

**TRAINING MANUAL
OF
DISASTER MANAGEMENT**

GOI-UNDP DISASTER RISK MANAGEMENT PROGRAMME
GOVERNMENT OF TRIPURA

Introduction:

Background:

The Indian sub-continent is highly prone to natural disasters; floods, droughts, cyclones and earthquakes are a recurrent phenomenon in India. Susceptibility to disasters is compounded by frequent occurrences of manmade disasters such as fire, epidemics etc. The changing topography due to environmental degradation has also increased the vulnerability of the country.

The Indian coastline, spread over by 8041 kilometres is exposed to tropical cyclones arising in the Bay of Bengal and Arabian Sea. The population on the bank of Bay of Bengal, are horribly haunt by regular natural disasters like flood and cyclone round the year, leading to immeasurable loss of lives and properties. Even today, the people of the coastal areas are thunder stricken by remembering the terrible disaster they experienced during the recent past. Even now, the suffering and hardship, which broke down the backbone of socio-economic fabric of the affected people during the super-cyclone, has remained as a scar mark in their mind as well as others who were affected partially by this devastating natural calamity. All their aspirations for family welfare, personal comforts and community security in the future have created a question mark in their mind. They are in a state of panic stricken for the coming days. Insecurity, unwanted and apprehensiveness has captured the mind of people inhabiting in the coastal districts. Besides, natural calamities and man-made devastations have for shaken the mental tranquillity and financial stability of the people. If we analyse the socio-economic impact on these people, we find a state of frustration in personal life, selfish individualistic attitude, a materialistic, cultural atmosphere, increase of criminal habits and migration to urban pockets have taken place as a side effect of these natural calamity

The International Decade for Natural Disaster Reduction (IDNDR) has made an effort to mitigate disaster worldwide. Recognizing the rapid rising world wide toll of human and economic losses due to natural disasters, the UN General Assembly in 1989 took a decision to launch a far reaching global understanding during the nineties to save human lives and reduce the impact of natural disasters. With this aim in mind, the decade 1990- 2000 was declared as the '**International Decade for Natural Disaster Reduction**' [IDNDR]. The main objective of the [IDNDR] is to reduce, through concerted international action, especially in the developing countries, loss of life, property damage and social and economic disruptions caused by natural disasters such as earthquakes, floods, cyclones etc. The IDNDR workshop in Yokohama in May 1994, a plan of action for disaster reduction called the Yokohama Strategy was evolved. The Yokohama Strategy gave guidelines for *Natural Disaster Prevention, Preparedness and Mitigation, shifting the focus and emphasis from disaster management to disaster prevention and preparedness.*

A major segment of Indian populations live in rural areas. The abject poverty, agriculturally and industrially underdeveloped region encompass the rural masses that face the various calamities all through the year. The negligible purchasing power of the people fails to fetch the basic needs of livelihood unlike the urban masses. In spite of providing all the facilities like road, bridge, school etc. the real development will be a distant dream unless and until the people themselves shoulder the management responsibility. Each and every disaster like flood,

cyclone, drought, sunstroke etc. mostly affect the rural mass and they become the ultimate loser. So it's very essential to form various disaster management teams at all levels to coordinate during different hazards starting from village to state level and discusses the management and mitigation strategies and processes in details. Last but not the least, a training curriculum mentioning, in detail, about the post training responsibilities of each working committee or disaster management teams at the time of disaster should be prepared.

The success of the village level training depends mostly on the Panchayat level trainees involving the Village Chief, Government officials at the Gram Panchayat level, Ward member, Youth clubs and Mahila Samiti members who play an active role in preparing the Gram Panchayat Disaster Preparedness and Mitigation Plan. After completion of the training, the block trainee will collect all the details information of the block through Gram Panchayat and village level committee. They will analyses the data and discuss with the block in consultation management committee regarding the planning and programming of the disaster mitigation strategies.

DISASTER MANAGEMENT DEFINITIONS AND CONCEPTS

Disaster

Disaster is an event, man-made or natural, sudden or progressive, causing widespread human, material or environmental losses which exceed the ability of the effected area to cope using its own resources. Example: Floods, Cyclone, Earthquakes, Landslides, Fire etc.

Floods:

A flood occurs when water flows or rises above and beyond its normal level or course in a river. The danger this causes to people and buildings is called the 'flood hazard' or the risk of damage to life, livelihoods or property from flooding. The most common kind of flood happens when a river overflows its banks and water spreads to the surrounding areas disrupting life, affecting livelihoods and causing damage to or destruction of houses and assets including crops.

A flood is usually caused by heavy downpour in the catchment areas of the rivers or along its course or due to rapid melting of snow draining huge quantity of water into the river faster than the river can discharge into the sea. It causes rivers to overflow and flood the surrounding areas. Floods in our country occur during or after the monsoon season. Other causes of flooding are strong tides, sea storms, cyclones and tsunamis. Sediment deposition or silting of riverbeds and the synchronization of river floods with sea tides compound the problem of floods in the coastal plains.

Cyclone:

A **cyclone** is a region of low atmospheric pressure, which occurs in the hot oceans of temperate and tropical latitudes. It is a swirling atmospheric disturbance, accompanied by powerful winds (exceeding 300 km/h at times) blowing in a clockwise direction in the Northern hemisphere and anti-clockwise direction in the Southern hemisphere. It pours heavy rain and gives rise to enormous waves in the ocean. Cyclones occur due to a combination of warm sea temperature, high relative humidity and atmospheric instability.

Earthquakes:

Earthquakes are among the most destructive of the natural hazards. Their destructive potential is further compounded by their absolute unpredictability. They cause immense destruction in a large area within a very short span of time and without any perceptible warning. However, prediction is not a solution to stop the destruction caused by an earthquake. Human and property loss occur due to the destruction of structures built by man and not directly by the earthquake.

Earthquakes do not kill people. Our unsafe buildings do.

WHY DO EARTHQUAKES HAPPEN? --

An earthquake is a sudden, rapid shaking of the Earth's surface called the crust. It is caused by the breaking and shifting of rocks beneath the Earth's surface, which is made up of several

wide, thin and rigid plate like blocks. Our earth is a big sphere having three layers similar to an egg's outer shell, white portion and yellow yolk.

Due to this movement, with the passage of time, plates deform and energy is stored inside them. After reaching a limit, it suddenly cracks, breaks or slips along these cracks and energy is released. This energy travels through the ground in the form of body waves and results in sudden, strong and rapid shaking of earth in a limited though extensive area and spreads due to surface waves. It is this tremendous amount of energy released during an earthquake which causes widespread damage.

Most earthquakes occur along the boundaries of the tectonic plates and are called *inter-plate earthquakes* (eg. 1897 Assam earthquake). A number of earthquakes also occur within the plate itself away from the plate boundaries, eg. 1993 Latur earthquake, which are known as *intra-plate earthquakes*.

Landslides: Earthquakes can trigger landslides in hilly regions and can be destructive. However, the weak regions can be identified and people settled in the range may require to be relocated or shifted.

Liquefaction: Liquefaction is a physical process that takes place during earthquakes, generally in cohesion-less soil. During earthquakes, soil deposits, primarily sand and silt, temporarily lose strength in presence of water and behave like a fluid rather than as solids. Liquefaction occurring beneath buildings, bridges and other structures can cause major damage during earthquakes. Buildings and other structures may topple, tilt or settle due to liquefaction.

Fire: During an earthquake, leakage in gas pipeline, mixing of chemicals in labs and factories, storage of inflammable materials, short-circuiting etc. may cause fire and kill people.

Hazard

Hazard is an event or occurrence that has the potential for causing injuries to life and damaging property and the environment.

Vulnerability

Vulnerability is a condition or sets of conditions that reduces people's ability to prepare for, withstand or respond to a hazard.

Capacity

Capacities are those positive condition or abilities which increase a community's ability to deal with hazards.

Risk

The probability that a community's structure or geographic area is to be damaged or disrupted by the impact of a particular hazard, on account of their nature, construction, and proximity to a hazardous area.

Disaster

A serious disruption of the functioning of a community causing widespread human, material or environmental losses which exceed the ability of the affected community to cope using its own resources.

Elements at Risk

Persons, buildings, crops or other such like societal components exposed to known disaster hazards which are likely to be adversely affected by the impact of these hazards.

Disaster Management

A collective term encompassing all aspects of planning for and responding to disasters, including both pre- and post-disaster activities. It refers to the management of both the risks and the consequences of disasters.

A broad range of activities designed to:

- Prevent the loss of lives
- Minimize human suffering
- Inform the public and authorities of risk
- Minimize property damage and economic loss
- Speed up the recovery process

Mitigation

Measures taken prior to the impact of a disaster to minimize its effects (sometimes referred to as structural and nonstructural measures).

Preparedness

Measures taken in anticipation of a disaster to ensure that appropriate and effective actions are taken in the aftermath.

Prevention

Measures taken to avert a disaster from occurring, if possible (to impede a hazard so that it does not have any harmful effects).

Response

Actions taken immediately following the impact of a disaster when exceptional measures are required to meet the basic needs of the survivors.

Relief

Measures those are required in search and rescue of survivors, as well to meet the basic needs for shelter, water, food and health care.

Recovery

The process undertaken by a disaster-affected community to fully restore itself to pre-disaster level of functioning.

Rehabilitation

Actions taken in the aftermath of a disaster to:

- assist victims to repair their dwellings;

- re-establish essential services;
- revive key economic and social activities

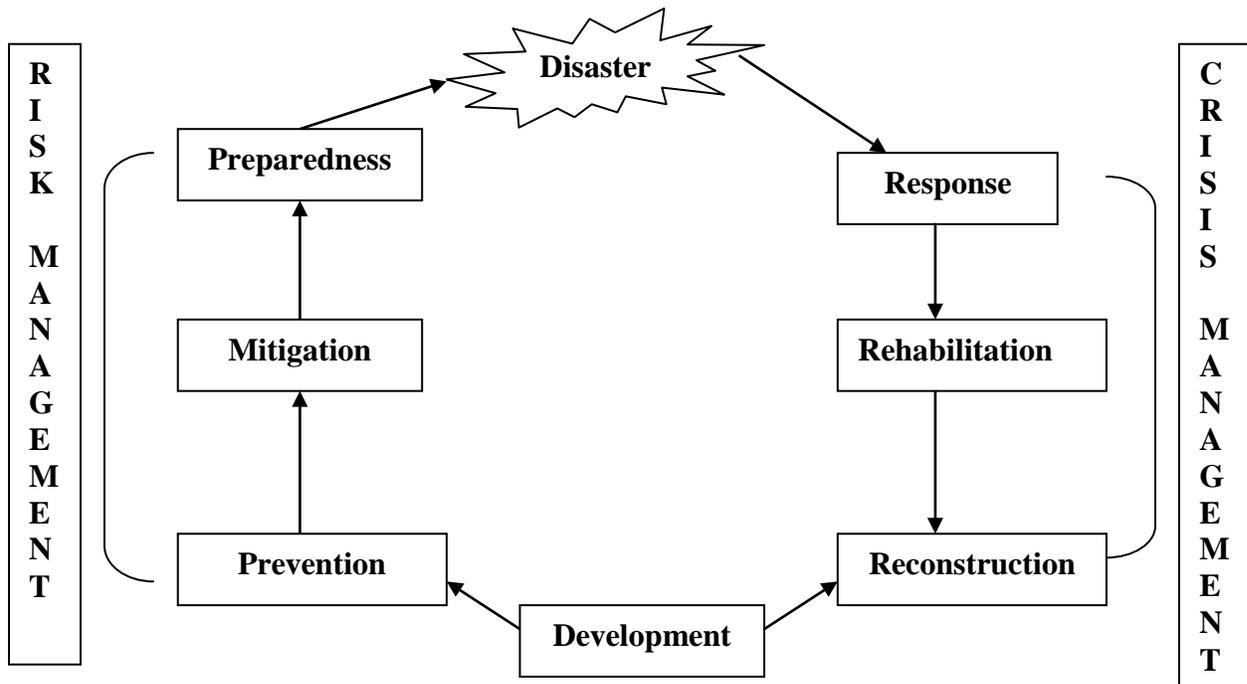
Reconstruction

Permanent measures to repair or replace damaged dwellings and infrastructure and to set the economy back on course.

Development

Sustained efforts intended to improve or maintain the social and economic well-being of a community.

THE DISASTER MANAGEMENT CYCLE



Disaster Management Cycle consists of the following broad stages:

a) The Disaster Event:

This refers to the real time event of the hazard occurring and affecting elements at risk. The damage is directly proportional to duration of the event.

b) Response and Relief:

This refers to the first stage after the calamity. Relief materials like food, clothing, medicines and other necessities are distributed to bring life to normalcy.

c) Recovery (Rehabilitation and Reconstruction):

It is used to describe the activities that encompass the three overlapping phases of emergency relief, rehabilitation and reconstruction.

- ❖ Emergency Relief: Activities undertaken during and immediately after the disaster strikes, which includes immediate relief, rescue, damage and need assessment etc.
- ❖ Rehabilitation: It includes the provision of temporary public utilities and housing as interim measures to assist long term recovery
- ❖ Reconstruction: It is an attempt to return communities to improve pre-disaster functioning

d) Development: It is an ongoing activity for a evolving economy. Long-term prevention/ disaster reduction measures like construction of embankments against flooding, increasing plantation for reducing the occurrence of landslides etc. are some of the activities that can be taken up as a part of development plans.

e) Prevention and Mitigation:

Reduction of risk in disasters involves activities, which either reduces or modify the scale and intensity of the threat faced or by improving the elements at risk. Mitigation too aims at reducing the physical, economical and social vulnerability to threats and the underlying cause for this vulnerability.

f) Preparedness:

The process embraces measures that enable governments, community and individuals to respond rapidly to disaster situation to cope with them effectively. Preparedness includes the formulation of viable emergency plans, the development of warning systems, the maintenance of inventories and the training of personnel. It may also embrace search and rescue measures as well as evacuation plans for areas that may be *'at risk'* for a recurring disaster. All preparedness plans needs to be supported by appropriate rules and regulations with clear allocation of responsibilities and budgetary provisions.

DISASTER MANAGEMENT: OBJECTIVES AND PRIORITIES

Disaster Management can be divided into pre and post disaster contexts. This sequence embraces pre and post disaster actions that are concerned with the six stages of:

1. Inception of Disaster Planning
2. Risk assessment
3. Defining levels of acceptable risk
4. Preparedness and mitigation planning
5. Testing the plan
6. Feedback from lessons learnt

Each grows out of the stage before it and leads to further action. Together the sequence can build up a planning and implementation system, which can become a powerful risk reduction tool. If disaster planning is restricted to only preparedness plan, then the full benefits of disaster planning sequence for disaster management.



Before
donors decide what victims needs

Now
community members participate in decision-making to prioritize needs

Community Based Disaster Preparedness

Why Community?

- First responder
- Early warning dissemination
- Familiar with local coping mechanism
- Would be better prepared through Pressure groups and advocacy
- Sharing disaster preparedness costs

Why a Village Plan?

- Is a response mechanism to save life, livelihood, livestock & Assets with available resources
- It leads to multi-pronged development interventions to address the root causes of vulnerability
- It leads to a self reliant disaster proof community

Who Carries out the plan and when?

- Village disaster management committee
- Taskforce Team members
- Volunteers/CBOs/NGOs/PRI's
- Normal time, Pre, During and Post Disaster time

Framework for Community Based Preparedness

- Household and village level:
 - What we need?
 - What we have?
 - How to combine them?

Components of Community Based Disaster Preparedness

- Zoning of the areas
- Networking among the CBOs/NGOs/ Civil Societies Response groups
- Training of Block/GP/CBOs on disaster management and implementation strategy
- Facilitate implementation process by CBOs/GP/Block/ District
- Identification of volunteers from each village
- Training of volunteers for preparing the village disaster Management Plan.
- VDMP development at village level
- Formation of taskforce at the Village level
- Development of Gram Panchayat & Block Disaster Management Plan
- Capacity building of taskforce members
- Periodic Mock drill at all levels

The Approach

- Sensitization/Awareness
- Review and analysis
- Situational Analysis
- Hazard mapping

- Risk Mapping
- Opportunity mapping

STAGES OF VILLAGE DISASTER MANAGEMENT PLAN

Formation of Task Force

Community Task Forces for :

- Warning, Search & Rescue, First Aid, Water & Sanitation, Relief Management, Damage Assessment, Shelter Management, Carcass Disposal, Trauma Counseling etc.

Capacity Building of Task Force

Training of Task Forces:

On Health & First aid, Water & Sanitation, Search and Rescue, Warning to carry out their responsibilities effectively.

Preparation of Village Disaster Management Plan:

With the help of standard village disaster management plan format, the Village Disaster Management Committee shall prepare the plan with the active involvement of all villagers and information.

Contingency Fund

Fund to Meet Emergency needs: Contribution for stock piling of food, medicine, equipments & emergency need for lives and livestock.

Preparedness Drill

Practice of Plan: Task Force members practice the plan periodically before possible Disaster Season.

➤ **SOCIAL MAPPING:-**

The direction - East, West, North and South

The villagers will then identify the main road and then identify each household in the village.

In the map, they have to show, Number of Houses: Kaccha, Pacca, Tiled, RCC (No. the houses)

Roads and Bridges: Kaccha, Pacca

Water Facilities: Ponds, wells, TW

Community Infrastructure: Temples, Club house, Cyclone shelters, PHC, School, Post Office etc

Rivers, Canals and embankments

➤ **RESOURCE MAPPING:-**

Lands and Fields; Forest/ Trees; Boats, Trucks, Bus, Trekker, Two wheelers; Pump sets and other implements used in farming; Looms and potters' wheels for artisans; Telephone; Power Supply (Transformers); Dispensary or Primary Health Center; School; Post Office; Cyclone Shelters; Community Centers, Temples, Churches etc.

➤ **VULNERABILITY MAPPING:-**

Ask Two simple Questions?

1. Who at a Risk?

- Elderly and disable
- Children below 5 years
- Sick and Ailing
- Families living in thatched Houses
- Pregnant Women
- Woman headed family

2. What at a Risk?

- Cattle and livestock
- Valuable documents of the family
- Livelihood assets
- Standing Crop
- Drinking water sources
- Weak Embankments

➤ **SAFE MAP:-**

- Concrete/ Pucca House
- Cyclone /Safe Shelters, Schools, Govt. buildings
- Mound

In this map we can also show the alternative route system. Suppose water enter a village from one particular direction then which is the alternative route to evacuate the people.

Disaster Management Taskforce

- Motivated & active Men/Women
- Ex-service Men/NCC/NSS/Swimmers
- Gram Rakhi/ Chowkidar
- Anganwadi Workers /ANM
- School Teachers
- Youth Club Members/ Self Help group/Farmer group/Any other groups

ROLE OF PRI_s IN DISASTER MANAGEMENT

At Village Level:

The Panchayati Raj Institutions play a key role in the various implementation process of the Disaster Risk Management Programme. The Disaster Risk Management Plan starts from the village/ ward level, the ward member/s along with the village volunteers help the community in preparing the multi hazard preparedness, management and mitigation plan and forming the Village disaster management Committee (VDMC). There will be a Village Disaster Management Team [VDMT] to carry out different activities during the time of emergency. The ward members are leading the village disaster management committee and play an active role in pre, during and post disaster. Being a part of the VDMC they could play an active role in the normal development activities that are being carried out in the village and these activities could be clubbed in such a way that the vulnerability of the area towards a particular hazard decreases.

At Gram Panchayat Level:

At the Gram Panchayat level the Sarpanch / Pradhan, Samiti members form a part of the Gram Panchayat Disaster Management Committee (GPDMC). The Pradhan is the chairperson of the GPDMC and the convener is the Gram Panchayat Nodal officer [extension officer from block]. The Pradhan would help the Nodal officer and the G.P Secretary in preparing the Multi hazard GP Disaster Management Plan and assigning the roles and responsibilities to the various members of the GPDMC. In normal times the Pradhan and the PS Member could help in preparing the Gram Panchayat plan and approval of all plans in Gram Sabha. They could assist village disaster management team members to carry out the activities and prepared themselves for emergency. The VDMT members training by Civil Defense for First Aid and Rescue operations, water & sanitation, shelter management, damage assessment etc., which are to be, carried out at the Gram panchayats level by the PRI members along with the government officials. Coordination of relief, rescue operation, shelter management first aid and health, damage assessments etc are the major activities that they have to play when a disaster strikes. The need of the gram panchayat has to address in the regular development programme to reduce the vulnerability such as high raised building for low laying areas, grain bank, training to the DMTs etc.

At Block / Panchayat Samiti Level:

At the block level the Chairperson / Sabhapati of Panchayat Samiti would play a key role in forming the Block Disaster Management Committee [BDMC] and preparing the multi hazard preparedness and mitigation plan. The Chairperson / Sabhapati of Panchayat Samiti would be the chairperson of the BDMC and the Block Development Officer would be the convener of the BDMC. They could help in providing training at the Grampanchayat level and help in carry out the preparedness activities. In pre, during and post disaster stock piling of food stuff in vulnerable areas, coordination of relief, rescue operation, shelter management, first aid and health, damage assessments etc could be one of the major activities that they would have to carry out. Similarly it is the responsibility of Panchayat Samiti to approve the block disaster preparedness and mitigation plan and make it a regular programme of the block.

At District / Zilla parishad Level:

The Zilla Parishad President / Sabhadhipati and the other elected members of district would be a part of the District Disaster Management Committee (DDMC). They would basically monitor and coordinate the preparedness programme of the district. Coordinate with the District Disaster Management Team [DDMT] for supporting the other DMTs in training on relief, rescue operation, shelter management, first aid and health, damage assessments and carry out the activities when a disaster strikes. Awareness generation among the community members could be a role that the elected members could play. The Zilla Parishad President / Sabhadhipati would be the chairperson of the DDMC and the Collector and District Magistrate would be the convener. They could take a lead role in carrying out the preparedness and mitigation activities in the blocks, which would reduce vulnerability and save life and property during disasters.

Role of PRIs in Disaster Risk Management Programme:

- Key facilitators
- Regular Up-gradation of disaster preparedness and mitigation plan
- Capacity building of disaster management team [DMT]
- Providing resource to DMTs-Medicine kit, Rescue equipment, Survival kits,
- Dissemination of warning to the communities
- Safe storage, temporary shelters at vulnerable pockets
- Helping the line depts. in pre-positioning of food , medicine and health functionaries and water with taskforce
- Coordination and networking among all stakeholders in preparedness programme and emergency situation
- Helping in damage assessment and relief distribution
- Awareness campaign

Local self government is in the front line of disaster management could be a part a coordination process. Coordination and collaboration with PRIs will help in mainstreaming of the disaster management into the on going developmental programme. They are more useful in community development, so it is essential to strengthen their capacity to manage the vulnerability reduction programme. They will be one of the major players in the network suggested for disaster management could be in the following key thematic areas

- Communications (for early warning and failsafe communications during emergencies)
- Awareness building and detailed preparedness plans at the community levels
- Accuracy in Vulnerability & damage assessment as a tool for planning development programs and mitigation measures (structural measures like embankments, roads, bridges and planning new housing programs)
- Information sharing during disaster situation to prevent loss of life and enable judicious distribution of relief and rehabilitation measures.
- To have a cadre of frontline response managers and resources to quickly move into the field in the event of any emergency.(manpower & machinery)
- Networks for developing technically sound and appropriate designs for disaster resistant construction technologies and wide dissemination of the same.

To make these possible, the meetings, workshops, joint exposure visits, electronic networks, newsletters, capacity building exercises, should be held at a regular interval with action points for each participating agency. Follow up; monitoring and review would be an important tool to ensure that the network does not lose sight of its objective. There must be interchange of information within the various networks so that each one is aware of the developments taking place to reach the final goal of Disaster safe community. In this process UNDP and other developmental agencies would facilitate the process to enhance the capacity of PRIs in reduction of vulnerability and able to provide basic services to the needy community.

Incident Command System (ICS)

Past experiences of handling disasters have highlighted that there is often delay in mobilizing and deploying resources at the site of the incident in the event of an emergency. Resources available may not be utilized in the most effective and efficient manner due to lack of developed planning process and logistic support. There is also a felt need to address the requirement of specialized disaster management functions at different levels, whether it is the State, District, Sub Division or Block. Often the designated coordinating officers at these levels are not backed up with professional teams whose members are trained for performing specialized functions such as materials/ logistic management, management of search and rescue operations, management of personnel, communications etc. These issues and managerial tasks ultimately devolve upon the coordinating officer who is required to take decisions on all aspects of an emergency like drawing up plans; logistic management; handling of media, transports etc. As a result of the manifold imperatives, the officer concerned may get overwhelmed and available resources are not used optimally. To give an example, arrival of large quantity of relief supplies during an emergency requires professional training for designated officer to handle it efficiently which otherwise can create additional problems. In essence for better management, the field functionaries at these levels responsible for the overall coordination need to have better systems and support for mobilizing different agencies, monitor the situation, coordinate the response, tackle logistics, dispatch materials and provide assistance in the event of a disaster. Professional management requires an approach, which recognizes importance of such specialized roles and training of officers to perform these roles at the time of emergencies.

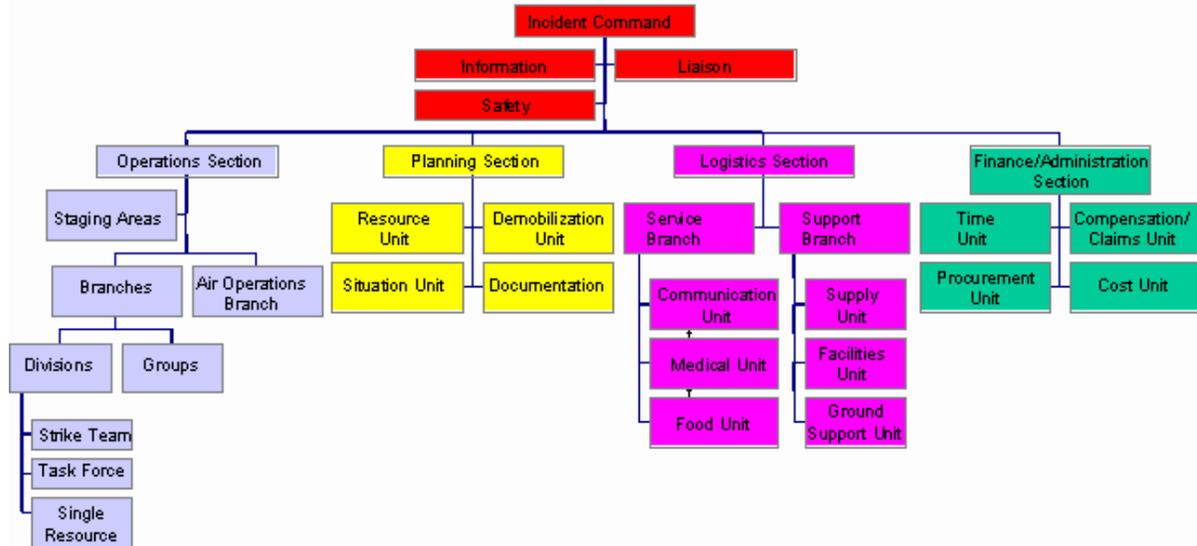
To address these issues, Ministry of Home Affairs in collaboration with the United States Agency for International Development (USAID) has developed a program for institutionalizing Incident Command System (ICS) in India.

What is ICS?

The Incident Command System (ICS) is a standardized method of managing disasters. It is primarily a management system that is flexible and adaptable to suit any scale of natural as well as man made emergency/incidents. Through ICS, the main intention is to transform the confusion during the early stage of an emergency situation into a well managed response process by providing answers to questions such as "who's in charge?" and "what's my job?" The ICS is broadly based on five-management principle a) Command b) Planning c) Operation d) Logistics e) Finance and administration.

INCIDENT COMMAND

ORGANIZATION CHART



Command: The command of an incident, for example, the incident may be a road accident or a major earthquake is headed by an Incident commander (IC) who is in overall charge. The Incident Commander may appoint Deputy Commander and other command staffs namely Safety officer, Information officer and Liaison officer. The IC also appoints various other positions in the organization and is responsible for positions, which are not implemented.

Operations: The Operations Section is a key section of ICS responsible for directing the tactical actions to meet incident objectives.

Planning: The Planning Section is responsible for the collection, evaluation, and display of incident information, maintaining status of resources, and preparing the incident action plan and incident-related documentation.

Logistics: The Logistics Section is responsible for providing adequate services and support to meet all incidents or event needs.

Finance/Administration: The Finance/Administration Section is responsible for keeping track of incident-related costs, personnel and equipment records, and administering procurement contracts associated with the incident or event.

Each of these functional areas can be further expanded as needed into additional organizational units with delegation of authority. Some of the most important features of Incident Command Systems are Management by Objective, Common Terminology, Unity and Chain of Command, Span of Control and Organizational Flexibility.

Why was ICS developed?

The Incident Command System was first conceptualized in early 1970s in the United States as a management system to tackle forest fire. It was developed by an inter-agency task force called FIREScope (Firefighting Resources of California Organized for Potential Emergencies). The system over the years has proven to be highly useful not just for forest fire but also for various other hazards and incidents. Early in the system's development process, four essential requirements became clear:

1. The system had to be organizationally flexible to meet the needs of the incident of any kind and size.
2. The system had to be sufficiently standardized to allow personnel from a variety of organizations and diverse geographical locations to rapidly meld into a common management structure.
3. Departments/ Agencies had to be able to use the system on a day to day basis for routine situations as well as for major emergencies.
4. The system had to be cost effective.

GENDER

Gender equality and Disaster Risk Management:

A disaster exposes the existing inequities and imbalances in a society -economic, social or gender inequities. The hazards have a differential impact for both men and women resulting from gender division of labour, poor health and educational status of women, unequal access and control over common resource and information due to the patriarchic social values.

A. Vulnerability to Disaster Risk Management:

Vulnerability is the exposure and susceptibility of any person to losses and/or possible harm (Physical, Mental, Psychological, Social, and Biological). Major indicators of vulnerability are loss of assets, entitlements, social exclusion, and physical or psychological exploitation.

Who are the vulnerable to disasters??

- Poor and low-income households
- Single-parent households.
- Socially isolated households.
- Recently arrived residents, immigrants, foreigners.
- Senior citizens, children and young people.
- People with a disease or a mental or physical disability.
- Undocumented residents; refugees; war veterans.
- Indigenous populations and subordinate ethnic groups.
- Institutionalized populations; homeless residents.
- Women.

(Source: Enarson and Morrow (1998))

Gender is an important variable since it is clear that those living in poverty are more vulnerable to disaster impacts and the majority of the world's poor (70%) are women. Since disasters occur in gendered social systems they need to be addressed by gendered disaster management programs, it is imperative these constructs no longer be ignored if we wish to improve the effectiveness with which we respond to extreme events.

The experiences of women in Bhopal, Latur and Orissa highlight the extreme vulnerabilities of women. It has been proved that persistent poverty and economic insecurity and unequal division of domestic labour, reproductive differences, unequal access to education, health and social services led to women's increased vulnerability to disasters and the impact as different from men.

A cross country review of gender in disaster by Fothergill in "The Neglect of Gender in Disaster Work: An Overview of the Literature," which is a review of over 100 studies addressing the issue of gender in disaster. In her review Fothergill found it right time to replace the "common" preparedness, response, recovery, mitigation mantra that guides most disaster studies with the nine-point categorization as mentioned below ,wherein men's and women's needs and capacities needs to be understood, planned and responded differently-

- 1) Exposure to risk
- 2) Risk perception
- 3) Preparedness behavior
- 4) Warning communication and response
- 5) Physical impacts (mortality and injuries)
- 6) Psychological impacts
- 7) Emergency response phase
- 8) Recovery phase
- 9) Reconstruction phase

As already mentioned women's vulnerability to disaster risk is more due to lack of information and knowledge, set roles and responsibilities and their duties as care givers (for the elderly, children and differently abled). The daily living conditions and responsibilities of women subject many to risk before, during, and after disaster. Women in disaster-impacted communities also exercise formal and informal leadership roles and are central actors in family preparation for, and recovery from, disaster.

B. Are we Gender Sensitive??

We need to ask ourselves few questions to understand the gender equity scenario in Disaster Risk Management.-

- a) Are we taking into consideration the needs of boys and girls and men and women in planning disaster Risk Management?
- b) Do men and women/boys and girls have equal access to information and knowledge in vulnerability reduction?
- c) Are men and women involved equally in community based disaster risk management activities?
- d) Are men and women equally involved in decision making bodies and processes?
- e) What are we doing to ensure equal participation and involvement to ensure better preparedness and mitigate vulnerabilities to disasters?

An attempt to answer these questions leads us to gender analysis of disaster impact.

C. Gender Analysis of Disaster risk and the impact:

Gender is one critical dimension of the social structure that is not so well developed in disaster scholarship. Initially was recognized as a demographic variable and provide basic information on gender differences, however lacked any serious discourse or analysis of women's

experiences in disaster. However with mainstreaming of gender equality, gradually importance of gender in disaster has emerged as an area of serious concern. The gender analysis of disaster has to take in to consideration environment, economic, social and institutional patterns of the society. The differential impact of disaster is to be understood at all three levels- field level, intermediary level and macro level. At all these three levels there are various factors that influence- socio/cultural, demographic, institutional, political, economic and environmental.

- I. The field level analysis should focus on men and women – socio-economic differences among households and communities as a whole in disaster preparedness and risk management.
- II. At the intermediary level focus in disaster preparedness and risk management should be on the access and control of men and women in structures such as institutions and services, communication, transport, credit, markets and health and education.
- III. At the macro level, focus is to be on gender sensitive policies, plans both social and economic at national and international level.

Thus this kind of gender analysis of disaster develops in to better under standing of different roles of men and women in disaster preparedness and what resources they have and what needs and priorities do they have. This leads is to the gender mainstreaming strategy to ensure social equity.

D. Impact of disasters on men and women:

Social vulnerability to disasters is determined by a number of factors and disaster responses of individuals and groups tend to mirror the status, roles and situation of these individuals and groups in society. Due to continuous subordination in many societies, we see that women are subjected to specific vulnerabilities- limited access to information, training and capacity development and to opportunities to make their voices heard. Existing gender inequalities in human rights , socio- economic and political status, access to and control over resources, access to education, health, safe shelter and other services, access to safety nets and exposure to violence can place women in even more vulnerable situations in the context of natural disasters.

Example 1: “Excess deaths among females following an earth quake in Maharastra, India were attributed to women being in homes damaged by earth quakes and men being in out side the houses. Men were sleeping in fields during harvest time and were away from the home in preparation for a festival, boys were away from village at school and many men were away from affected areas as they were employed in other districts of states. (WHO 2002)

Alice Fothergill (1996) has broadened the categories of disaster to examine various specifics of social processes involved. Alice highlighted that differential impact is to be understood in the following stages/ categories ¹-

1. Exposure to Risk
2. Risk Perception
3. Preparedness Behaviour
4. Warning Communication and Response
5. Physical Impact
6. Psychological Impact
7. Emergency Response
8. Recovery
9. Reconstruction (the categories in the typology are mutually exclusive)

Different studies across the countries showed that women and men are differently affected as a result of the unequal relations of men and women. Some of the significant ways in which both men and women were impacted is presented briefly here.

- a) The different roles and responsibilities men and women undertake in their day today lives resulted in gender related differences in the times of crisis and hazards unequal gender division of labour led to addition physical work and burden for the women.
- b) Demographic changes have an impact on gender relations in any society. These changes affect the women most in terms of additional mouths to feed, sick or elderly to care for or losses to the family. When men die or get injured and move to other places to work it is women who are the single care takers of the family.
- c) The economic impact of the disasters shows with a disaster the livelihood problem becomes common for all and there are fewer opportunities for women. The reason being men have the option of migrating and finding employment in rehabilitation/restoration work, while women stay back with their families.
- d) Another dimension of the economic impact is that women may be forced o sell their own personal assets including valuables and jewels. At the same time disasters often result in increasing the dependence of women on men and make them more susceptible to sexual exploitation and domestic violence. Take the case of Orissa floods, where it has been found that during floods among the survivors of disaster, many women were trafficked and forced in to sex work.
- e) Psychological impact shows that though both men and women are psychologically affected, women are more under psychological stress. Women's stress originates from the risk perception to the family. The breaking down of household and social structures during disasters tends to make women more vulnerable to stress and anxiety.

¹ The Neglect of gender in disaster work; An overview of the literature' International Journal of Mass Emergencies and Disasters 1996

ASPECTS OF A GENDER-FOCUSED ANALYTICAL FRAMEWORK:²

Aspect	Description
<i>Needs assessment</i>	<p>What are the priority needs of women and men? <input type="checkbox"/> <input type="checkbox"/> What factors are causing these needs? How can we meet these needs? <input type="checkbox"/> <input type="checkbox"/> What problems can we resolve at the local level? <input type="checkbox"/> <input type="checkbox"/> What capabilities exist in the community? <input type="checkbox"/> <input type="checkbox"/> What problems required outside intervention? <input type="checkbox"/> <input type="checkbox"/> What type of intervention is necessary: training, money, etc.?</p>
<i>Activity profile</i>	<p>Who used to do/is currently doing what? What did men, women, children, etc. used to do, and what are they doing currently? When do they do these activities, each day, twice a year, etc.? <input type="checkbox"/> <input type="checkbox"/> Where do they do these activities, are there special risks associated with the activities? <input type="checkbox"/> <input type="checkbox"/> Have the activities of different people changed? <input type="checkbox"/> <input type="checkbox"/> What is the division of labour on gender lines like? Is it flexible or not in terms of these activities? <input type="checkbox"/> What is the significance of the division, power relations, the vulnerability of individuals, etc.? <input type="checkbox"/> <input type="checkbox"/> Have the people who carry out the various activities changed? <input type="checkbox"/> <input type="checkbox"/> What are the consequences of these changes?</p>
<i>Resources, access and control profile</i>	<p><input type="checkbox"/> <input type="checkbox"/> What resources are used by men and women to carry out their activities? Have they lost these resources? What resources –land, skills, money, savings, loan arrangements, etc. – are available to men and women? <input type="checkbox"/> <input type="checkbox"/> Do men and women have control of resources or the ability to decide how and when to use them, etc.? How are they using these resources to deal with the situation? What are the effects? Are there new sources of resources, credit, etc.? <input type="checkbox"/> <input type="checkbox"/> Who has access to these sources, and what are the effects in terms of power relations etc.?</p>
<i>Limitations and opportunities</i>	<p>What vulnerabilities do the various groups of people in the community have? What differences exist in terms of power, access and control of resources? <input type="checkbox"/> <input type="checkbox"/> What capabilities, skills, knowledge and strategies do various groups of people in the community have?</p>

² Moser, Caroline (1996), “Confronting Crisis: A Comparative Study of Household Responses to Poverty and Vulnerability in Four Poor Urban Communities”, TWURD, World Bank, Washington DC, mimeo.

	<ul style="list-style-type: none"><input type="checkbox"/> <input type="checkbox"/> What opportunities are there to develop existing capabilities?<input type="checkbox"/> <input type="checkbox"/> What laws, policies, rules, etc., of various organizations– government, donor organizations– are important in this situation?<input type="checkbox"/> <input type="checkbox"/> What are the outcomes of these policies?<input type="checkbox"/> <input type="checkbox"/> What financial resources are available and what opportunities exist?<input type="checkbox"/> <input type="checkbox"/> What skills do organizations have in terms of gender training, planning and practical skills such as housing construction? <p>What sort of planning, monitoring and evaluation processes is there?</p> <p>What sort of information do community organizations have, and what are they lacking?</p>
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SCHOOL SAFETY

In the event of an earthquake, children and teachers in an unsafe school building are at considerable risk. According to the Government of Gujarat, a total of 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 of 2001. Formal education was disrupted due to widespread damage to physical infrastructure. Many of the buildings collapsed and many were declared unfit for use. Many of these buildings had been poorly constructed, lacked earthquake resistant features and were badly maintained (P 1 and P 2 show the collapse of a school building in Ahmedabad city on account of the Bhuj earthquake). The casualties might have been much higher had it not been a holiday, when many students were either at home or were in open spaces because of the Republic Day celebrations.

Aim and Objective:

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

In this unit, we will look at

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

Need for the plan:

The School is a densely populated place and has small children that are one of the most vulnerable groups in the society.

To reduce this vulnerability particularly for schools, it is important to have a school Disaster Management Plan. Schools also have many resources and are community nodes. Therefore, a School also has responsibility towards its immediate locality, just as the neighbouring community is linked to the school.

Planning Principles:

When developing a school emergency management plan, observance of the planning principles mentioned below.

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

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

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

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

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

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

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

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

Policy: Policy issued shall be resolved during the planning process. The death of the student inevitably raises issues concerning specially media. The stress could be reduced if local policy issues have been considered in advance.

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

Scope of Responsibilities: The plan shall describe the scope and the limitations of staff and students responsibilities.

The school is responsible for ensuring the ongoing safety of the staff and students for the duration of the emergency.

Staff and students shall not be expected to place themselves in danger by combating the emergency themselves.

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

While preparing the plan one needs to see to it that the plan prepared has a holistic approach to combat any disaster. A written description of the school and its surroundings shall provide a basis for identifying hazards to which the school might be exposed. Once the hazard has been identified, it becomes possible to develop preparedness, prevention and a response programme to minimise them. Not all emergencies can be prevented. Therefore, the plan needs to describe arrangements for responding to those Emergencies that do occur/are at a greater chance of occurring. It shall describe key roles and responsibilities including who will be responsible for coordination, control and communication when responding to an emergency.

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

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

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

STEPS FOR PREPARING SCHOOL DISASTER SAFETY PLAN:

Setp-1

Sensitisation meeting for awareness amongst Teachers/ School Management

Step-2

Formation of the School Disaster Management Committee (SDMC)

Setp-3

Hazard identification and safety assessment

Step-4

Preparation of the School Disaster Management Plan (SDMP) document

Step-5

Formation and Training of the School Disaster Management Teams

Step-6

Awareness activities & Dissemination of the plan to everybody in the school

Step-7

Conduct regular mock drill and report to SDMC

Step-8

Evaluation of the Plan to improve effectiveness

Procedures for conducting School/College Earthquake Safety Mock Drill

Participants: (School/College Disaster Management Committee)

Teachers, Students and support staffs of the School/College

Incident Commander:

1. Principal/ Head Master of the School/College

Incident Management Team Leaders (On-Site)

2. Class Teacher of each class (Site 1 – inside the class room)
3. Teacher No. 1– to be identified by the School/College Authority (Site 2 – during safety evacuation)
4. Teacher No. 2– to be identified by the School/College Authority (Site 3 – at assembly-open field)

Evaluation Team:

- | | | |
|----|----------------|--------------------------------------------------------------------------------|
| | Principal | (Over all) |
| 5. | Teacher No. 3- | (Inside the class rooms and office rooms during drop cover and hold positions) |
| 6. | Teacher No. 4- | (During Evacuation) |
| 7. | Teacher No. 5- | (During Assembly at open field) |
| 8. | Teacher No. 6- | (During Search and Rescue and First Aid) |

Role and Function of Participants/ Teams

1. Incident Commander: The incident commander's role is to supervise the overall conduct of the exercise, to make sure that the exercise proceeds as planned and that the objectives are achieved. The Incident Commander is to give signal of the initiation of the simulation, monitors the sequence of events, and conducts a de-briefing and critique (verbal and written) with all personnel involved.
2. Incident Management Team Leaders: The role of the incident management team leader is most crucial at the site of the incident. All teams working on-site will act on his/her command. He/she will decide the exact timing when any team working on-site will take action and will report to Incident Commander (Principal/Head Master).
3. Evaluation Team Members: They will present themselves at the sites and follow the action from thereon. They will evaluate the event as per the sequence and timings.

Sequence of Drill:

S.No.	Time in Minutes	Event	Action By	Actual time taken
1	00:00	Incident Commander gives instruction to Peon to ring the bell with unusual sound for one minute (60 seconds)	Incident Commander	
2	00:00-00:01	All teachers, students and other staffs will make drop cover hold position till the end of bell. Drop (kneel) down to the desk/table, hold one leg of desk/table tightly and put one palm/bag/book on back of the head.	Teachers/Students/ other staffs	
3	00:01-00:06	Safety evacuation of the students as per the instruction of the Teacher No-1 and Class teacher with a planned and disciplined manner by putting bag on the head to pre-identified open field and stand class wise queue.	Teacher No. 1 and Class Teachers	
4	00:06-00:08	Class teacher will make the head count and tally with the attendance sheet and inform to Teacher No.-2 if anybody absent in the field.	Class Teachers and Teacher No. 2	
5	00:08	Teacher No. 2 will give command to Search & Rescue Team	Teacher No. 2 and	

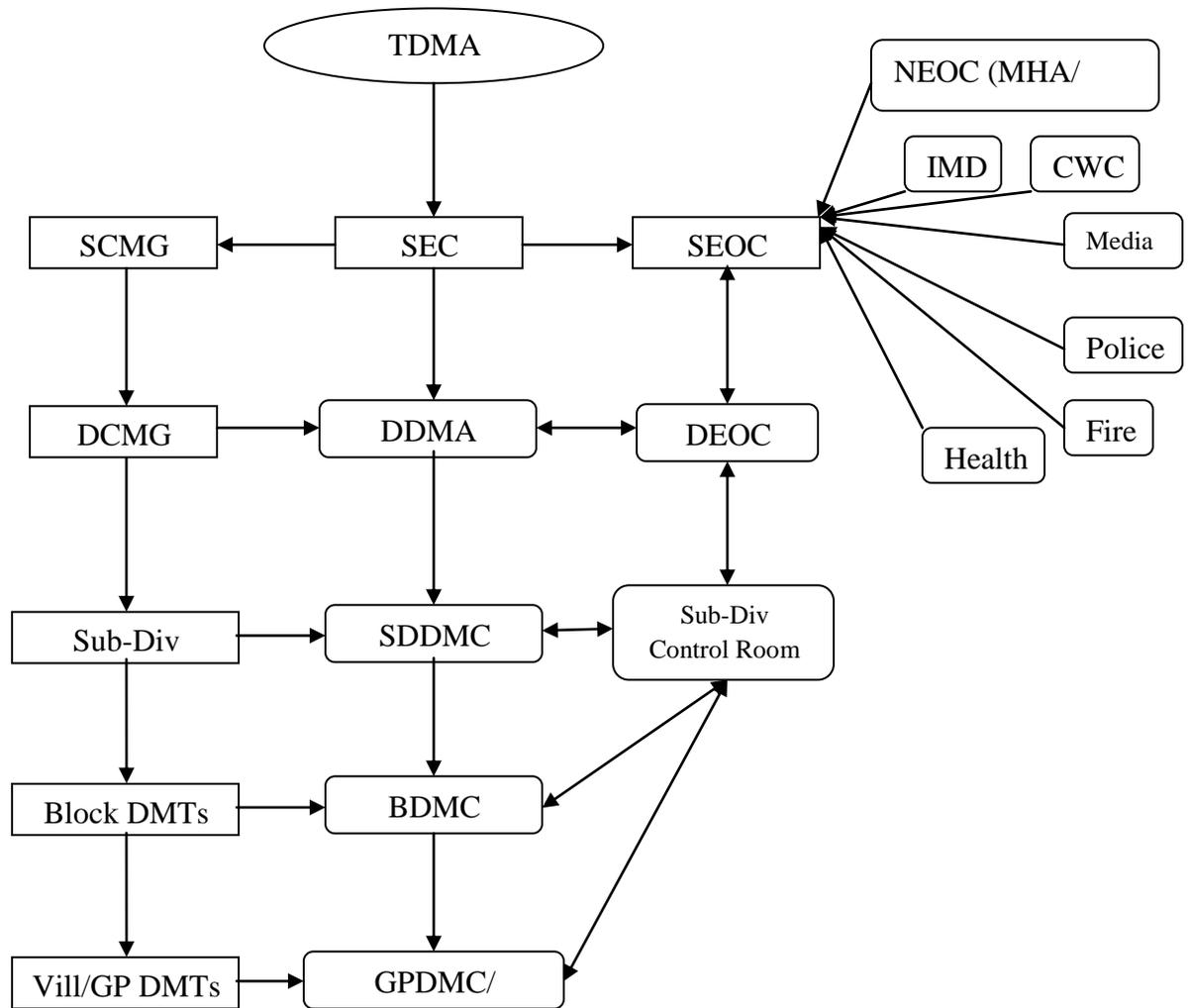
		(to be formed by senior students consisting of 10-15 members of both boys and girls in co-ed School/College) for rescue of the missing students from the particular class.	Search & Rescue Team	
6	00:08-00:13	Rescue operation by the S&R team. (The team may split to different classes as per the requirement). The S&R Team will handover the injured victims to the First Aid team (the FA team to be formed by the senior class students consisting of 10-15 member of both boys and girls in co-ed School/College)	Search & Rescue Team	
7	00:13-00:18	First Aid team will perform the first aid activities if needed as per the command of Teacher No. 2	Teacher No. 2 and First Aid Team	
8	00:18-00:20	Evaluation Team will submit the report to Incident Commander	Evaluation Team Members (Teacher no.-3, 4, 5 & 6)	
9	00:20-00:25	De-briefing of Incident Commander with all teachers and Students	Incident Commander	

Preparation of School/College authority before the Mock Drill:

1. A round of Sensitization meeting with the Teachers and Students on Earthquake and identifying/clarifying of the roles and responsibility of each individual.
2. Preparation of School/College Safety Plan as per the format provided. Plan is must to conduct the drill.
3. Constitution of at least two teams and training a. Search and Rescue Team and b. First Aid Team by the senior class students consisting of 10-15 students both boys and girls in co-ed School/College. The training will be provided by the sub-division/ block master trainers or by Police, Fire Service personnel, Doctors and Paramedical staffs, IRCS etc with the assistance from block / sub-division administration.
4. Pre-identification of students (in a confidential manner) in a class to remain inside the class as injured victim during evacuation.
5. To make a drill by the School/College administration themselves before showing to other authorities.

Disaster Management activities undertaken in Tripura

1. Institutional Framework:



(a) Tripura Disaster Management Authority (TDMA) chaired by the Hon'ble Chief Minister is the apex body in the State. **Two** TDMA meeting has been conducted. The members of TDMA are as follows:

- 1) Chief Minister, Tripura, (Chairperson)
- 2) Minister, Revenue & PWD (Vice Chairperson)
- 3) Minister, Tribal Welfare (Member)
- 4) Minister, Health (Member)
- 5) Minister, Power (Member)
- 6) Chief Executive Member, TTAADC (Member)
- 7) Chairman, AMC (Member)
- 8) Chief Secretary (Chief Executive Officer, (ex-officio))

(b) State Executive Committee (SEC) chaired by the Chief Secretary is the implementing body of Disaster Management Activities in the State. Till date six SEC meetings have been held. Members of the SEC are as follows:

- | | | |
|-----------------------------|---|-------------|
| 1) Chief Secretary, Tripura | : | Chairperson |
| 2) Secretary, Revenue | : | Member |
| 3) Secretary, PWD | : | Member |
| 4) Secretary, Health | : | Member |
| 5) Secretary, Finance | : | Member |

Co-opted Members

- | | | |
|---------------------------------------------------|---|--------|
| 6) Secretary, Planning & Coordination | : | Member |
| 7) Secretary, Social Welfare and Social Education | : | Member |
| 8) Director General of Police | : | Member |
| 9) Principal Chief Conservator of Forests | : | Member |
| 10) Director, Fire Service | : | Member |
| 11) State level Officer of NCC | : | Member |
| 12) State level Officer of NSS | : | Member |
| 13) State level Officer of Civil Defence | : | Member |
| 14) Joint Secretary, Revenue | : | Member |

(c) District Disaster Management Authority (DDMA) is the implementing body in the District. DDMA meetings are held on half yearly basis. DDMA's have been constituted in following manner:

- | | |
|-------------------------------------|-------------------------|
| (1) District Magistrate & Collector | Chairperson |
| (2) Zilla Sabhadhipati | Co-Chairperson |
| (3) ADM & Collector | Chief Executive Officer |
| (4) Superintendent of Police | Member |
| (5) Chief Medical Officer | Member |
| (6) Executive Engineer, PWD(R&B) | Member |
| (7) Divisional Fire Service Officer | Member |

(d) Disaster Management Committees constituted at sub-division, block and GP/Village levels. Meetings are held at regular intervals.

(e) The State Crisis Management Group (SCMG) and District Crisis Management Groups (DCMGs) have been constituted and linked up with the SEC and DDMA's respectively.

(f) Disaster Management Plan at District, Sub-division, Block, Panchayats/ Villages have been prepared and updated annually.

(g) Disaster Management Plans also prepared for line departments, school levels and New Capital Complex.

(h) State Disaster Management Plan, Policy and Rules are drafted.

- (i) Standard Operating Procedures (SOPs) have been prepared for functioning of Control Rooms, Handling Equipments, Conducting Mock Drills, for Search & Rescue Operations.

2. Operation of Control Room/ Emergency Operation Centres (EOC):

- (a) The state has 24x7 State and District Control Rooms (EOCs) functioning round the clock in the Secretariat and DM & Collectors Offices respectively.
- (b) Control Rooms are also functioning in all SDMs Office and few BDOs office during office hours.
- (c) State EOC receives daily weather information / warnings from IMD and CWC and shares to the District EOCs. Daily situation report is being issued at 5PM.
- (d) **Toll Free** telephones are working in State EOC (**1070**) and District EOCs (**1077**).
- (e) Doppler Rader at IMD-Agartala station is being linked with State EOC for sharing now casting (warning of severe thunder storm, cyclones before one hour).
- (f) New **Mass SMS system** is operational. **3500** contact numbers of key officials in the state have been incorporated in the system.
- (g) Newly built State EOC near the Secretariat Complex is ready for occupation.
- (h) State and District Quick Response Teams have been linked up with the Control Rooms for quick deployment of the team at the disaster site.
- (i) 46 State and District EOC personnel have been trained at SIPARD on operation of control room and critical equipments.
- (j) At the district level, the details of the quick response team have been shared with all line departments and other agencies for public information.
- (k) There are two Strong motion accelerographs installed in Agartala (AD Nagar & 79 Tilla) by NEIST-Jorhat and GSI-Agartala. An Officer from PWD has been identified as the nodal officer for disseminating the Earthquake information.

3. Disaster Management Teams and Equipments:

- (a) State, District, Sub-division and Block levels a 20 member Disaster Management Team (DMT) and Quick Response Team (QRT) constituted.
- (b) Recently **22 sets of equipments consisting 38 items** have been positioned at **15 sub-divisions, 6 TSR Bns and CTI-Gokulnagar**. The details are given blow:

List of equipments positioned at the sub-divisions and TSR Bns

Sl	Name of the Equipment	Qty.
1	Bullet Chain Saw	44 sets
2	Bolt Cutter-14" Manual	132 nos
3	Bolt Cutter - 30" Manual	132 nos
4	Rotary Hammer Drill	44 sets
5	P.A System Handled Mega Phone	44 sets
6	Spades Shovels	220 nos
7	Spade	440 nos
8	Commando Search Light	110 nos
9	Fire Extinguisher Portable	110 nos
10	Crow Bar 3 Ft.	420 nos

11	Crow Bar 5 Ft.	420 nos
12	Traffic Cones	440 nos
13	Safety Goggles	110 sets
14	Inflatable Rubber Boat – 12 person capacity without motor	22 nos
15	Nose Mask	2200 nos
16	Electric Drill	22 sets
17	Water mist and CAF Fire extinguisher back pack 10 ltr	30 sets
18	Portable inflatable emergency lighting system with generator	30 sets
19	Tarpaulin-Plastic 13x30	350 nos
20	Natural calamity Tent 16x16	35 nos
21	Fire Proximity Suit	66 nos
22	Fire Boot and Gloves	66 sets
23	Generator Set	22 sets
24	Rotary Rescue Saw (Petrol) with blade	22 sets
25	Angle Cutter (Electric)	66 nos
26	Fire Extinguisher – Medium	66 nos
27	Concrete Cutter	44 sets
28	Shovels Round	220 nos
29	Scene Tape 100m long	88 nos
30	Fuel container	110 nos
31	Rope nylon 100m rolls	88 nos
32	Fire and Rescue Helmet	66 nos
33	Reciprocating Saw with Blade (Electric)	22 sets
34	Hand Saw	440 nos
35	Heavy Duty Work Gloves	1100 pairs
36	Breathing Apparatus	44 sets
37	Folding Stretcher	660 nos
38	Flexible Splints (Large/ Medium/ (Small)	88 nos

Equipments supplied to following Sub-Divisions & TSR Bns

Sl	District	Sub-Division	TSR Bn/ Trg. Centre
1	West Tripura	Sadar	Commandant, CTI, Gakulnagar
2	Sepahijala	Bishalgarh, Sonamura	7 th BN TSR, Jampuijala
3	Gomati	Udaipur , Amarapur	5 th BN TSR, Doluma.
4	South Tripura	Belonia, Sabroom, Santirbazar	9 th BN TSR, Baikhora
5	Khowai	Khowai, Teliamura	6 th BN. TSR, Ramchandra Ghat
6	Dhalai	Kamalpur, Gandacharra	8 th BN. TSR, Lalchara
7	Unakoti	Kailashahar, Kumarghat	-
8	North Tripura	SDM, Dharmanagar	13 th BN. TSR, Daspara
		15 Sub-Divisions	6 TSR Bns & CTI

- (c) **90 officials** from the 15 sub-divisions and 6 TSR Bns have been trained on handling equipments at CTI.
- (d) Fire Service and Health Departments are procuring critical equipments for emergency response by using fund from 13FC allocation for Capacity Building.
- (e) **40** helipads have been constructed at sub-division and block headquarters for emergency rescue, evacuation and emergency relief purposes in case of disaster. The list is given below:

SL.	BLOCK	LOCATION
1	Killa	Noabari
2	Kakraban	Kalikishore H.S.School Field
3	Karbook	Near ARDD Office
4	Rajnagar	Gautam nagar J.B. School Field
5	Amarpur	Amarpur R.D Block H.Q
6	Rupai Chari	Near Block Office
7	Bagafa	West Katalchari GP
8	Ompi	Near Ompi RD Block
9	Satchand	Near O/O SDO, PWD, Bhuratali
10	Matabari	Shalgarah High School Ground
11	Gournagar	Near Gournagar RD Block
12	Kumarghat	Pabicharra School field
13	Kadamtala	Kadamtala GP
14	Panisagar	Near O/O Panisagar RD Block
15	Pecharthal	Sollanala
16	Damcharra	Khedacharra Village
17	Dasda	Kambal Tilla
18	Jampui Hill	Near Vangmun PS
19	Ambassa	Jawaharnagar
20	Salema	Near Kachucharra
21	Durgachowmuhan	Manik Bhandar
22	Dumbur Nagar	Surma
23	Chawmanu	Bakcharra
24	Manu	West Machali
25	Jirania	Office Tilla field under Bankimnagar GP
26	Mandai	Gurumani Mini Stadium Ground
27	Mohanpur	Tula Bagan ground near BSF Camp
28	Hezamara	Surendranagar Class XII gound
29	Bishalgarh	Beladepha JB School
30	Dukli	Bagan Tilla, Jarulbachai
31	Jampuijalla	Sudhanya Debbarma memorial H.S.School ground
32	Khowai	Madhyaganki School Ground
33	Kalyanpur	Purbakunjaban H.S.School ground
34	Teliamura	Assam Rifles Complex and Kashiamangal BSF Complex
35	Tulashikhar	Bharat Sardar HS School Ground
36	Padmabil	Baijalbari H.S.School
37	Mungiakami	Kakrchera and Nonacherra
38	Melagharh	Jaganathbari Ground
39	Kathalia	Baranarayan HS School ground and Bhabanipur High School ground
40	Boxanagar	Old School Field of Boxanagar H.S.School.

4. Trained Manpower for Disaster Response:

- (a) So far **915 nos.** of uniformed personnel (TSR-745nos., State Police-74nos., Fire Service-60nos. and Civil Defence volunteers-34nos.) have been trained at CTI-Gokulnagar on Medical First Aid and Search and Rescue. These trained people are posted at TSR Bns and department offices at state, district and sub-division Hqs who can be mobilized immediately to any disaster site in the state.
- (b) @20 personnel have been identified as Core Team for Disaster Management at District, Sub-division and Block Hq levels for carrying out immediate disaster management activities.
- (c) Besides the above, @20 volunteers have been identified at the GP/Village levels for carrying out Rescue and First Aid activities during disaster times. Out of these, **2500+** volunteers have been trained at Block and Panchayat levels rest of the volunteers are being trained up by the Block and Sub-division administration in phase manner.

5. Trainings organized:

- (a) Central Training Institute (**CTI**) is the nodal training institute for imparting practical training on Search and Rescue and First Aid for the TSR, Police, Fire Services, Civil Defence and community Volunteers. Till date **915** uniformed officials have been trained.
- (b) CTI is being further strengthened as State of Art training centre for Disaster Management with the help of National Disaster Management Authority by stationing one NDRF Team with required equipment support.
- (c) **SIPARD** is imparting general Disaster Management trainings to the Govt. Officials, PRIs, SHGs, NGOs etc. So far **3566** officials from various departments and PRIs in the state since 2009 till date.
- (d) Civil Engineering Department of **NIT-Agartala** is the nodal training centre for Engineers training. So far, **132** Engineers from PWD, RD, Power, UDD, Education deptts have been trained on Earthquake Engineering. More training programmes are being planned.
- (e) PWD in collaboration with **Institution of Engineers-Tripura** is organising Masons and Helpers training at District, Sub-division, Nagar Panchayat and Block Hqs. So far **2000+** masons and helpers have been trained.
- (f) **1134** School and College teachers have been trained on School Safety at State and District levels.
- (g) State and District nodal officers, line department nodal officers and key officials of disaster management in State, District, Sub-division and Block levels officials have been trained.
- (h) So far **134** doctors and **307** paramedical staffs of different hospitals in the state have been trained on Emergency Health Management and Hospital Preparedness.

- (i) **746 PRIs** (Pradhan, Upa Pradhan, Village Chairpersons and Ward members) have been trained on Disaster Management by **PRTI** during 2011-12 and **1179 PRI** representatives and Govt. officials at District, Sub-division and Block levels have been trained in a special training programme through **IGNOU & NDMA** during 2012-13.
- (j) **137 Journalists** from print and electronic media have been trained on role of media on Disaster Management at State and District level training programmes during 2011-12-13.

6. Mock Drills:

- (a) The state level mock drill was conducted on 24th February, 2012 at Netaji School Agartala by involving line departments, army and paramilitary forces, NDMA, NDRF-Guwahati Bn, NGOs, schools and general public. About 3000 general public witnessed the mock drill and wide publicity was made. District level mock drill in each district organized by involving all district level stakeholders and communities. **12** Sub-divisions, **18** Blocks and **84** Schools have conducted earthquake mock drills at their levels. At a time 62nos. of Earthquake Safety Mock Drills have been conducted in the State on 12th October, 2012 on observance of **International Day for Disaster Reduction (IDDR)**. Similar programmes are being organized on IDDR since last three years in the state.

7. Development of Awareness and Training Materials:

- (a) **Three types** of posters, **three types** of handouts on Disaster Safety Tips (Earthquakes, Floods and Cyclones) were printed and distributed upto the panchayat levels.
- (b) **Five types of booklets** have been distributed on Disaster Management for the officials, PRIs and volunteers upto the panchayat levels.
- (c) **Four types** of school safety booklets have been printed and distributed all DMs and SDMs for using in School level training and awareness programmes.
- (d) **18 nos.** of disaster management documentaries/ films/ jingles have been dubbed into Bengali and distributed to all districts and line departments for conducting awareness programmes at their levels.
- (e) A list of awareness, training and important documents developed for disaster management is given below:

Awareness, Training Materials and important documents developed for Disaster Management

<p>Coloured Posters (Bengali):</p> <ul style="list-style-type: none"> Earthquake Safety Cyclone Safety Flood Safety <p>Leaflet (Bengali):</p> <ul style="list-style-type: none"> Earthquake Safety Cyclone Safety Flood Safety 	<p>Movies (English):</p> <ul style="list-style-type: none"> Earthquake Surviving Natures Fury Community Based Disaster Preparedness Samiyarpetti-Community Preparedness Dost Appu-Cartoon <p>Short Ad Film (Bengali):</p> <ul style="list-style-type: none"> Act Now Save Later Earthquake Clipping
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Handout (Bengali):

Safe Construction Practices

Booklet (Bengali):

Disaster Management Booklet at village level
Training guidelines for DM at Panchayat level
Training guidelines for DM at village level
Training guidelines for DM at Block level
Picture booklet for flood management
Hand book on Swine Flu
School DM Planning

Booklet (English):

Handbook on Disaster Management
First Aid Handbook
Search and Rescue Handbook
School Safety Handbook
Disaster Safety Education Booklet
Trg Module for Master Trainers on
School Safety
Volunteers Handbook

Movies (Bengali):

Disaster Management – BMTPC
Earthquake Preparedness
Are You Ready
Captain Surakshya-School Safety
Dost Appu-Cartoon
First Aid
Search & Rescue
Improvised Rescue Techniques
Tilly Smith-School Safety
Community Based Disaster Preparedness
Tsunami
Retrofitting of Ujjayanta Palace

Movies (English):

Disaster Management-BMTPC
Are You Ready
First Aid
Search & Rescue
Mock Drill
Does & Donts for Earthquake
Cyclones
Floods
Incident Command System
Chunauti-Bhuj Earthquake Response

Disaster Resistant House
Kobe Hospital
Sikkim Earthquakes
CPR
Galle
Karipatiya

Jingles (Bengali):

Upadesh theke lav
Sabdhan acche to surakhito achhen
Baso, Dhuko ar Dharo
Doi hadi
Non structural Damage (Earthquake)
Thaku Maa
Ami toyari achhi
Anek madhye ekta
Sabai sathe NDRF

Standard Operating Procedures (SOP):

SOP for Operation of EOC
SOP for conducting safety drill in School
SOP for conducting earthquake drill in Villages
SOP for conducting cyclone drill in Villages
SOP for First Aid
SOP for Earthquakes
SOP for Cyclones
SOP for handling Media

Guidelines:

Guidelines for preparation of department DM Plan
Guidelines for handling equipments
Guidelines for preparation of School DM Plan

Checklists:

Checklist for DM & Collector on Disaster Preparedness
Checklist for SDM on Disaster Preparedness
Checklist for BDO on Disaster Preparedness
Checklist for Disaster Management Nodal Officer
Checklist for Education Department
Checklist for RD Department

Reports:

Annual Report-2011-2012
Uptodate Status Report upto October-2011
Uptodate Status Report upto 2010
Uptodate Status Report upto 2009

Hope Again-Odisha Cyclone response Are You Prepared-Interactive	
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8. GOI-UNDP Disaster Risk Reduction (DRR) Programme (2009-2012):

NDMA with support from UNDP implemented the DRR programme from 2009 to 2012. Entire fund of **Rs. 61.85 lakh** received for the programme has been utilized for development of Disaster Management Plans upto the GP/Village levels, capacity building for doctors, engineers, journalists, PRIs on disaster management, development of training modules, integration of disaster management component in programmes like MGNREGA and NRHM.

9. GOI-UNDP Urban Risk Reduction (URR) Programmes (2009-2012):

Ministry of Home Affairs with support from UNDP implemented the URR programme from 2009 to 2012 in three towns in the state i.e. Agartala, Dharmanagar and Kailashahar. The programme helped the urban local bodies for development of city and ward wise disaster management plans and training of engineers, masons, doctors, teacher and students on disaster management. Vulnerability analysis of identified 200 major public buildings in Agartala city is being done by state PWD. Fund received under the programme is **Rs. 33.84 lakh** out of which Rs.27.84 lakh have been utilised.

10. National School Safety Programme (NSSP):

Govt. of India has sanctioned **Rs.1.76 Crores** for 2011-12-13 under central sponsored scheme for taking up awareness generation, conducting school level mock drills, training of students and teachers and taking up structural and non-structural mitigation activities on school safety in 400 schools in the State. 10 Master Trainers at NIDM-Delhi and 4 engineers at IIT-Roorkee have been trained. Training of Trainers (Teachers) will be organized from 10-12 July, 2013. Adequate fund already placed with the DM & Collectors of West Tripura, Sepahijala, Khowai, North Tripura and Unakoti districts for the programme.

11. Funding Mechanism:

(a) For immediate relief, rescue and restoration:

The state has received Rs.5,023.44 lakh under State Disaster Response Fund (SDRF) during 2010-11, 2011-12 and 2012-13. As per the requirement of the DM & Collectors, the fund has been placed with them for using in relief, rescue and medical response, immediate reconstruction purposes.

(b) For procurement of Equipments:

As per the SDRF norm, 5% out of SDRF can be utilized for purchase of critical search and rescue. The State has already utilized the total allocation of 5% of SDRF.

(c) For training and Capacity Building:

Under 13FC, **Rs.5.00** Crores (i.e. Rs.1.00 Crore per year) has been allocated to the State for Disaster Management Capacity Building purposes. Till date the state has received Rs.2.00 Crores for 2010-11 and 2011-12 and the funds sub-allocated to the DM & Collectors and line departments as per the approved action plan for organising different disaster management training programmes. Fund received recently for 2012-13 is being allocated as per the approved action plan.

N.B.: The information given above as updated on August, 2013.