms of disabilities (given below),
- Lack of social support.

The stereotype set for CWD says that they are weaker and inferior too than the children without any form of disability. When during normal times CWD are more prone to violence and given a lower position in the community, during disasters this seemingly insignificant action intensifies and puts CWD in further more vulnerable and hence perilous position.

"Social Model of Disability" ascribes the inability of persons with disability to perform on to the barriers within the society. Hence, the disability does not lie within a person but in the mind of the society, facilities provided and resources used or allocated. (*The Social Model of Disability*, British Council of Disabled People, 1981). In other word disability is a social product. Here, the basic categorization of the children with special need is being presented for better understanding of the needs that to addressed for an inclusive approach.

Children with Special Needs

Children who have been exposed to maltreatment • Physical abuse • Emotional abuse • Neglect • Sexual abuse	**Children with developmental disabilities** • Blind and visually impaired • Deaf and hard of hearing • Mobility impaired • Mentally ill • Brain disorders and injuries • Chronically ill • Drug and/or alcohol dependent • Dually-diagnosed with mental illness and substance abuse
Children with special psychiatric needs • Children who were previously defined as psychiatrically disturbed, and/or who were receiving psychotropic medication, and/or whose condition worsened due to the lack of access to medications • Children with existing psychosocial and psychiatric problems which are exacerbated by the stress of disaster	**Children who experience cultural/ethnic health disparities or live in geographic isolation** Cultural/ethnic groups and Rural residents
Children with limited language proficiency • Limited-English or non-English speaking • Refugees • Legal immigrants • Illegal/undocumented immigrants • Sign language	**Children who live in economic disadvantage** • Population-wide poverty • Living at or below the poverty line • Working poor
Children with special medical needs • Children with medical trauma • Children with medical needs • Families with children with medical needs	**Others** • Juvenile offenders • Dependent on public transportation • Families underserved by public health • Sheltered juveniles: runaways, battered youth • Homeless youth

(Source: American Psychiatric Association, 2007)

Disability and safe school practice:

CWD are much stronger than what the community perceives of them and instead of undermining them, their needs have to be included in every aspect of child development. This includes customized interventions in schools and effective communication for providing accessible information and societal setting. The needs of the CWD can be well defined by them and therefore we need to begin to including them in the process of disaster preparedness and mitigation planning in schools. Involve them in all facets of disaster management in schools and provide them a platform based on equality and non-discrimination so that they grow beyond their vulnerabilities. For this the important considerations should be made on following aspects.

- Assess the types of disability.
- Determine the special needs that to be supported.
- Ensure special training for the disabled children, as well as the team who will be taking care of them in case of crisis and emergency. For example, if they need special assistance for evacuation that should be planned and be part of the system.
- Ensure equal opportunity and participation.
- Evaluate the plan and ensure effective documentation.

Scheduled Castes and Scheduled Tribes

The "Scheduled Castes" and "Scheduled Tribes" are names given to different groups in the Indian society which have been given a lower position in the society and/or considered less worthy of dignified life due to the kind of occupation, economic status, and way of life and place of dwelling. Though today malpractices such as 'untouchability' are considered unlawful, Indian Constitution considers them disadvantaged due to the inferior treatment meted out to them years back. Nonetheless to say, many members of the Scheduled Castes still live in rural areas and economic abuse remains their most severe problem. When placed in very sensitive and hazardous conditions in the community, SC and ST members involuntarily become unsafe and during and post a disaster are further more eligible to neglect, abuse, and left disenfranchised.

Children from such strata of the society need to be given support to access their rights. Their problems can be very different from children of higher castes, for example poverty, and need to be addressed in a different way. Including them in the planning of school safety programme is the first step towards ensuring a safe environment to learn and nurture *(Reference: MHRD)*.

4.2.4.3 Question and Answer with Discussion (20 minutes)

- Divide participants in groups.
- Ask participants to perform HRVA with integrating inclusiveness.
- Ask participants to present in front of the larger group.
- Discussion on what changes they had to make for integrating the inclusive approach.
- Ask the participants to evaluate the plan which they have developed in earlier session and make necessary changes with inclusion.

4.2.5 Reference/Further Reading:

1. Access to Equality in Education for Children with Disability through Inclusive Education by Dr. Vandana Singh, Lecturer, School of Education, IGNOU
2. http://www.indg.in/india/sitemap-1/primary-education/education-as-fundamental-human-right/inclusion-discovering_new_paths.pdf.
3. A practical guide to gender-sensitive approaches for disaster management.
4. Active learning network for accountability and performance in humanitarian action, 2005).
5. IASC, gender handbook in humanitarian action, 2006.

Session 4.3 Psychosocial Issues of School Children in Disaster

4.3.1 Session Objectives

Psychosocial problems of school children from different dimensions and the need for special attention for them during disaster.

4.3.2 Outline of Content

This session details the physical, social and psychological impact of school children in general at various levels.

4.3.3 Expected Outcome of the Session

- The participants would be able to understand the emotional reactions of the school children of different age group and the persons to be involved in the psychosocial interventions for them.
- The participants would be able to internalize the role of teachers in the provision of psychosocial care for the school children.

4.3.4 Detailed Session Plan

4.3.4.1 Grouping of the participants (10 minutes)

Participants should be asked to name animals. After four participants have named one animal each, the remaining participants should repeat the same four names in order one after the other. By doing this each participant would have one name of any of the four animals named first. So, participants with similar animal names would form groups.

4.3.4.2 Presentation (15 minutes)

The participants would be asked to define psychosocial; and list out the psychosocial problems of children affected by disaster. One representative of each group would be presenting on the outcome of the discussions.

Facilitator may sum up with brief comments:

Psychosocial refers to the dynamic relationship between the psychological and social dimension of a person, where the one influences the other. The psychological dimension includes the internal, emotional and thought processes, feelings and reactions. The social dimension includes relationships, family and community networks, social values and cultural practices. Psychosocial support refers to the actions that address both the psychological and social needs of individuals. The child in a disaster requires special attention for the reasons:

- Loss of familiar environment.
- Fear and insecurity.
- Struggle for food, shelter and other amenities.
- Witnessed death.
- Continued threat to their sense of wellbeing.

The objective of psychosocial support interventions are:

- Enhancing immediate and ongoing safety, and providing physical and emotional comfort.
- Facilitating calmness and orient emotionally-overwhelmed children and adolescents.
- Offer practical assistance and comprehensive explanation to avoid any misconception.
- Encourage expression of thoughts and building hope and vision.
- Connect children as soon as possible to social support networks, including family members, friends, neighbours, and informal/formal schooling.

Psychosocial support in safe school Programme:

While the safe school training programme is planned and implemented, training the students of EFA (Emotional first aid) is equally important with physical first aid and other rescue techniques. Therefore, following aspects should be ensured in safe school programme designing and implementation:

- Training the teachers and students on psychological aspect in disaster preparedness, as they could respond adequately and immediately. Psychological preparedness is most crucial for the students.
- Role play to ensure that the students are adequately sensitive each other in case of emergency and crisis.
- Ensure empathy for each other for responding adequately.

Psychosocial care techniques to work with children and adolescents:

The psychosocial care giver should understand the different impact at different age level to formulate the interventions accordingly. For the age group of 0 to 5 years the intervention should be mainly by the parents with some referral interventions. In the age group of 6 to 12 years of children, the intervention should be by both parents and teachers. Also the peer group should be used positively to build a better future for the children. During adolescent period, children would have more changes and one should address these issues through the peer group meetings as each adolescent is influenced by the group.

4.3.4.3 Clay and Potter game (25minutes)

The participants would be paired. One in each pair would be clay and the other is potter. Potter would be asked to shape the clay in to a statue of their interest. Then the roles would be reversed.

4.3.4.4 Group discussion (15 minutes)

Each group formed in such manner would be given a topic of emotional reactions of school children of age group 0 -5 years, 6 -12 years, 13 Years and above boys and 13 years and above girls.

Each participant would be asked to explain what they have made and the reason behind it. Most of the shapes would be of positive outlook

Sum up with brief comments: The school children affected in disaster is like clay. It is in the hands of teachers who can shape the children to have a positive outlook of their future.

4.3.4.5 Notes for Facilitators

The facilitators can add the following psychosocial issues of school children as part of presentation by respective groups.

0 to 5 years:	6 to 12 years:
• Fear • Crying • Dependent towards parents • Refusing food • Lack of appetite • Disturbed sleep	• Change in behaviour • Fear, anxiety, tension • Anger, irritability • Lack of interest • Lack of interest in studies • Disturbed sleep

• Adamancy • Bed wetting, thumb sucking, nail biting • Irritation • Aggressive behaviour • Anger • Refusing to go to school • Lack of energy • Lack of concentration • Feeling insecure • Numbness	• Dreams • Repeated thoughts about disaster • Change in their behaviors • Loneliness • Fear towards the future • Confusion • Not respecting others • Pretending to work • Aggressive towards the classmates. • Use of substance

13 years and above boys	13 years and above girls
• Poverty • Fear, unsecured feeling • Lack of interest in education • Lack of sleep • Change in their behaviour • Forgetfulness • Change in their mind status • Antisocial behaviour • Suicidal thoughts • Loneliness • Depression • Child labor • Early marriage • Fear towards the future • Dependency • Easily influenced by peer group • Lack of interest • Stress • Lack of acceptance • Drug abuse	• Fear • Emptiness • Lack of interest in studies • Loneliness • Changes in their relationship • Tension • insecure feelings • Unreasonable anger • Lack of sleep • Bed wetting • Lack of interest towards future • Becoming orphan/ single parenthood • Loss of memory • Anger • Aggressiveness • Believing others immediately • Lack of appetite • lack of self care • Verbal/ physical and sexual abuse

While giving the psychosocial support to children:

- Be warm and friendly.
- Accept the child as he/she is.
- Avoid flooding the child with advice.
- Respect the child.
- Be there – give both time and attention.

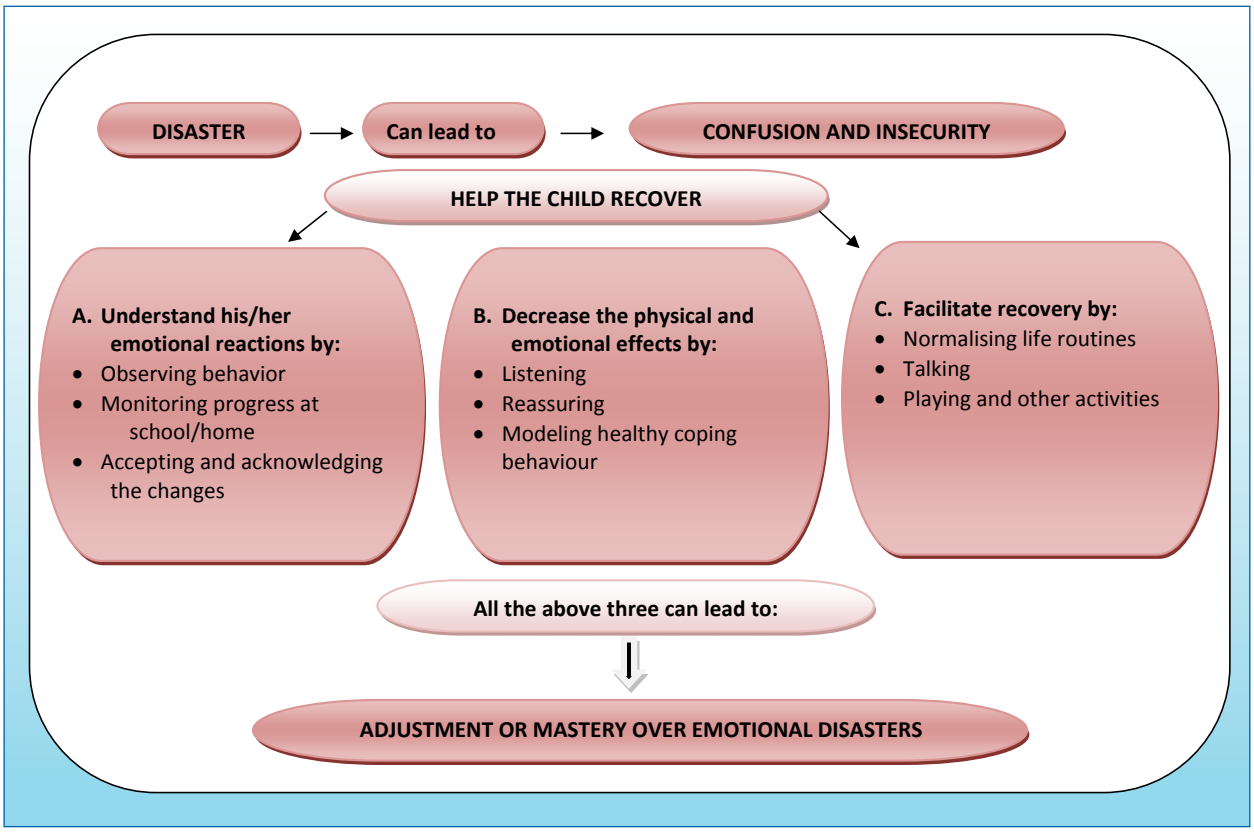
4.3.4.6 Energizer

Please refer Annex 1 for the list of energisers. Choose one depending on the availability of time and number of participants.

4.3.5 Session Resources

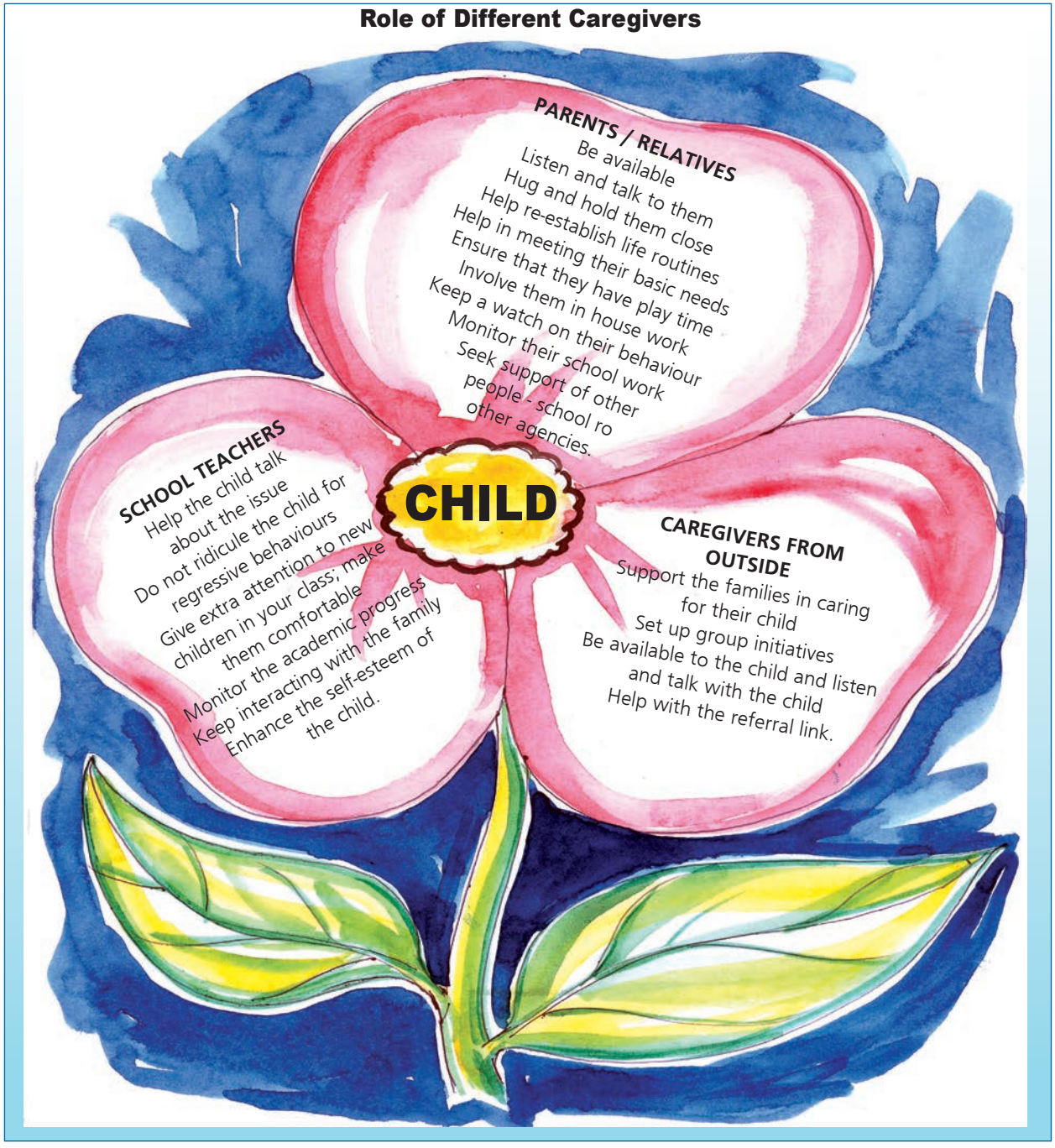
Power Point:

PPT 1: How to support a child's recovery from a traumatic event



(Adapted from: Riots, psychosocial care for children-information manual)

PPT2:



4.3.6 Reference/Further Reading:

1. NDMA Guide line on psychosocial support: http://ndma.gov.in/ndma/guidelines/PSSMHSGuidlines.pdf.
2. http://www.nimhans.kar.nic.in/dis_man/man_hm3.pdf.
3. Childhood trauma reactions: teacher manual to accompany Childhood Trauma Reactions: Tip Sheet Series.
4. Information manual 3, riots : psychosocial care for children by books for change.
5. Psychosocial Care in Disaster Management: A training module of Training of Trainers module, NIDM http://nidm.gov.in/PDF/modules/psycshosocial.pdf.

Session 4.4 Revisiting SDMP

4.4.1 Session Objectives

Revisiting SDMP, finalization and sharing.

4.4.2 Outline of Content

This session is basically to summarise key points of the school disaster management plan. This will be done through a group exercise. It will also act as an assessment to see how much participants have been able to understand and grasp during the programme.

4.4.3 Expected Outcome of the Session

By the end of session, participants should be able to prepare an inclusive SDMP.

4.4.4 Detailed Session Plan

4.4.4.1 Recap (15 minutes)

Divide participants in different groups.
Give chart paper and sketch pens to each group.
Ask groups to list out key points for the SDMP.
Ask each group to come and read out their list.

4.4.4.2 Group Activity (55 minutes)

- Ask participants to form groups as previously formed. Everyone should be in their same group.
- Ask participants to revisit their previous SDMP plan and rework on it and finalize with keeping in view all the new information particularly the inclusive approach.
- Ask groups to then present in front of the larger group.
- Discussion on the plan, if needed.

4.4.4.3 Energizer (20 minutes)

Please refer Annex 1 for the list of energisers. Choose one depending on the availability of time and number of participants.

Day 5: Reflection and Planning: Way Forward

Session 5.1 Training Session

5.1.1 Session Objectives

Enhance the knowledge and skill of delivering training in most effective manner.

5.1.2 Outline of Content

The session will provide the participants with the skill to deliver training and deliver it in such a manner that their engagement and participation remain high constantly.

5.1.3 Expected Outcome of the Session

- The session will provide participants with the skill to conduct and modulate training in most effective manner with their participation.
- The trainer will learn the skill of converting training session in more interesting way, thereby the knowledge is conveyed well to them.

5.1.4 Detailed Session Plan

Materials required for the day: Flip chart/white board, chart papers, markers etc.

5.1.4.1 Recap from previous day sessions (30 minutes)

- Form a circle with all the participants.
- Ask participants to tell one new thing they learned yesterday.
- What information they will be able to use in their area of work.
- Ask from each participant.

5.1.4.2 Facilitator Skills (60 minutes)

- Who is a Facilitator
- What does Facilitator do
- Facilitator techniques

5.1.5 Session Resources

Handout 1 and 2

Handout 1

Facilitator Skills

As a facilitator your key role is to facilitate the participants to enhance their knowledge, skills and also to influence their attitude during the training programme. You have to give enough attention and positive reinforcement to the participants. The interaction you have with the participants should not only promote learning but should also promote their understanding transfer, retention and application of skills. This is possible by building on their existing knowledge, promoting thinking ability by asking and responding to questions, monitoring their understanding, developing skills and attitudes and providing feedback to them.

You need to visualize the whole session before starting the activity as well as highlight that some of the related points will be covered in the subsequent modules. As a facilitator, you should reinforce and emphasize on the lessons learnt. Try to see that the message to the participants is clear, unambiguous, without being sermonizing or moralizing.

During discussions you may come across certain viewpoints of the participants that may be specific to their cultures or conditions around them. Such views should be respected. Role of facilitator is to foster an environment where participants feel comfortable being honest and feel respected, not just tell us we want to hear from them.

Functions of a Facilitator

A facilitator is responsible for:

a. Maintaining and supporting the group.

b. Keeping the group on target so that course content is covered.

c. Providing a model for effective communication skills.

Principles of Adult Learning

Given below are some of the principles which when put in practice during the training sessions, can facilitate adult learning.

- **From known to unknown**: During the trainings, make an effort to impart the learning points from what is known to participants to what is unknown. You can ask the trainees to tell about the situation of disasters in their states, then begin to give learning points further.
- **From simple to complex**: Explain the easy concepts first, then go to difficult areas.
- **Training needs oriented**: The training should be as per the needs of the participants
- **Active practice**: Always build some practical exercises and let the trainees practice on these.
- **Repetition of salient factors**
- **Appreciate behaviour of the trainees.**
- **Basic/ physiological needs** like water; comfort in training should be taken care of.

Key Learning Points for the Facilitators:

1. Concentrate on "real world" situations.
2. Emphasize how learning can be applied.
3. Involve learners in establishing learning goals.
4. Use learners' experiences as a resource.
5. Allow debate and the challenge of ideas.
6. Pay attention to and value the opinions of learners.
7. Foster a spirit of collaboration and draw upon each other's knowledge.
8. Treat learners like adults.

Skills required to be an effective trainer:

1. **Body Language:**

- **Minimum distractions;**
- **Positive behaviour;**
- **Purposeful movement.**

2. **Vocal Behaviour: Your voice should reflect enthusiasm and vitality.**

3. **Create a Learning climate:** The learning climate tells a lot about the general feelings and attitudes that exist in the instructional environment. It helps to clarify complex concepts and encourages asking of questions by the trainees.

4. **Skill of asking questions**: Asking questions is a skill in itself, which facilitates learning and keeps the motivation high. Ask questions to checking for understanding of instruction and to evaluate effectiveness of the lesson. Thinking. Vary the patterns of questions, vary type of questions and vary the thinking time.

5. **Answering questions:** How to answer the questions asked by the trainees is very important skill. Try to answer briefly and thank the questioner for asking question. Admit ignorance, if you do not know the answer. **Accept controversy.**

6. **Providing feedback:** Knowledge of results enhances the learning. Therefore provide feed back to the trainees as to how well they are performing. You can do this by asking ddirect oral questions, written responses and by return demonstration.

Handout 2

Training Methods

A training method is the process, technique or approach, which a trainer uses in teaching. Given below are some of the most common methods used during training settings. To be an effective trainer, try to link your teaching points with the actual disaster situations and examples in your state.

1. Lecture Method

The lecture is, by definition, words spoken by the instructor. It is thus a "verbal-symbol" medium, offering a relatively passive and un-stimulating experience for learners, unless the speaker has unusual vocal and rhetorical talent. The lecturer needs plenty of interesting examples to illustrate theory, colourful and persuasive language to enhance a well-organized pattern of ideas, and a pleasant and stimulating voice.

When to Use it?

- ❖ When the group is large - say 30 or more.
- ❖ When knowledge or understanding is to be imparted by an expert.
- ❖ When a body of factual information has to be communicated in a short time.
- ❖ When information is not readily available to group members.

Delivery: Essentials of good delivery:

- Words must all be clear and spoken at a suitable pace.
- Pauses should occur at logical places.
- Variety should be used: emphasizing important points in a deliberate manner, connecting parts and using illustrations in a conversational way.
- Limit the number of concepts presented.
- Use examples and summaries frequently.
- Add visual aids.
- Provide ample time for question-and-answer or discussion period.
- Provide resources for further study.

Advantages

- o Easy and efficient.
- o Conveys most information.
- o Reaches large numbers.
- o Minimum threat to learner.
- o Maximum control by instructor.

Disadvantages

- Lowest level in the cognitive domain.
- Learner is passive participant.
- Lectures do not meet the requirements of the adult education "andragogy" for self-directed learning and problem-solving approaches.
- Lecturer bombards students with considerable information (saturation may occur).

Lectures can be made interactive by posing questions:

- ❖ At beginning of lecture: to find out what trainees already know and to discover opinions
- ❖ During lecture: to find out whether the participants understand and are following the lecture
- ❖ End of lecture: to recapitulate and test the participants' knowledge and understanding

2. The Discussion Method

- One- to-one or group setting
- Individuals are active participants by exchanging ideas through verbal responses
- Discussion may be lead by a facilitator for:
  - ➢ Common experiences
  - ➢ Problem solving
  - ➢ Case studies of real-life situations

Advantages

- More interesting / motivating
- Active participation
- Broadens perspectives
- Good for higher-level cognitive, affective objectives
- Individuals can examine their own ideas and internalize knowledge

Disadvantages

- Learner may be unprepared
- Shy people may not discuss
- More time-consuming
- Size of group limited

When to Use it?

- ❖ When the group is small - say 20 or less
- ❖ When the members know one another well enough
- ❖ When the material is of a kind that can be assimilated readily, at least in part, or when there is some prior knowledge of it
- ❖ **The most useful starting point for the discussion is the question.**

Pitfalls

- Repeating the answer (do not repeat. Move on.)
- Holding a dialogue with a single answerer (Bring in the group, e.g. "Would anyone like to add to that?")
- Trampling the incorrect answerer
- Asking too many questions (adults do not like to be cross-examined.)
- Letting the discussion take too long (guide it carefully. Remember the objective of your discussion.)

3. Demonstrations

Demonstrations are merely illustrated lectures or presentations. Demonstrations are especially useful for psychomotor objectives (where participants are required to perform some manual task), but can of course be used to illustrate interpersonal skills, interviewing, communication, discipline, or counseling.

Planning a Demonstration

- ▪ Outline steps in order
- ▪ Outline what you will say
- ▪ List items and time needed for each step
- ▪ Prepare some steps and/or finished product ahead of time
- ▪ Select best equipment
- ▪ Organize materials and equipment efficiently
- ▪ Involve audience in demo
- ▪ Practice!!!!

Strengths

- ▪ Realistic visual image
- ▪ Appeals to several senses
- ▪ Can show a large group
- ▪ Good for psychomotor domain

Weaknesses

- Requires equipment
- Requires time
- Learner is passive, unless they can practice

Interactive Demonstrations

Good demonstration is interactive. They allow learner-trainers to do something instead of merely observe. The trainers have things in their hands and they move those things in purposeful ways; they start doing so at the earliest possible moment. They move around, they ask questions, they interact.

4. Group Discussion

Group discussions are conversations and deliberations about a topic among two or more participants facilitated by a trainer or other discussion leader. Such discussions are most useful when certain conditions are present. For example, it always helps when there is someone in the group with some experience or knowledge about the topic being addressed. It can assist groups when they have to create new ideas or actions, do a need assessment, understand complex ideas and then make decisions about them. The purpose of the discussion in these situations is to assist the group in doing what it is supposed to do.

5. Question-Answer Method

This method requires the educator begins the lesson by introducing some provocative idea or question and the students respond. One of the best ways to generate discussion is to ask an open-ended question (one which can't be answered by a simple "yes" or "no"). Questioning tends to be a universal teaching strategy. There are drawbacks to this teaching method, such as lack of class participation due to discomfort from speaking out loud or misunderstanding the questions given to them. Having a student reword the question or giving the class time to react to the questions are good solutions to these drawbacks

6. Role Playing

Role-playing is a training technique where, without a script, participants act out a situation in front of the rest of the group. In order to decide what they will say and do in the role-play, participants are given a situation described in detail and assigned a role to play. Role players and observers are aware of the general situation, but individual role players may be the only ones aware of the intricacies of their respective roles. The intricacies are either told to the role players individually, or written on a slip of paper for each role player. After the role play is completed, it is discussed by the entire group.

Role-playing can be used to examine delicate problems, or to explore solutions and to provide insights into attitudes differing from those of participants.

Session 5.2 Open House Discussion

5.2.1 Session Objectives

Discussion with the participants on the contextual issues and specific challenges related to school safety.

5.2.2 Outline of Content

This session is to clear concepts; doubts related to specific contexts that participants belong to.

5.2.3 Expected Outcome of the Session

By the end of session, participants will be able to resolve issues raised regarding school safety and related topics to their local context.

5.2.4 Detailed Session Plan

5.2.4.1 Question and Answer with Discussion (60 minutes)

It will be preferable to invite external resource persons for sharing of experiences and feedback

5.2.4.2 Note for the Facilitator:

- Announce the house is now open for discussion.
- Ask participants to raise any issue they wish to discuss to get more information on.
- Write down question and concerns on the board or flip chart.
- Facilitator may encourage other participants to respond to the queries and add more information if required.

Facilitator should finally respond to the questions and concerns raised by the participants.

5.2.3 References/Further Reading:

http://ndma.gov.in/ndma/nssp-projects/ModelSchoolDMplantemplateenglish.pdf

Session 5.3 Action Plan

5.3.1 Session Objectives

Preparation of "action plan.

5.3.2 Outline of Content

This session gives an opportunity to the participants to prepare action plan as they feel fit for the school safety. This session will help them understand the school safety planning in a more holistic manner.

5.3.3 Expected Outcome of the Session

By the end of session, participants will be able to prepare their action a plan for the next steps.

5.3.4 Detailed Session Plan

5.3.4.1 Group Activity (30 minutes)

- Ask participants to regroup in same groups.
- Ask participants to make action plan in their specific regional context for the way forward.
- Ask groups to present in front of the larger group.
- Discussion on the presentations.

Session 5.4 Post-Training Evaluation

5.4.1 Session Objectives

Feedback and Suggestions.

5.4.2 Outline of Content

This session is to get feedback from the participants about the training programme. This will help the facilitator to determine what worked well land what didn't in the training programme. What will be the areas for improvement next time?

5.4.3 Expected Outcome of the Session

Strengths of the training and areas for improvement.

5.4.4 Detailed Session Plan

5.4.4.1 Experience Sharing (90 minutes)

Ask participants to share their experience during the training in terms of content, material, methodology etc.

Ask participants the following:

- What have you gained from this training?
- Will they be able to use this information in their work?
- Anything they wish to share regarding the entire programme?
- Who among the participant became their best friend and one thing they like about that person.
- Encourage each participant to talk.

Handout

Training Programme on School Safety
(During ---to---)

Overall Evaluation/ Feedback Form

Name of the participant:_____

Thanks in advance for giving your assessment. Just **encircle** the option that expresses you truly.

1. I think the structure and organization of the course fulfilled the objectives of the Training programme.
   Excellent Very Good Good Average No response
2. I think the contents of course were relevant
   Excellent Very Good Good Average No response
3. I found the course materials supplied to us to be.
   Excellent Very Good Good Average No response
4. I believe this will help me in my future job related to Disaster management
   Strongly Agree Agree Can not say Disagree Strongly disagree
5. I feel this inspires me to take up assignments related to disaster management
   Very strongly strongly Can not say Low Do not feel at all
6. I have benefited from interaction with fellow participants in the course
   Excellent Very Good Good Average No response

7. Your overall impression of the training workshop
   Excellent Very Good Good Average No response
8. Specific suggestions from participants for improving the course
9. Which portion of the Workshop you found least helpful
10. Any specific observation/ comments you wish to make
11. Any suggestion regarding the training methods
12. Any suggestion regarding topic and speakers
13. any particular faculty you have in mind, give the subject and address of the faculty
14. You comments on administrative arrangements (Just encircle the option that expresses you truly):

Sl. No.	*PPT2:*	*Comments*				
a.	Reception and Registration	**Excellent**	**Very Good**	**Good**	**Satisfactory**	**Poor**
b.	Drinking water arrangements in the lecture hall	**Adequate**		**Inadequate**		
c.	Lunch and tea during the programme	**Excellent**	**Very Good**	**Good**	**Satisfactory**	**Poor**
d.	Lodging arrangements	**Excellent**	**Very Good**	**Good**	**Satisfactory**	**Poor**
e.	Catering in the hostel	**Excellent**	**Very Good**	**Good**	**Satisfactory**	**Poor**

15. Any other recommendation/ suggestion, not covered above, to improve the programme
16. Kindly indicate how effective the following sessions/topics to you were:

Day / Date	Topic	Faculty Name	Assessment				No Response
			Excellent	Very Good	Good	Fair	
Day 1	Session1	Resource Person Name					
	Session2	Resource Person Name					
Day 2	Session 1						
	Session 2						
Day 3							
Day 4							
Day 5							

Any other Comments:

Session 5.5 Valediction

5.5.1 Session Objectives

Completion of the training.

5.5.2 Outline of Content

Do invite important senior members and other key people for this session.

5.5.3 Detailed Session Plan

5.5.3.1 Valediction (60 minutes)

Thank participants for their participation.

ANNEX 1

List of Energizers

The Energizers can be taken in-between sessions depending on the time and the strength of participants.

Name	How to Conduct	What is achieved
Card Games	The card games have dos and don'ts written on each card on different hazard. There are three ways to play it dumb charades, Lucky star and memory bank. However dumb charades would be most suitable one. Two groups are to be formed. Facilitator reads out the entire message on each card and explains them to the groups. Each group will choose one card and act on it without uttering words and writing on board. The other group has to recognize the message being act. It would go on till all the messages are read	This is would show one of the ways the children can be oriented on dos and don'ts of different hazards and it would also bring in the age appropriateness. Like primary students prefer games than a lecture or a session.
Connecting eyes	Participants stand in a circle. Each person makes eye contact with another person across the circle. The two walks across the circle and exchange positions, while maintaining eye contact. Many pairs can exchange at the same time, and the group should try to make sure that everyone in the circle is included in the exchange. Begin by trying this in silence and then exchange greetings in the middle of the circle.	It would help participants to know each other and open among themselves which would eventually help the topic discussions more proactive.
Killer wink	Before the game starts, ask someone to be the "the killer" and ask them to keep their identity a secret. Explain that one person among the group is the killer and they can kill people by winking at them. Everyone then walks around the room in different directions, keeping eye contact with everyone they pass. If the killer winks at you, you have to play dead. Everyone has to try and guess who the killer is. It can continue to number of times.	It shows the importance of identifying the risk which may also be hidden and plan accordingly. Otherwise, if in planning these risks are not included the whole plan would fail. Hence participatory approach becomes helpful to identify and assess these risks.
Family members	Prepare cards with family names. You can use different types of professions, such as Mother Farmer, Father Farmer, Sister Farmer and Brother Farmer. Or you could use names of different animals or fruits. Each family should have four or five in it. Give each person one of the cards and ask everyone walk around the room. Explain that when you call out, "family reunion", everyone should try to form a "family group" as quickly as possible.	It can be linked with stake holder analysis and their importance.
Act on	The facilitator asks all the participants to stand in different area of venue. He then shouts name of hazards, the participants would now need to act appropriately for that hazard. Like, fire the facilitator shouts "earthquake", everyone would go for duck cover and hold. Similarly if he says tsunami, they stand on chairs or any elevated place.	It shows the importance of awareness and act on the knowledge gained.

Name	How to Conduct	What is achieved
Port and Starboard	Participants stand in the centre of the room. If the leader shouts "starboard", everyone runs to the right. If he/she shouts "port", everyone runs to the left and if he/she shouts "man the ship", everyone runs back to the centre.	It is to relate to the team work and leadership.
Don't Answer	Ask the group to stand in a circle. One person starts by going up to someone and asking them a question such as, "what is your most annoying habit?" However they must not answer the question themselves – the person to their left must answer. People can make their answer as imaginative as possible.	This is to emphasis on knowing stakeholders about their capacity, weakness, and resources and so on and so forth.
Count Down	Ask the participants to form a circle. Explain that the group needs to count together from 1 to 50. There are few rules: they are not to say seven or any number which is a multiple of seven. Instead, they have to clap their hands. Once someone claps their hands one time, the group must continue the number from next digit. If someone claps their hands twice or more than twice, the group must count the number in reverse. If someone says seven or multiple of seven, start the counting again.	It shows the importance of being sensitive towards local culture, child's age, gender, religion, so on and so forth. However it does not mean that the positive message is not to be given but should be delivered in very strategic, localized and non-offending ways.
Mirror Image	Participants sort themselves into pairs. Each pair decides which one of them will be the "mirror". This person then copies (mirrors) the actions of their partner. After some time, ask the other person can be "mirror".	It shows the importance and how replication of good practice can be done. May be with some slight contextual modification.

ANNEX 2

Supreme Court of India Judgment

Avinash Mehrotra vs Union of India & Ors. on 13 April, 2009

Author: D Bhandari

Bench: R.V. Raveendran, Lokeshwar Singh Panta

IN THE SUPREME COURT OF INDIA

CIVIL ORIGINAL JURISDICTION

WRIT PETITION (CIVIL) NO.483 OF 2004

Avinash Mehrotra... Petitioner Versus

Union of India & Others... Respondents JUDGMENT

Dalveer Bhandari, J.

1. This important Public Interest Litigation relates to a fire swept through the Lord Krishna Middle School in District Kumbakonam in the city of Madras, Tamil Nadu. The fire started in the school's kitchen while cooks were preparing mid-day meal. In order to protect the rights of life and education guaranteed to all school going children under Articles 21 and 21-A, the petitioner has prayed this Court to bring about safer school conditions.

2. It is alleged that Lord Krishna Middle School is one of the thousands of private schools that have sprung up in response to drastic cuts in government spending on education. This building houses more than 900 students in a crowded, thatched-roof building with a single entrance, a narrow stairway, windowless classrooms and only one entrance and exit.

3. The fire had sparked by dry coconut leaves used as firewood in a nearby makeshift kitchen with thatched-roof. The fire had started when the cooks were preparing mid-day meal under a Mid-day meal scheme popular in Tamil Nadu. It is alleged that the ventilation of the entire school building was extremely poor with only cement-perforated windows. It took sufficient time for the fire fighters on a crane to break these windows and rescue the few children they could with severe burn injuries. The kitchen fire rose so high that the thatched roof of the classrooms caught fire and the blazing roof supported by bamboo poles collapsed on the school children and most of them died on the spot.

4. The nearby residents started dousing the flames and trying to rescue children. The school's narrow, steep stairs and few exists apparently hampered those efforts. The crowd of volunteer rescuers ended up blocking the main door as they tried to help.

5. According to rules, a government-certified engineer is supposed to visit these schools once every two years and issue a "stability certificate" if the building is found to be in good condition and all safety precautions are met. The engineer can refuse to issue the certificate if he finds the safety measures inadequate, losing the school its licence to operate.

6. It is mentioned in the petition that the investigations have revealed that the school in Kumbakonam was last inspected three years ago. The school had a thatched roof in severe violation of building laws. It even had a thatched kitchen close to the thatched classrooms. The fire officials had described the school as a death trap. They said that the victims had no chance of escape when the fire erupted as they were doing their lessons on the top floor. It is alleged that the incidence of Kumbakonam District is not the first of its kind. In the year 1995, a school prize-giving ceremony in a Northern Indian town turned to tragedy when a fire broke out, killing nearly 400 people, many of them children and teenagers. The fire was caused by an electrical short circuit in the town of Dabwali in the state of Haryana, about 150 miles from the National Capital.

7. Flagrant violation of school safety regulations continues in the entire country even four decades after the government pledged to enforce them after a private school building in Madurai caves in, killing 35 school girls and injuring 137.

8. The petitioner has prayed that he has filed this petition with a specific objective that:(1) each and every child of this country can receive good education free from fear of safety and security, (2) to ensure that more stringent rules and regulations are framed keeping in mind the safety of the students, (3) to ensure that such standards of safety are at par with the highest standards set up anywhere in the world; and (4) to ensure that such standards are in fact enforced regularly for the safety and protection of children in classrooms across the country.

9. The petitioner has submitted that the concerned building by-laws and rules are not followed by most of the schools in the country causing serious safety hazards for the children.

10. In this petition, it is prayed that along with the existing rules regarding safety, some additional rules be framed to strengthen the laws to protect the children in school buildings in cases of fire and other kinds of emergencies. In the petition, the petitioner has prayed for:

    i Developing a manual with fire safety procedures, and other safety precautions and distributing them in schools. The manual can include the ways fires can be prevented through careful design, management, and maintenance practice; and ideas for limiting fire damage, and other calamities. Marking clear and safe emergency evacuations. Making sure that all exists are marked clearly and that there are no objects obstructing the Entry and Exit of the school building.

    ii Ensuring that the kitchen in the precincts of the school has adequate safety mechanisms. Not keeping any hazardous, inflammable material in the school precincts. Not making school buildings with inflammable material like thatched roof, or having any exposed wires in the school.

    iii Separating hazardous areas from the main school.

    iv Ensuring that the schools are not exceeding the limit of the students it can admit in accordance with the facilities available for each school, ensuring proper facilities like safe drinking water, toilets, first aid boxes, proper ventilation, lighting etc is available to the students and the teachers.

    v Schools must take appropriate safety measures and an emergency response plan that delineates staff responsibilities, communication modes, and training and updating procedures for all members of the faculty, staff and students. Assigning duties to teachers in case of an emergency like fire, earthquake, flood, a mob attack etc and training the staff to ensure that all safety precautions are followed.

    vi Fire insurance coverage should be made mandatory for all schools. This will also help as all insurance companies will definitely inspect the school premises before agreeing to provide insurance cover, thereby ensuring adherence to the highest safety standards by the schools.

    vii Residential schools to have proper safety measures in case of using boilers, kitchen, ensuring that there is no leakage while using or storing fuel, and that it is outside the reach of children. All school buildings must install fire extinguishing equipment and sensor alarms in case of fires. Such alarms must be able to automatically intimate the nearest local fire station so that their response times are much quicker in case of fire.

    viii. Regular fire drills to make students aware of what to do in case of a fire emergency.

    ix The States should deal with all aspects of safety within schools pertaining to classrooms, kitchen, laboratories, and libraries and outside schools relating to playgrounds, swimming pools and field trips.

    x There should be a policy prescribing safety audits in all schools vide which an assessment of the extent to which the stipulated safety procedures for a particular area/task are followed can be done. Audits can be used to identify weaknesses in safety norms and check compliance with set standards and reinforce positive safe behavior.

xi The local authorities in both urban and rural areas should be given specific directions with regard to the safety measures by the respective State Government.

11. In the petition, it is averred that the State is duty bound to protect and secure lives of students across the country by ensuring the minimum safety standards. The State is liable to promulgate policies, which ensure the implementation of the safety laws and procedures laid down. The State must ensure that the government-certified engineer visits each and every school at least once in two years and issued a `stability certificate'. if the building is found to be in good condition and all safety precautions are met. There should be strict supervision on those engineers who can issue these kinds of certificates. It is alleged that most of the Indian private schools in district towns are dull, claustrophobic, cramped and often have derelict structures with no fire safety systems, playgrounds or libraries. Most of these private schools in the district towns are located in a warren of congested lanes and school authorities often lock the gates when classes are on to keep children from slipping out of the school. Most of the schools in the villages and small towns are still made of thatched roofs made from coconut leaves or other cheap and easily available materials to avoid the cost of construction in flagrant violation of the building laws.

12. It is prayed in the petition that a committee of jurists, legal experts and lawyers be constituted to formulate a comprehensive report in a time bound plan for carrying out reforms in the safety standards as prescribed in the schools and to direct all the schools to implement the plan, alternately to come forward with their own plan for providing safety measures in the schools. It is further prayed that this Court should evolve model safety standards as a part of Article 21 and for free and fair exercise of fundamental rights under Articles 14, 15 and 19 of the Constitution of India.

13. In this petition, we are called upon to determine what, if any, safety standards schools should have and how, if at all, schools have not met those standards.

14. The National Building Code of India, 2005, promulgated by the Bureau of Indian Standards, provides detailed instructions on how to construct fire-safe buildings. Tables and drawings set standard for schools particularly, including number and type of fire extinguishers, quantity of water necessary for a proper fire suppression system, and many more, providing an engineer-tested, nationally applicable set of standards that our schools could follow. In the introductory materials for the Code, the Bureau of Indian Standards affirms the petitioner's claim in this case: "The hazards of fire in educational buildings can be considerably lowered by adoption of certain predetermined fire safety measures with regard to proper planning of buildings, choice of proper materials and components, electrical equipments and making suitable provisions for fire detection and suppression system."

15. This Court issued notice to the Union of India, State Governments and the Union Territories. Replies and counter affidavits have been received from almost all the State Governments and the Union Territories and also the Union of India. This Court appointed Mr. Colin Gonsalves, learned Senior Advocate as Amicus Curiae. He also suggested some guidelines which need to be followed by all schools in the country.

16. 27 States and Territories have filed affidavits in this Court detailing the current safety of their schools and plans for improvement. The States admit that many schools do not meet self-determined safety standards, let alone the more rigorous standards of the National Building Code. The affidavits generally focus on plans for improvement, rather than schools' current conditions, because much work remain. Where States have provided detailed counts of schools and installed safety features, it emerges that thousands of schools lack any fire suppression equipment. Thousands more schools do not have adequate emergency egress or non-inflammable roofs. Unfortunately, most States failed to provide any quantitative data in their affidavits. Instead these States filed vague plans for future renovations and piecemeal schemes to improve schools safety. Little technical advice informs some of the plans, and few have any admitted force of law or fail-safe or follow-up mechanism from the State Government.

17. While we applaud States' efforts to improve schools, we find that States have done too little, too late. With the guidance of the National Building Code and affidavits in this case, we view Mr. Gonsalves's brief

as crystallizing a minimum set of safety standards for schools. By their own admission, States have not met these standards and they have welcomed this Court's guidance in achieving improvement. We will consider in more detail the exact standards required and relief sought later in this view. It is clearly borne out from the affidavits filed by the respondents that even the basic fire extinguishing equipments have not been installed in most of the schools. Majority of the schools do not have emergency exits. The schools must realize and properly comprehend the importance of the fire safety equipments, but unfortunately most of the schools do not have fire extinguishing equipments and consequently, the schools are not following the minimum safety standards prescribed by the Building Code, the Bureau of Indian Standards.

18. Despite best intentions and frequent agreements, these codes and safety standards rarely bind builders in law or practice. State or local governments must enact Building Codes before any may have the force of law. Some Building Codes exist in law, but few states or municipalities have enacted a standard as rigorous as the National Building Code. Weak enforcement often then moots the enacted code's effectiveness, no matter the Code's intent, whether fire safety officials, routinely speak to the need for meaningful standards with real enforcement.

19. In the petition, the petitioner does not seek damages or court's finding on culpability. The main intention of filing this petition is to protect against similar future tragedies by improving the conditions of the schools in our country.

20. Education occupies an important place in our Constitution and culture. There has been emphasis on free and compulsory education for children in this country for a long time. There is a very strong historical perspective. The Hunter Commission in 1882-83, almost 125 years ago, recommended Universal Education in India. It proposed to make education compulsory for the children.

21. The Government of India Act, 1935 provided that "education should be made free and compulsory for both boys and girls." While debating in a bill in Imperial Legislation Council in 1911, Shri Gopal Krishna Gokhale strongly advocated that elementary education should be both compulsory and free.

22. Our original Framers of the Constitution placed free and compulsory education in the Directive Principles. The un- amended Article 45 provided that:

"The State shall endeavour to provide, within a period of ten years from the commencement of this Constitution, for free and compulsory education for all children until they complete the age of fourteen years."

23. The Kothari Commission on Education set up by the Government of India in 1966 strongly recommended free and compulsory education for children up to 14 years. The Commission observed that there is no other way for the poor to climb their way out of this predicament.

24. Education occupies a sacred place within our Constitution and culture. Article 21A of the Constitution, adopted in 2002, codified this Court's holding in Unni Krishnan, J.P. & amp; Others v. State of Andhra Pradesh & Ors. (1993) 1 SCC 645, in which we established a right to education. Parliament did not merely affirm that right; the Amending Act placed the right to education within the Constitution's set of Fundamental Rights, the most cherished principles of our society. As the Court observed in Unni Krishnan (supra), para 8:

"The immortal Poet Valluvar whose Tirukkural will surpass all ages and transcend all religious said of education"

"Learning is excellence of wealth that none destroy; To man naught else affords reality of joy."

25. Education today remains liberation - a tool for the betterment of our civil institutions, the protection of our civil liberties, and the path to an informed and questioning citizenry.

26. Then as now, we recognize education's "transcendental importance" in the lives of individuals and in the very survival of our Constitution and Republic. In the years since the inclusion of Article 21A, we have

clarified that the right to education attaches to the individual as an inalienable human right. We have traced the broad scope of this right in R. D. Upadhyay v. State of A.P. & Ors. AIR 2006 SC 1946, holding that the State must provide education to all children in all places, even in prisons, to the children of prisoners. We have also affirmed the inviolability of the right to education. In Election Commission of India v. St. Mary's School & Ors. (2008) 2 SCC 390, we refused to allow the State to take teachers from the classroom to work in polling places. While the democratic State has a mandate to conduct elections, the mundane demands of instruction superseded the State's need to staff polling places. Indeed, the democratic State may never reach its greatest potential without a citizenry sufficiently educated to understand civil rights and social duties, Bandhua Mukti Morcha v. Union of India & Ors., (1997) 10 SCC 549. These conclusions all follow from our opinion in Unni Krishnan. Education remains essential to the life of the individual, as much as health and dignity, and the State must provide it, comprehensively and completely, in order to satisfy its highest duty to citizens.

27. Unlike other fundamental rights, the right to education places a burden not only on the State, but also on the parent or guardian of every child, and on the child herself. Article 21A, which reads as follows, places one obligation primarily on the State:

"The State shall provide free and compulsory education to all children of the age of six to fourteen years in such manner as the State may, by law, determine."

28. By contrast, Article 51A(k), which reads as follows, places burden squarely on the parents:

"Fundamental duties - it shall be the duty of every citizen of India who is the parent or guardian to provide opportunities for education to his child or, as the case may be, ward between the age of six and fourteen years."

29. The Constitution directs both burdens to achieve one end: the compulsory education of children, free from the fetters of cost, parental obstruction, or State inaction. The two articles also balance the relative burdens on parents and the State. Parents sacrifice for the education of their children, by sending them to school for hours of the day, but only with a commensurate sacrifice of the State's resources. The right to education, then, is more than a human or fundamental right. It is a reciprocal agreement between the State and the family, and it places an affirmative burden on all participants in our civil society.

30. This Court has routinely held that another fundamental right to life encompasses more than a breath and a heartbeat. In reflecting on the meaning of "personal liberty" in Articles 19 and 21, we have held that "that `personal liberty' is used in the article as a compendious term to include within itself all the varieties of rights which go to makeup the `personal liberties' of man." Kharak Singh v. State of U.P. & Ors. AIR 1963 SC 1295, para 16. Similarly, we must hold that educating a child requires more than a teacher and a blackboard, or a classroom and a book. The right to education requires that a child study in a quality school, and a quality school certainly should pose no threat to a child's safety. We reached a similar conclusion, on the comprehensive guarantees implicit in the right to education, only recently in our opinion in Ashoka Kumar Thakur v. Union of India & Ors. (2008) 6 SCC 1.

31. The Constitution likewise provides meaning to the word "education" beyond its dictionary meaning. Parents should not be compelled to send their children to dangerous schools, nor should children suffer compulsory education in unsound buildings. Likewise, the State's reciprocal duty to parents begins with the provision of a free education, and it extends to the State's regulatory power. No matter where a family seeks to educate its children, the State must ensure that children suffer no harm in exercising their fundamental right and civic duty. States thus bear the additional burden of regulation, ensuring that schools provide safe facilities as part of a compulsory education.

32. In the instant case, we have no need to sketch all the contours of the Constitution's guarantees, so we do not. We merely hold that the right to education incorporates the provision of safe schools.

33. This Court in Ashoka Kumar Thakur's case (supra) observed as under:

"It has become necessary that the Government set a realistic target within which it must fully implement Article 21A regarding free and compulsory education for the entire country. The Government should suitably revise budget allocations for education. The priorities have to be set correctly. The most important fundamental right may be Article 21A, which, in the larger interest of the nation, must be fully implemented. Without Article 21A, the other fundamental rights are effectively rendered meaningless. Education stands above other rights, as one's ability to enforce one's fundamental rights flows from one's education. This is ultimately why the judiciary must oversee Government spending on free and compulsory education."

34. In view of the importance of Article 21A, it is imperative that the education which is provided to children in the primary schools should be in the environment of safety.

35. In view of what has happened in Lord Krishna Middle School in District Kumbakonam and other incidents which have been enumerated in the preceding paragraphs, it has become imperative that each school must follow the bare minimum safety standards, in addition to the compliance of the National Building Code of India, 2005, in particular Part IV - Fire & Life Safety and the Code of Practice of Fire Safety in Educational Institutions (IS 14435:1997) of the Bureau of Indian Standards. The said safety standards are enumerated herein below:

3.1 FIRE SAFETY MEASURES IN SCHOOLS:

i. Provision of adequate capacity and numbers of fire extinguishers of ISI marks to be provided in eye-catching spots in each block of the school.

ii. First aid kits and necessary medicines should be readily available in the school.

iii. Provision of water tank and separate piping from the tank with hose reel to the ground floor and first floor.

iv. Fire fighting training to all teachers and students from X to XII standards.

v. Fire Task Force in every school comprising of Head of the institution, two teachers / staff members and one member from the Fire and Rescue Department should be constituted. The Fire & Rescue Department member shall monitor and make fire safety plan and conduct inspections once in every three months.

vi. Display of emergency telephone numbers and list of persons to be contacted on the notice board and other prominent places.

vii. Mock drills to be conducted regularly. Fire alarm to be provided in each floor and for rural schools separate long bell arrangement in case of emergency.

viii. All old electrical wiring and equipment shall be replaced with ISI mark equipments and routine maintenance conducted by the School Management in consultation with the Fire and Rescue Department.

ix. No High Tension lines should run inside or in close proximity to the school. Steps must be taken to shift them if they are already there.

x. The Fire and Rescue Department shall frame guidelines with "DOS and DON'Ts" for schools and issue a fitness certificate, which shall be renewed periodically.

3.2 TRAINING OF SCHOOL TEACHERS & OTHER STAFF:

i. The teachers along with other staff shall be trained to handle safety equipment, initiate emergency evacuations and protect their students in the event of fire and other emergencies by the Fire and Rescue Department.

ii. They shall also be trained in providing emergency first-aid treatment.

iii. There shall be a School Safety Advisory Committee and an Emergency Response Plan drafted by the Committee in approval and consultation with the concerned Fire & Rescue Department.

iv. Emergency Response Drills conducted at regular intervals to train the students as well as the school staff. v. All schools to observe Fire Safety Day on 14th of April every year with awareness programs and fire safety drills in collaboration with the Fire and Rescue Department.

3.3 SCHOOL BUILDING SPECIFICATIONS:

i. The school buildings shall preferably be `A' Class construction with brick / stone masonry walls with RCC roofing. Where it is not possible to provide RCC roofing only non-combustible fireproof heat resistance materials should be used.

ii. The nursery and elementary schools should be housed in single storied buildings and the maximum number of floors in school buildings shall be restricted to three including the ground floor. iii. The School building shall be free from inflammable and toxic materials, which if necessary, should be stored away from the school building.

iv. The staircases, which act as exits or escape routes, shall adhere to provisions specified in the National Building Code of India 2005 to ensure quick evacuation of children.

v. The orientation of the buildings shall be in such a way that proper air circulation and lighting is available with open space all round the building as far as possible.

vi. Existing school buildings shall be provided with additional doors in the main entrances as well as the class rooms if required. The size of the main exit and classroom doors shall be enlarged if found inadequate.

vii. School buildings have to be insured against fire and natural calamities with Group Insurance of school pupils.

viii. Kitchen and other activities involving use of fire shall be carried out in a secure and safe location away from the main school building.

ix. All schools shall have water storage tanks.

3.4 CLEARANCES & CERTIFICATES:

i. Every School shall have a mandatory fire safety inspection by the Fire and Rescue Services Department followed by issuance of a `no objection certificate' to the School as a mandatory requirement for granting permission for establishing or continuation of a School.

ii. An Inspection Team consisting of experts like a Civil Engineer, a Health Officer, a Revenue Officer, a Psychologist, a Fire Officer, a local body officer and a development officer besides the educational authorities shall carry inspection and assessment of infrastructural facilities before the commencement of each academic year. The Team shall submit its Inspection Report to the concerned district Chief Educational Officer.

iii. The building plans for schools shall be prepared only by a Government certified engineer and the PWD Executive Engineer concerned should inspect the building and award a structural stability certificate.

Stability Certificates shall be issued by the State or Central Government Engineers only and shall be mandatory for granting permission for establishing or continuation of a School.

iv. In every district, one Recognition Committee headed by a retired judge shall be constituted. Officials from Revenue Department, Public Works Department, Fire Service, Electricity Board, Health and Education Department, a reputed NGO shall be members. They shall visit the schools periodically or at least the erring institutions as listed by the Chief Education Officer. v. Conditional recognition / approval shall never by resort to for any school.

36. In this petition, we need not take any action contrary to government policy to fulfill the Constitution's mandate. Union and State officials have already filed wide-ranging plans to improve school safety. Along with the National Building Code, a combination of the better parts of these plans would bring the nation's schools to an adequate level of safety. States have also expressed enthusiasm for reform and some have asked this Court expressly for direction.

37. Many States have already begun implementation. The most forward thinking States have enacted and enforced the National Building Code in their schools. Often these States have also created, empowered and funded a state-wide emergency response office. The coordinated efforts and concentration of knowledge in these administrative units make States better able to prepare for emergencies, as much as to respond once the problem has started. For example, the State of Gujarat has established such an emergency management office. Having already settled building codes and other large issues, the State can focus on other aspects of emergency management. With the assistance of outside experts, Gujarat recently created a colouring book to teach children how to respond to emergencies. On a smaller scale, but no less vital, in the Union Territory of Pondicherry, administrators replaced all thatched roofs and allocated an additional Rs.500 lakhs to build pucca classrooms. Some States have counted their schools and know which require repairs; they provided these details in their affidavits along with detailed plans for improvement. We are encouraged by the agreement shared among States that safety must improve. Our order should provide additional stimulus for the general aims of the States' already agreed policy.

38. In the end, we should need to do little but enforce existing laws and encourage States in their own well-intentioned safety programmes. However, in the years since the fire at the Lord Krishna Middle School, some States have moved slowly and safety standards have varied in quality across States. These delays and variations have subjected millions more school children to danger from fire, earthquakes and other causes, when simple enhancements could offer much greater protection. Articles 21 and 21-A of the Constitution require that India's school children receive education in safe schools. In order to give effect to the provisions of the Constitution, we must ensure that India's schools adhere to basic safety standards without further delay.

39. It is the fundamental right of each and every child to receive education free from fear of security and safety. The children cannot be compelled to receive education from an unsound and unsafe building.

40. In view of what happened in Lord Krishna Middle School in District Kumbakonam where 93 children were burnt alive and several similar incidences had happened in the past, therefore, it has become imperative to direct that safety measures as prescribed by the National Building Code of India, 2005 be implemented by all government and private schools functioning in our country.

We direct that:-

(i) Before granting recognition or affiliation, the concerned State Governments and Union Territories are directed to ensure that the buildings are safe and secured from every angle and they are constructed according to the safety norms incorporated in the National Building Code of India.

(ii) All existing government and private schools shall install fire extinguishing equipments within a period of six months.

(iii) The school buildings be kept free from inflammable and toxic material. If storage is inevitable, they should be stored safely.

(iv) Evaluation of structural aspect of the school may be carried out periodically. We direct that the concerned engineers and officials must strictly follow the National Building Code. The safety certificate be issued only after proper inspection. Dereliction in duty must attract immediate disciplinary action against the concerned officials. (v) Necessary training be imparted to the staff and other officials of the school to use the fire extinguishing equipments.

41. The Education Secretaries of each State and Union Territories are directed to file an affidavit of compliance of this order within one month after installation of fire extinguishing equipments.

42. List this petition on 07.12.2009 to ensure compliance of this order.

.....J. (Dalveer Bhandari)
.....J. (Lokeshwar Singh Panta)
New Delhi; April 13, 20..

TRAINING MODULE FOR MASTER TRAINERS ON SCHOOL SAFETY

Towards a disaster free India

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