

TRAINING MANUAL OF DISASTER MANAGEMENT

**GOI-UNDP DISASTER RISK MANAGEMENT PROGRAMME
GOVERNMENT OF TRIPURA**

CHAPTER I

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.

Institutional arrangement in the Disaster Risk Management programme is:

At National Level

Ministry of Home Affairs is the Nodal Agency for Disaster Risk Management Programme [Sudden disasters], and is the executer of the programme. United Nations Development Programme is implementing the programme along with State Nodal Agency in the selected states.

Project Management Board [PMB]: Project Management Board has been constituted under the chairmanship of Secretary, Ministry of Home Affairs, and Government of India. Project Management Board is responsible to provide necessary support and guidance to the implementation of DRM Programme.

Project Steering Committee [PSC]: The PSC has been constituted under the chairmanship of Joint Secretary [DM], Ministry of Home Affairs, Government of India for review and monitoring of the Disaster Risk Management Programme.

At State Level

State Nodal Agency: Each State government is to identify one agency or Department as the nodal agency for the implementation of Disaster Risk Management Programme.

State Steering Committee [SSC]: State Steering Committee has been constituted under the chairmanship of Chief Secretary of the Government of Tripura. State Nodal Agency, Revenue Department and other related departments of the state government, leading Non – Governmental Organizations, Red Cross are the members of the State Steering Committee. The State Steering Committee will provide necessary support and guidance for the implementation of the programme.

The members of the state steering committee to review the programme of the State in every quarter.

At District Level

Nodal Officer: The District Magistrate and Collector or the state government has to designate one or two officers as nodal officers at the district level to carry out the Disaster Risk Management activities in the district, for example Project Officer/ Director/ District Development Officer of District Rural Development Agency and District Emergency / Relief Officer.

District Disaster Management Committee [DDMC]: All officers of the line departments. NGOs, Red Cross and NCC/NSS in all programme districts will be members of this committee under the chairmanship of the President of the Zilla Parishad or the District Collector. The District Disaster Management Committee will approve the work plan of the district for Disaster Risk Management Programme and help in implementation of the programme. District Disaster Preparedness and Mitigation Plan will be prepared under the guidance of the District Disaster Management Committee and will be approved by the District Development Committee [DDC]. District Disaster Management Committee is also responsible for the training of District Disaster Management Team.

District Master Trainers: The District Collector will select five officers from different sectors either from district or from block level as District Master Trainers in disaster management. The District Master Trainers and District Project Officers will be trained in programmes organized by State Nodal Agency at the Administrative Training Institutes at state level. The District Master Trainers are responsible for training of all Block Disaster Management Committee members, Disaster Management volunteers and other stakeholders involved in Disaster Management activities.

Teachers training: SIET / DIET is responsible to organize training for selected teachers and developing new curriculum at district level to be introduced in the schools.

DMT [Disaster Management Team] training: District Master Trainers will organize the sectors wise training for the members of district management team on disaster management and special skills for emergency response to provide necessary support and training to the Disaster Management Teams at block and other levels.

Mock drills: Two mock drills have to be conducted based on the Disaster Preparedness and Mitigation Plan every year in the month of May and September. District Disaster Management Committee is responsible to carry out the mock drills at district level.

At Block Level

Block Disaster Management Committee [BDMC]:

The BDMC will be formed in all the blocks consisting of line department officials, few [two or three] elected representatives (men and women), representatives from local NGOs/ CBOs, School teacher, senior citizen, NCC and NSS teachers etc. The Chairperson of the Panchayat Samiti will be the Chairperson of the BDMC and the Block Development Officer will be the convener of the committee. The BDMA will implement the Disaster Risk Management programme in the block and provide necessary support for approval of Block Disaster Preparedness and Mitigation plan by the Panchayat Samiti. Block Disaster Management Authority will be responsible for the training of the Disaster Management Teams at block, Grampanchayat and village level. After completion of all Grampanchayat Disaster Management Plans, Block Disaster Management Plan will be prepared.

Block Master Trainers: The District Magistrate and Collector and District Nodal Officer will select two or three persons from each block as Block Master Trainers. The master trainers will be either block government officials or representatives of NGOs. They will be trained by the District Disaster Management Teams/ resource persons on development of Disaster Management Plan at block and lower levels and on Disaster Management activities. The master trainers are responsible for training of all Gram Panchayat Disaster Management Committee members, Disaster Management volunteers and members of various Disaster Management Teams

Training of Panchayati Raj Members (PRI): All Sarpanches and Samiti Members will be trained on disaster management, Disaster Risk Management Programme and the PRIs role in Disaster Risk Management Programme. Block Disaster Management Authority is responsible for organizing the training at block level.

Volunteers for development of Village Disaster Management Plan: Gram Panchayat Disaster Management Committee/ Sarpanch / Gram Panchayat Extension Officer will select 10 to 15 volunteers [The volunteers may be active members of CBOs, Youth clubs, Mahila Samitis, PRI etc.] from each Gram Panchayat, who will be trained by the Block Master Trainers on development of Village Disaster Management Plan at village level. The main focus of the training will be on identifying the vulnerability, risk and resources at the village level and other techniques for mobilizing community for development of Village Disaster Management Plan. Volunteers will be responsible for development of the plan and organizing mock drills at village level.

Training of Block Disaster Management Team [BDMT]: BDMT is the part of the Block Disaster Management Authority. The team members will be responsible for carrying out different activities in pre, during and post disaster phases. The BDMT members will be trained by the District Disaster Management Teams on training of lower levels and on effective management of emergency situations.

Teachers Training: There will be training for selected teachers preferably 5 from each block to train the students on common safety measures for different hazards. These teachers will further be responsible to carry out mock drills in the schools and also in the villages (mentioned as the responsibility of the volunteers in a paragraph above!). New course curriculum on disaster preparedness will be introduced for greater awareness on Disaster Management. The training programme will be for both primary and high school teachers. DIET (expand) / Block Disaster Management Authority will be responsible for this training.

Mock drills: Mock drills will be conducted twice a year in the months of May and September or the hazard season(s) based on the Disaster Preparedness Plan. The Block Disaster Management Committee is responsible to carry out the mock drill at block level.

At Gram Panchayat Level

Gram Panchayat Disaster Management Committee [GPDMC]:

GPDMC will be constituted by all Gram Panchayat Extension Officers, Gram Panchayat Secretary, ICDS Supervisor, Village Agriculture Worker, Village Level Worker, other Gram Panchayat level officials, representatives of CBOs/ NGOs and elected representatives of the Gram Panchayat. Pradhan and Extension Officers will be responsible for smooth functioning of Grampanchayat Disaster Management Committee, preparation of Gram Panchayat Disaster Management Plan and formation and training of Gram Panchayat Disaster Management Teams. The Gram Sabha will approve the Gram Panchayat Disaster Management plan. After completion of all Village Disaster Management Plan, the Gram Panchayat Plan will be modified according to the actual data.

Gram Panchayat Disaster Management Team (GP DMT) training: Grampanchayat Disaster Management Team is part of the Gram Panchayat Disaster Management Committee and special training will be organized for the Gram Panchayat Disaster Management Team members to carry out their activities effectively. Local resource persons will be used for this type of training such as local medical officers for first aid and counseling and RWS&S and their technicians for water and sanitation sector.

Mock drills: Mock drills will be conducted before the hazard season in all the Gram Panchayat based on the Disaster Preparedness Plan. One of the members of the Block Disaster Management Committee will monitor the mock drills and help the Gram Panchayat Disaster management Committee in modifying the Gram Panchayat Disaster Preparedness Plan.

At Village Level

Village Disaster Management Committee [VDMC]:

Trained volunteers and PRI members will fix the day and time for village sensitization meeting and form the Village Disaster Management Committee. Villagers will select the members of VDMC as per their requirement. Anganwadi Worker, Male and Female Health Workers, Ward Members, School Teachers, member of youth clubs, women groups, ex-service men, any health practitioner, swimmers, village home guards, philanthropic organization, opinion leaders etc. could be the member of the VDMCs. VDMC will be responsible for development of the Village Disaster Management Plan, formation of Village Disaster Management Teams and to conduct mock drills. The VDMC too will be involved in formation of a Community Contingency Fund which will be used by the villagers in pre, during and post disaster. The contingency fund will be in a name of the VDMC and in each month from each household a fixed amount of money say Rs.5/- or Rs.10/- as decided by the villagers will be collected and deposited in the bank.



Meeting of the VDMC

Specialized training to the DMTs: Members of each Disaster Management Team will be trained on different activities to carry out their roles effectively. Specific training on **first aid, warning dissemination, rescue and evacuation, damage assessment, counseling, shelter management, carcass disposal, water and sanitation**, operation of early warning equipments etc would be organized.

Mock Drill: Based on the Disaster Management Plan the villagers will carry out a mock drill before any hazard seasons, preferably in the months of May and September. GPDMC members will monitor the village mock drill.

Other Activities to be taken up under the programme to reduce vulnerability:

- o Construction of disaster resistant and cost effective demonstration units and retrofitting of non-engineered buildings.
- o Training of masons and engineers for wider dissemination and adaptation of technology
- o Advocacy for standard building codes and byelaws
- o Emergency rescue kits to be provided to the vulnerable districts.
- o Strengthening of the State and District Emergency Operation Centers
- o Resource Inventory database

- o Urban earthquake vulnerability preparedness programme
- o Strengthening National training Institutes
- o Vulnerability and Risk Indexing

Sustainability of the Programme:

- o All disaster Preparedness and Mitigation Plans to be approved by Palli sabha, Gram Sabha, Panchayat Samiti and Zilla Parishad.
- o Disaster Preparedness and Mitigation Plans to be an integral part of all developmental planning process.
- o DMCs and DMTs to conduct mock drills regularly to enhance preparedness. Well equipped and functional disaster management information system.
- o Adequate human resources capacity building
- o Manuals and guidelines will be available for all emergency operations
- o Availability of trained masons in appropriate disaster resistant housing technology.

Village volunteers:

- o The village volunteers will be over all charge of preparing the village disaster preparedness plan.
- o They will be involved in carrying out the training of the task force volunteers at the village level.
- o The mock drills are to be carried out by the village volunteers with support from the VDMC and GPDMC.

ROLE OF PRIs 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.

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

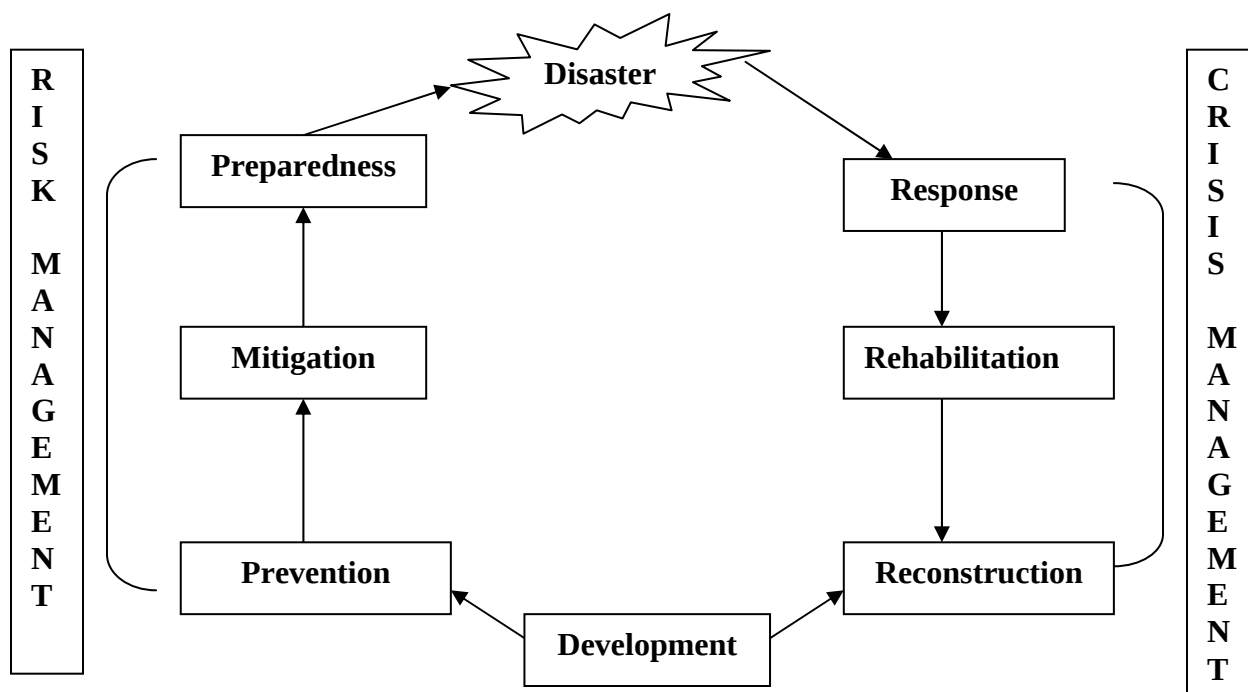
Reconstruction

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.



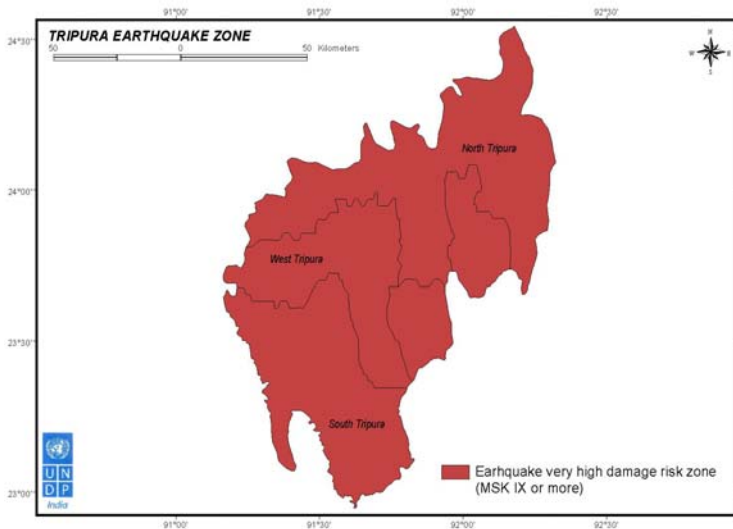
Before
donors decide what victims needs

Now
community members participate in decision-making to prioritize needs

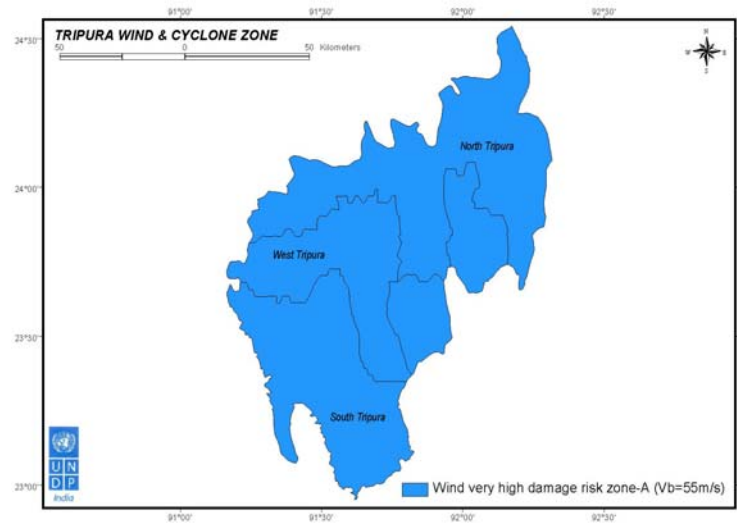
DISASTER IN TRIPURA AT A GLANCE

Prioritization of Disasters in Tripura

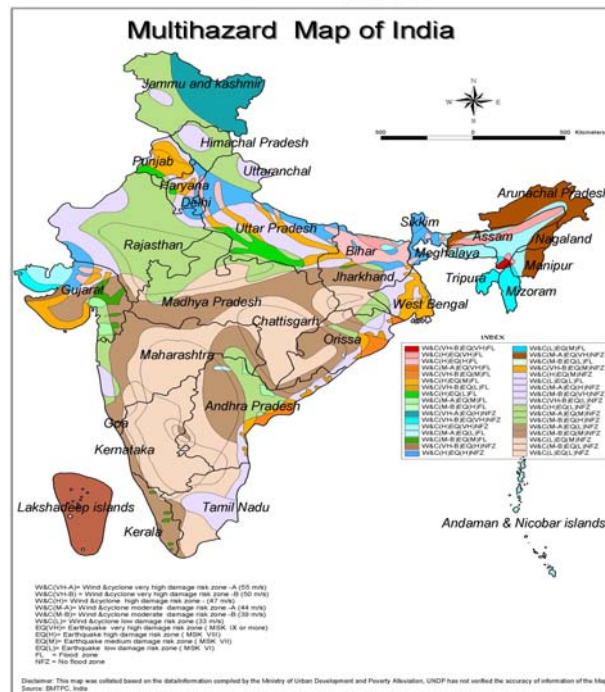
- Earthquake – High
- Landslide - Low
- Cyclone – Moderate
- Hail Storm – Moderate
- Flood - Moderate



Disclaimer: This map was collated based on the data/information compiled by the Ministry of Urban Development and Poverty Alleviation. UNDP has not verified the accuracy of information of the Map. Source: BMTPC, India



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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/PRIIs
- 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?

- | |
|---|
| <ul style="list-style-type: none">• Cattle and livestock• Valuable documents of the family• Livelihood assets• Standing Crop• Drinking water sources• Weak Embsnkments |
|---|

➤ **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

STEPS IN FORMULATING A BLOCK DISASTER MANAGEMENT PLAN (BDMP)

- A letter is to be issued by the District Magistrate and Collector to BDO for a general meeting on Block Disaster Management Committee by calling all the stake holders in the Block.
- District nodal officer will discuss about the programme and objective of BDMC.
- Formation of Block Disaster Management Committee (BDMC) by BDO by involving Block and Panchayat Samiti/ District Council and other line departments. The Committee composed with BDO as Chairperson, Chairman Panchat Samiti or Chairman District Council at block level will be Vice-Chairperson, Officials from PWD, Health, Police, Rural Development, PHED, Education, Agriculture, Electricity, Veterinary etc, 2 Extension Officer, 2 Eminent Personnel, 2 Teachers/ Lecturers, NGO Representatives, Volunteers etc will be represent as Member of the Committee.
- Organize a meeting with BDO, CO, Representatives of DDMC & BDMC, ZPM, PRIs, Teachers, NGOs, SHG groups, Eminent persons, Volunteers and line deptts of the Block and Circle.
- Explain the aims and objectives of the BDMP and roles of each sector.
- Distribution of GOI-UNDP standard BDM Plan format to all the deptts.
- Discussion of BDMP format and the required components.
- Fill up available data from the concerned deptts./sectors.
- The draft plan will be sent to all deptt / sector for verification and approval at the Block level.
- After compilation of the responses of draft plan, final plan will be prepared.
- BDO/ CO will call a meeting of all members to discuss about the plan and approval by the Committee with the signature of all member concerned.
- The final plan will be submitted to DDMC to incorporate in Dist. Plan.
- Distribution of the plan to all concerned and target groups.

ROLE OF TRAINER IN PARTICIPATORY TRAINING -WORKING WITH PEOPLE-

12 primary ingredients of effective personal communication skill

- Accurate perception of how one, personality affects others- self insight
- Prepared to stand firm - assertion
- Good listening skills - active listening
- Supportive and directive leadership as necessary – leadership
- Methodical approach to problem solving and decision making – systematic approach
- Acknowledges the importance of feeling and emotion – counseling
- Capable of steering meetings well – chairmanship
- Able to deal with uncooperative people – interpersonal problem solving
- Developing the competence of others – training competence
- Prepared to consider and implement new ideas – creativity
- Able to communicate effectively through the written words – written skills
- Able to communicate effectively through the spoken work – oral communication competence.

Role of trainer in participatory training

Pre – training role

- Training design
- Administrator organizer

During training role

- Facilitator:
- Instructor
- Counselor
- Recorder: all the queries can be noted
- Evaluator: on going evaluation
- Organizer/administrator/manager: time management

Post training role

- Report writer
- Follow – up – coordinator

Pre training role:

As training designer

- Collecting and identifying the learning needs
- Listing the objectives
- Working out the related content and methods, materials and exercise
- Sequencing the content and activities
- Identifying the resource persons
- Preparing and selecting the learning materials

As administrator/organizer:

- Choosing venue and time
- Selecting and scheduling facilities
- Regularly communicating with the trainers regarding programme plans
- Identifying and arranging the needed support system at the training venue
- Scheduling the time of co-trainer and resource persons
- Distributing training materials
- Arranging/mobilizing resource

During training role:

As facilitator:

- Eliciting opinions
- Focusing participants attention on their potentials
- Summarizing and synthesizing information
- Intervening in the process

As instructor:

- Provide information and concepts
- Directing structured learning
- Using learning aids – film, audio, tapes, video tapes and other materials

As recorder:

Observing keenly both flow of content and process

Maintaining detailed notes on a daily basis

As evaluator:

- Planning and evaluation mechanism
- Using written as well as verbal reports to assess an event
- Utilizing evaluation design to assess individual changes in attitude behavior and knowledge
- Conducting mid term review
- Sharing reflections and analysis with co-trainer
- Providing relevant feedback

As organizer/administrator/manager:

- Managing time and space for each session
- Solving problems relating to food, lodging
- Organizing reservations, departures, reimbursement
- Timing, breaks, off – time etc

Post training role:

As report writer:

- Organizing the relevant information for the report writing
- Disseminating the reports to all participants, resource persons and other interested

As follow up coordinator:

- Communicating at regular intervals
- Inviting feedback from both individuals and organizations
- Collecting learning needs for the next
- Providing support in the field
- Impact assessment

FIRST AID

Chapter – 1

Action Plan

This Action Plan is a vital aid to the first aider in assessing whether the casualty has any life-threatening conditions and if any immediate first aid is necessary.

D - Check for DANGER

- To you
- To others
- To casualty

R - Check RESPONSE

- Is casualty conscious?
- Is casualty unconscious?

A - Check AIRWAY

- Is airway clear of objects?
- Is airway open?

B - Check for BREATHING

- Is chest rising and falling?
- Can you hear casualty's breathing?
- Can you feel the breath on your cheek?

C - Check for CIRCULATION

- Can you feel a pulse?
- Can you see any obvious signs of life?

Chapter – 2 Expired Air Resuscitation (EAR) or Mouth to Mouth resuscitation

EXPIRED AIR RESUSCITATION (EAR) ADULT

1. Clear airway:

- Place casualty in recovery position
- Lift chin and open mouth
- Use finger to remove any obvious obstruction
- Tilt head back gently
- Check breathing for up to 10 seconds.



If not breathing:

2. Open airway:

- Turn casualty onto back
- Gently tilt head back
- Pinch nose closed (use thumb and index finger)
- Open mouth and maintain chin lift.



3. Give Expired Air Resuscitation (EAR) or mouth-to-mouth resuscitation:

- Take a full breath and place lips on casualty's mouth (ensure good seal)
- Blow steadily into mouth for 1.5 –2 seconds
- Watch for chest to rise
- Take mouth away and watch for chest to fall
- Take another breath and repeat sequence, to give two effective breaths



4. Check for pulse:

- Check pulse at neck or wrist
- If pulse absent, commence CPR
- If pulse present, continue EAR at 15 breaths per minute
- Recheck pulse and look for other signs of recovery about every minute.



5. Place in recovery position when breathing returns.



Chapter –3 CARDIOPULMONARY RESUSCITATION (CPR)

ADULT

1. Position hands for CPR:

- Place casualty on back
- Find groove at neck between collarbones
- Find lower end of breastbone by running finger along last rib to centre of body
- Extend thumb of each hand equal distances to meet in middle of breastbone
- Keep thumb of left hand in position and place heel of right hand below it
- Place heel of left hand on top of the right and interlock fingers of both hands.



2. Commence chest compressions:

- Position yourself vertically above casualty's chest
- With your arms straight, press down on breastbone to depress it about 4–5 cms.
- Release pressure



3. Continue CPR:

- Complete 15 compressions
- Give two effective breaths
- Continue compressions and breaths in ratio of 15:2 at a rate of 4 cycles per minute
- Check pulse about every minute.



NOTE:
CPR combines chest compressions with expired air resuscitation (EAR) or mouth to mouth resuscitation. CPR is given when casualty is not breathing and has no pulse.

Cardiopulmonary Resuscitation Child (aged 1–8)

- Use heel of one hand over lower half of breastbone to give chest compressions
- Compress chest approximately 1/3 depth of chest
- Give 5 chest compressions in 3 seconds
- Give 1 effective breath
- Continue compressions and breaths in ratio of 5:1 at a rate of 12 cycles per minute
- Check pulse about every minute

NOTE: For newborn baby, chest compressions should not be attempted by anyone untrained in neonatal resuscitation.



about every

INFANT (under 1 year)

- Place tips of 2 fingers (index and middle) on lower half of breastbone
- Compress chest approximately 1/3 depth of chest
- Give 5 chest compressions in 3 seconds
- Give 1 effective breath
- Continue compressions and breaths in ratio of 5:1 at a rate of 12 cycles per minute
- Check pulse about every minute



Chapter - 4

Recovery Position

Adult/Child (From Age 1)

1. Position casualty's legs:

- Kneel beside casualty
- Straighten casualty's limbs



- Lift nearer leg at knee so it is fully bent upwards.
2. Position arms:
- Place casualty 's nearer arm across chest
 - Place farther arm at right angles to body

3. Roll casualty into position:

- Roll casualty away from you onto side
- Keep leg at right angles, with knee touching ground to prevent casualty rolling onto face



4. Make casualty steady:

- Make any adjustments necessary to ensure casualty does not roll



5. Ensure airway is open

Infant (under 1)

- Lay infant face down on an adult 's forearm
- Support head with hand
- Check infant does not choke on tongue or inhale vomit

Chapter – 5

BLEEDING

1. Apply pressure to the wound:

- Remove or cut casualty's clothing to expose wound
- Apply direct pressure over wound
- Cover wound with sterile dressing
- Apply a pad.



2. Raise and support injured part:

- Lie casualty down
- Raise injured part above level of heart
- Handle gently if you suspect a fracture



3. Bandage wound:

- Bandage firmly in place



- Apply another dressing or pad if bleeding continues.
4. Check circulation below the wound.
 5. Call for an ambulance or shift the patient to a hospital if severe bleeding persists.
 6. Treat for shock:

WARNING

Do not apply a tourniquet.

If bleeding from a limb does not stop, apply pressure with hand to pressure point.

If embedded object in wound, apply pressure either side of wound and place pad around it before bandaging.

Wear gloves, if possible, to guard against infection.

If casualty becomes unconscious, follow DRABC.

Chapter – 6

SHOCK

SIGNS AND SYMPTOMS OF SHOCK

1. Lie casualty down:
 - Protect casualty from cold ground
 - Calm casualty.
2. Assess casualty:
 - Follow DRABC
3. Call for an ambulance or shift patient to the hospital.
4. Manage any injuries:
 - Control any bleeding
 - Raise legs (unless fractured) above heart level
 - Dress any wounds or burns
 - Immobilize fractures
5. Ensure comfort:
 - Loosen any tight clothing around neck, chest or waist
 - Maintain body warmth (do not heat)
 - If thirsty, moisten lips (but nothing to drink or eat)



6. Monitor breathing and pulse:

- Maintain a clear and open airway

7. Place casualty in recovery position:

- Place in recovery position if casualty has difficulty in breathing, is likely to vomit or becomes unconscious

Chapter – 7

HEAD INJURY

1. Monitor breathing and pulse:

- If casualty is unconscious, follow DRABC
- Keep casualty's airway open with fingers (if face badly injured)

2. Support head and neck:

- Support casualty's head and neck during movement in case the spine is injured

3. Control bleeding:

- Place sterile pad or dressing over wound
- Apply direct pressure to wound unless you suspect a skull fracture
- If blood or fluid comes from ear, secure a sterile dressing lightly in place and allow to drain.

4. Lie casualty down:

- Place casualty in comfortable position with head and shoulders slightly raised
- Be prepared to turn casualty onto side if they vomit
- Clear the airway quickly after vomiting.

Signs & Symptoms of Head Injury

- Altered or abnormal responses to commands and touch
- Wounds to the scalp or face
- Blood or clear fluid escaping from nose or ears
- Pupils becoming unequal in size
- Blurred vision
- Loss of memory

Chapter – 8

SPINAL INJURY

1. Swift immobilization is highest priority:

- Do not move casualty unless in danger.

2. Check breathing and pulse:

- If casualty unconscious, follow DRABC

WARNING

If casualty unconscious, place in recovery position

If casualty conscious, do not move,

3. Support casualty's head and neck at all times:
 - Place hands on side of head until other support arranged
 - Apply a cervical or improvised collar to minimize neck movement.
4. Give reassurance:
 - Calm casualty.



Chapter –9

FRACTURES, DISLOCATIONS AND SPRAINS

SIGNS & SYMPTOMS

Fracture and dislocation

- Pain at or near the site of the injury
- Difficult or impossible normal movement
- Deformity or abnormal mobility
- Tenderness
- Swelling
- Discolouration and bruising

NOTE

If dislocation of a joint is suspected, rest, elevate and apply ice to joint.

It can be difficult for a first aider to tell whether the injury is a fracture, dislocation, sprain or strain.

If in doubt, always treat as a fracture.

FRACTURES AND DISLOCATIONS

1. Follow DRABC
2. Control any bleeding and cover any wounds.
3. Check for fractures:
 - Open, closed or complicated.
4. Ask casualty not to move injured part.
5. Immobilize fracture:
 - Use broad bandages (where possible) to prevent movement at joints above and below the fracture
 - Support the limb, carefully passing bandages under the natural hollows of the body
 - Place a padded splint along the injured limb (under leg for fractured kneecap)
 - Place padding between the splint and the natural contours of the body and secure tightly
 - Check that bandages are not too tight (or too loose) every 15 minutes.
6. For leg fracture, immobilize foot and ankle:
 - Use figure of eight bandage.
7. Watch for signs of loss of circulation to foot or hand.



SPRAINS

1. Follow DRABC
2. Follow RICE management plan:

- R – Rest
- I – Ice
- C – Compression
- E – Elevation

3. Seek medical aid.

Chapter – 10

CHOKING AND OBSTRUCTED AIRWAY

Diagnosis and treatment

Before you do anything to assist a person you think is choking, ask the victim to talk. If talk is possible, the airway is not completely obstructed and it is best to leave the victim. If the victim cannot talk, the airway is completely obstructed and you should assist in dislodging the obstruction.

ADULT Partial blockage:

- Encourage casualty to relax and breathe deeply
- Ask casualty to cough
- If unsuccessful, bend casualty well forward and give 4 sharp blows between shoulder blades
- If still unsuccessful, place the casualty on the side on floor, call an ambulance or shift to a hospital



Total blockage:

- Lie casualty on side on floor
- Give 4 sharp blows between shoulder blades
- If unsuccessful, give 4 quick downward lateral chest thrusts (place your hands on side of chest, below casualty's armpit)
- Repeat steps until help arrives or blockage clears



CHILD (1 –8 years) Partial blockage:

- Ask child to try to cough up obstruction
- If unsuccessful, place child with head low and face down
- Give 4 sharp blows between the shoulder blades

Total blockage:

- Place child face down on the floor or across your lap



- Give 4 sharp blows between shoulder blades
- If not breathing, give up to 4 quick, squeezing lateral chest thrusts on both sides simultaneously (place your hands below child's armpits)
- Repeat above steps until help arrives or blockage clears
- If not breathing, follow DRABC

Chapter – 11

BURNS

1. Remove casualty from danger:

- Follow DRABC
- If clothing on fire: STOP, DROP AND ROLL
- Pull casualty to ground • wrap in a blanket or similar material
- Roll casualty along ground until flames extinguished

2. Cool the burnt area:

- Hold burnt area under cold running water - at least 10 minutes
- If a chemical burn, run cold water over burnt area - at least 20 minutes
- If burn is to eye, flush eye with water for 20 minutes.

3. Remove any constrictions:

- Remove clothing and jewellery from burnt area (unless sticking to the burn).

4. Cover burn:

- Place sterile, non-stick dressing over burn

5. Calm casualty

W A R N I N G

- Do not apply lotions, ointment or fat to burn.
- Do not touch the injured areas or burst any blisters.
- Do not remove anything sticking to the burn.
- If burn is large or deep, manage casualty for shock.

Electric Shock

Take care when rescuing someone who has been electrocuted so you do not become a victim as well.

- Switch off the current, if possible, by removing the fuse or switching off
- Do not touch the person who is in contact with electricity
- Separate the person from the source of electric current using a dry broom handle wooden stick or other type of non-conducting material such as wood or rubber.

- Make sure your hands and feet are dry and you are standing on a dry surface.
- If it is safe for you to touch the victim, check for heartbeat and breathing. Feel for a pulse along the neck, or on the wrist. Watch the rise and fall of the chest to see if the person is breathing.
- If there is no heartbeat and no breathing, do CPR. If there is a heartbeat, but no breathing, immediately start rescue breathing.

If a person has been struck by lightning

- Check immediately to see if the person is breathing and has a heartbeat.
- (Note: You will not get an electric shock from someone who has been struck by lightning.)
- If the person has no heartbeat and is not breathing, do CPR & Get Medical help

Chapter – 12

DROWNING

Get the victim out of the water safely.

Note:

Saving a drowning person carries risk. Before swimming out to someone in trouble, be sure you can handle the situation. Many people drown in the brave effort of trying to save someone else because they are not well trained and have not properly thought through the risks of the situation.

- Follow DRABC
- If the victim is breathing and has a pulse, put him or her in the **recovery position**
- Take cold, wet clothes off the victim and cover him or her with something warm to prevent hypothermia.

Chapter –13

HEAT INDUCED CONDITIONS

HEAT EXHAUSTION

1. Lie casualty down:

- Move casualty to a cool place with circulating air.

2. Loosen tight clothing:
 - Remove unnecessary garments
3. Sponge with cold water.
4. Give fluids to drink
5. Seek medical aid:
 - If casualty vomits
 - If casualty does not recover promptly

HEATSTROKE

1. Follow DRABC
2. Apply cold packs or ice:
 - Apply to neck, groin and armpits.
3. Cover with wet sheet.
4. If conscious, give fluids.

Chapter – 14

**POISONING AND SNAKE BITE
POISONING**

- Check first for vital signs—breathing and pulse—and, if they are absent follow DRABC and transport the victim to the nearest emergency service.
- Diluting the poison by administering water or milk is advised for most substances. Water is recommended for acid and alkali ingestion if the person can swallow.
- Induce vomiting if the substance was swallowed within an hour
- Aid vomiting by making the person drink salt water (2 tablespoons of common salt in one tumbler of water)
- Take the poisoning victim, along with the bottle or container of whatever was swallowed, to the nearest hospital for further treatment

Do not induce vomiting if:

1. The nature of the substance is unknown.
2. A corrosive substance (acid or alkali product) is suspected.
3. A petroleum product is suspected.
4. The person is having seizures, is unconscious or appears to be losing consciousness.
5. The victim is less than 1 year of age.

SNAKE BITE

Check breathing and pulse:

- If casualty unconscious, follow DRABC
- Calm casualty, Reassure the person and keep him supine and as quiet as possible.
- Remove any rings or constricting items
- Create a loose splint to help restrict movement of the area
- Keep the stricken limb below the heart
- Allow bite to bleed freely for 15-30 seconds.
- Wash the wound with soap and water and rapidly disinfect the area with an antiseptic lotion.

WARNING

Do not cut bitten area or try to suck venom out of wound.

Do not use a constrictive bandage

Do not try to catch the snake.

- If possible, ensure casualty does not move.
- Take the victim to the nearest hospital or emergency service as soon as possible

Chapter – 15

CONVULSIONS / EPILEPTIC SEIZURES

1. Check breathing and pulse:

- Follow DRABC.

2. Protect casualty

- Protect from injury
- Do not restrict movement
- Do not place anything in mouth.

3. Manage injuries:

- Place on side as soon as possible
- Manage injuries resulting from seizure
- Do not disturb if casualty falls asleep
- Continue to check airway, breathing and pulse.

4. Seek medical aid if:

- The seizure continues for more than 5 minutes
- Another seizure quickly follows
- The person has been injured.

SIGNS & SYMPTOMS - seizures

Casualty may:

- Suddenly cry out
- Fall to ground
- Have a congested and blue face and neck
- Have jerky, movements
- Froth at the mouth
- Bite the tongue
- Lose control of bladder and bowel

Section 2 Health Tips

Unit 1: Safe drinking water and better sanitation

Safe drinking water means water which is free from disease causing organisms, and harmful chemicals. Diseases caused by unclean water and bad sanitation include diarrhoea, cholera, typhoid, dysentery and Jaundice (Infective Hepatitis). Mosquitoes which breed in puddles, borrow pits, open drains, slow moving streams, and ponds cause malaria, dengue fever, and other diseases.

Golden rules for safe water

1. **No one should defecate or urinate near or in a source of drinking or bathing water.**
2. **Keep animals away from water collection areas.**
3. **Water for drinking must always be boiled or chlorinated, and covered against flies and dust.** Germs causing diarrhoea will be killed or inactivated when water begins boiling rapidly, or when it is chlorinated. If the water is very cloudy it should be filtered before chlorination.
4. **Keep drinking water in a clean container.** Be sure hands do not touch the water inside. Cover the container to keep water free from insects and dust. Clean the container and change the water regularly.
5. **Always wash hands with water and soap or ash** before preparing food, eating or feeding little children, and after defecating or handling the waste of children or people who are sick.

Disaster Management Teams need to undertake the following measures to ensure safe water use in their community

1. Remove mud and rubbish from around the well
2. Check to see that water easily drains away from the pump into drain pits or gardens
3. Check the fences around the well/ponds to keep animals away
4. Keep children from playing around wells
5. Check to see that the tube wells are working
6. Replace worn-out parts
7. Educate community in ways of making and keeping water safe. They can motivate people to keep the community water supply safe and make their environment a nicer place to live.

Ways to make drinking water safer

“Boiling and chlorination are the best way to make water safe”

Boiling

- Germs which cause diarrhoea and other diseases are killed or inactivated by boiling the water strongly for one minute.
- After boiling, store water in clean, covered containers, away from dirt and germs.
- Dirty hands make boiled water dirty again. Use a dipper to take water from the container

Chlorination

Chlorination is the mixing of chemical called chlorine with water, in order to disinfect the water. Health workers usually chlorinate drinking water sources. But it is essential for people whose water is not safe to chlorinate the water they need. Products for chlorinating water are available in nearly every area with the Health Department. It may be in the form of tablets (halogen) or as a powder (bleaching powder). Whatever kind of product you use, be careful to follow instructions on how to use it.

Steps for disinfecting wells

- Use 2 match box level (20 gms) of bleaching powder for every 3 feet of water (depth and diameter)
- For large wells measure the depth of the water column by lowering a stone tied to a dry rope in the well. The length of rope in meters which gets wet will give the depth of the well. Measure the diameter of well in meters. The volume of water in the well is calculated by using the formula given below:

$$\text{Volume in liters} = \frac{3.14 \times d^2 \times h \times 1000}{4}$$

d = diameter of well and h = depth of water in meters

- Roughly 2.5 gms of good quality bleaching powder are required to disinfect 1000 liters of water.
- The required quantity of bleaching powder is placed in a bucket with not more than 100 gms in one bucket. If the volume of water is more, use two or more buckets.
- Make a paste by adding one litre of water in it. More water is added till the bucket is nearly three-fourths full. Then stir the contents with a rod or wooden stick and allow to sediment for 15 minutes when lime settles down. The supernatant solution which is chlorine solution is transferred to another bucket and the sediment is discarded. This sediment should not be poured into the well as it will increase the hardness of the well water.
- Wait for 1 hour before using the water from the well. It is best to disinfect the well at night and use the water next morning
- Disinfect the well twice a week. In case of outbreak of diarrhoea chlorinate/disinfect the well everyday

If you are not getting water from disinfected well or other safe source, use 1 halogen tablet (4mg) to purify 1 liter of water. Wait for 30 minutes before using the water

Latrines

In rural areas and urban slums where latrines are not used people defecate in open areas and many a times close to water sources (rivers, ponds etc.). Children defecate all over the place! Flies feast on faeces and then land on our food. We have to build latrines and use them properly to keep flies away from human faeces. Use of Latrine brings down considerably water contamination. This will protect drinking and bathing water from faeces causing diarrhoea, dysentery, worms, cholera and typhoid bilharzia.

Latrines are the best place for defecation

- Using latrines keeps the village clean and safe from many diseases.
- Latrines must be at-least fifty feet away from any water source, latrine too close to wells or water sources will pollute them.
- Always remember to wash hands with soap and water or ash after defecation.
- When properly used, latrines provide privacy and many health advantages.
- Keep soap, ash and clean water near the latrine to wash hands after use
- Young children often do not use latrine. Clean them well after defecation and drop their faeces down the latrine. Teach them how to use the latrine.
- While working in the fields or away from home when it is not always possible to use a latrine, bury the faeces with soil to keep flies and animals away.

Unit 2: Coping with some common health problems

Diarrhoea

Diarrhoea is loose watery faeces. Someone who has three or more loose faeces in a day has diarrhoea. Diarrhoea is caused by germs from faeces entering the mouth. These germs can be spread by dirty fingers, flies, food and faeces. Dirty utensils and babies' bottles increase the risk of getting diarrhoea.

Why diarrhoea is so dangerous

Diarrhoea is dangerous to both children and adults, but it is especially dangerous for children. Many children in our country die from diarrhoea because they lose too much liquid from their bodies. When a child loses water with diarrhoea, the child begins to dry up, like a plant does when it has no water. This drying up happens especially quickly in young children who have diarrhoea.

The second reason why diarrhoea can be very dangerous is that some people believe that we should stop feeding, and particularly stop breast-feeding, children with diarrhoea.

Reducing the risk of diarrhoea

Four important ways of avoiding diarrhoea:

1. Keep food and water clean

Use the cleanest water possible for drinking. It is very important to keep food and water clean, covered and away from flies. Always wash hands before preparing or eating food. If possible food should be thoroughly cooked, and prepared just before eating.

2. Use latrines and keep them clean

Children and adults should use latrines, and should quickly clear up the faeces of young children and put them in a latrine.

3. Breast-feed

Breast-feeding can reduce the risk of children getting diarrhoea and other illnesses. Give only breast-milk for the first four to six months of life and continue to breastfeed for at least two years.

4. Immunize children against measles

There is no vaccine to prevent ordinary diarrhoea, but because measles often leads to serious diarrhoea, it is very important to immunize children against measles and other common childhood diseases.

What to do when a child has diarrhoea

There are **three important rules** to remember when looking after a child with diarrhoea

Rule 1: Give a child with diarrhoea plenty of liquids to drink

Rule 1 is to give the child more fluids than usual. Diarrhoea can cause death by draining liquid from a person's body. You must replace the fluids and energy washed out of your child by diarrhoea.

Give any of the following fluids:

- Breast milk (you must continue breast-feeding when your baby has diarrhoea)
- Oral Rehydration Salts
- Cooked cereal
- Plain water, preferably boiled and cooled
- Food-based drinks, such as soup, rice water and yoghurt
- Fresh fruit juice
- Coconut water (from a young coconut)

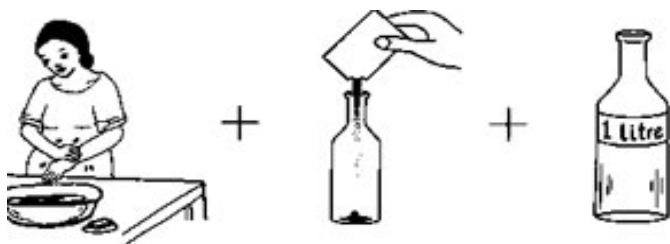
Do not give soft drinks and sweetened fruit drinks. If milk made with powder or animal milk has to be used, give it to the child from a cup instead of a bottle. Always use the cleanest water available. "Water from open wells, springs and rivers should be brought to a boil or chlorinated and preferably filtered and covered before use.

Oral Rehydration Salts (ORS)

These are available at the Anganwadi, Sub centers or PHCs

Method for mixing oral rehydration salts (ORS):

- Wash your hands.
- Measure 1 liter, of clean drinking water (boiled and cooled if possible) into a clean container.
- Pour all the powder from one packet into the water and mix well until the powder has completely dissolved. Give to the child to drink.



After each loose stool give the following amount of ORS:

- A child of less than 24 months - Half a cup
- A child of between 2 and 10 years - One cup
- A child of 10 years or more - As much as wanted

These drinks should be given until the diarrhoea has stopped. This usually takes from three to five days.

If the child vomits, wait for ten minutes and then begin again, giving the liquid to the child, in small sips at a time.

Do not mix the ORS with liquids such as milk, soup, fruit juice or soft drinks - only mix them with clean water.

Rule 2: A child with diarrhoea needs food

While the child is sick

It is important to feed a sick child. Some mothers think that a child with diarrhoea needs to stop eating. This is not true. A sick child should be encouraged to drink clean water and other liquids and to eat nutritious food.

Continue to breast-feed frequently. If children are already taking solid or semi-solid food make sure that they get all the different kinds of food that they need.

These children need soft well-mashed mixtures of the staple food and, if possible, pulses, vegetables, and meat or fish. Remember always to add some fat or oil. Fresh fruit juice or mashed banana provides potassium. Offer food at least six times a day.

Rule 3: Trained help is needed if the diarrhoea is more serious than usual

“Rule 3 is that we should take children to the health worker if they do not get better or if they show:

- Marked thirst
- Many watery stools

- Blood in the stools
- Fever
- Eating or drinking poorly
- Repeated vomiting

Unit 4: Health risks related to stagnant water and mosquito breeding

Pools of standing or slow-flowing water provide a breeding ground for many insects, including mosquitoes that can transmit diseases. Different types of mosquitoes transmit different diseases, and they will also breed in different types of water collections. Some of the mosquito-borne diseases are malaria, Filariasis, dengue and Japanese encephalitis.

Puddles and rubbish near houses, old containers lying around fill up with water and provide breeding sites for mosquitoes.

Filling in puddles, unblocking drains, and cleaning up rubbish and old containers, will help in getting rid of most of the mosquitoes, cutting grass around houses will also reduce mosquitoes as they rest on tall grasses. Rats and snakes also hide in the grass, so it is a good idea to keep it cut short.

Important measures for prevention of mosquito bites:

- Personal protection measures like use of insecticide impregnated nets
- Use of mosquito repellents to re-inforce personal protection using
- spraying of DDT, fumigation of houses with neem leaves
- Do not let water collect near houses
- Seek Medical care if you have a high fever and think you may have malaria.
- Treatment is with Chloroquine tablets, injections are not better than tablets for malaria. They do not work more quickly."

In areas where malaria is a big problem, young children (under five years old) should be treated with an anti-malaria drug within 12-24 hours of first having a fever. All pregnant women should take chloroquine tablets regularly. one tablet weekly from the third month of pregnancy till four weeks after delivery.

Unit 3: HIV and AIDS

HIV stands for Human Immunodeficiency Virus. This is the virus which causes people to get AIDS.

AIDS stands for Acquired Immunodeficiency Syndrome

What is HIV?

HIV is a very small germ called a virus. HIV makes the body go weak and less able to fight sickness. People with HIV in their body go on to become sick with AIDS.

How HIV is spread

HIV is found in the blood and in the sexual fluids (semen in men and vaginal secretions in women)

This means that HIV is spread in three main ways:

1. Sex

Most people get HIV from having sex with someone who already has HIV.

2. From infected blood

People get HIV when HIV infected blood enters their blood. This infected blood can come from a blood transfusion. It can also come from a needle or a blade that has been used on a person with HIV and not sterilized afterwards.

3. Mothers to babies

Women with HIV can pass it on to their babies. The baby becomes infected while in the mother's womb or as it is being born. There is also some risk of transmission through breast milk. But breast-feeding is recommended even if the mother has HIV, unless your health worker gives you special reasons not to do so. Breast milk is almost always the best food for babies.

HIV is not spread by

- Sharing food, touching, hugging, shaking hands, crying, sitting close to other people or holding other people in normal ways
- You cannot give or get HIV by sharing combs, sheets, towels or clothes.
- Sharing toilets or latrines is also safe.
- HIV also does not spread by the bite of mosquitoes, bedbugs or any other insect or animal

How HIV infection can be prevented

Three most important ways for prevention of HIV transmission

1. Do not have sex until you get married and then stay faithful to that partner.
2. If you know that you are uninfected and are already sexually active, have sex only with a mutually faithful partner who you know to be uninfected.
3. In all other situations use a condom during sex.

Other ways of keeping safe are:

4. Women with HIV should seek advice before getting pregnant because they may pass the HIV to the baby.
5. In case of a need for blood transfusion, insist on having blood which has been tested for HIV
6. When you cannot avoid skin-piercing instruments like blades, needles and syringes, insist on having sterilized instruments.
7. Do not share razor blades, because they might come into contact with cut skin.

How can you know if we have contracted the virus?

Most people with HIV feel healthy at first, for months or even years.

They do not know that they have HIV. If you are healthy the only way to know whether you have HIV is to have a special blood test.

It is important for someone to explain about the test before you take it and to make sure someone is there to talk to after the test.

Caring for people with AIDS

People with HIV or AIDS need support from family members, friends and neighbors. Take some simple precautions like covering any cuts or wounds you or the HIV positive person may have with waterproof plasters. Keep the home very clean. Be careful with any bloodstained clothes or sheets or other articles. Wash them with plenty of soap and water and hang them to dry. The HIV germ cannot survive exposure to sunshine or dryness. Make sure that they get medical help, that they have plenty of nutritious food and drink, and that they get enough rest and relaxation.

Unit 5: Heat Stroke

Heat stroke is the most severe form of heat illness and is a life-threatening emergency. It is the result of long, extreme exposure to the sun, in which a person does not sweat enough to lower body temperature. Most susceptible are the elderly, infants, persons who work outdoors and those suffering from Diabetes, heart problems and anybody with poor general health are .

What causes heat stroke?

Our bodies produce a tremendous amount of internal heat and we normally cool ourselves by sweating and radiating heat through the skin. However, in certain circumstances, such as extreme heat, high humidity or vigorous activity in the hot sun, this cooling system may begin to fail, allowing heat to build up to dangerous levels.

If a person becomes dehydrated and can not sweat enough to cool their body, their internal temperature may rise to dangerously high levels, causing heat stroke.

How can heat stroke be prevented?

There are precautions that can help protect you against the adverse effects of heat stroke. These include:

- Drink plenty of fluids during outdoor activities, especially on hot days. avoid tea, coffee, soda and alcohol as these can lead to dehydration.
- Wear lightweight, loose-fitting clothing in light colors.
- Schedule vigorous activity and sports for cooler times of the day (morning and evening).

- Protect yourself from the sun by wearing a hat, sunglasses and using an umbrella.
- During outdoor activities, take frequent drink breaks.
- Try to spend as much time indoors as possible on very hot and humid days.

Unit 6: 10 golden rules for safe food preparation and handling

1. **Cook food thoroughly**
2. ***Eat cooked food as soon as possible*** Cook food thoroughly to reduce the risk of germs and eat it straight away - germs can invade food very quickly.
3. ***Keep containers and work areas clean*** Wash equipment and dishes before making meals. Protect them from flies, insects and dust.
4. **Avoid contact between raw foods and cooked foods.** Safely cooked food can become contaminated through even the slightest contact with raw food.
5. **Store cooked foods carefully** If you must prepare foods in advance or want to keep leftovers, be sure to store them under either hot or cool (refrigerator) conditions. *Foods for infants should preferably not be stored at all.*
6. **Reheat cooked foods thoroughly,** This is your best protection against microbes that may have developed during storage (proper storage slows down microbial growth but does not kill the organisms). Once again, thorough reheating means that all parts of the food must reach at least 70 °C.
7. **Wash hands repeatedly,** Wash hands thoroughly before you start preparing food and after every interruption - especially if you have to change the baby or have been to the toilet. After preparing raw foods such as fish, meat, or poultry, wash again before you start handling other foods. And if you have an infection on your hand, be sure to bandage or cover it before preparing food. Remember, too, that household pets - dogs, cats and birds - often harbour dangerous pathogens that can pass from your hands into food.
8. **Protect foods from insects, rodents, and other animals-**Animals frequently carry pathogenic microorganisms which cause food-borne disease. Storing foods in closed containers is your best protection.
9. **Use safe water-**Safe water is just as important for food preparation as for drinking. If you have any doubts about the water supply, boil water before adding it to food. Be especially careful with any water used to prepare an infant's meal.
10. **Choose foods processed for safety** While many foods, such as fruits and vegetables, are best in their natural state, others simply are not safe unless they have been processed. For example, always buy pasteurized as opposed to raw milk.

SEARCH AND RESCUE

Search and rescue is a technical activity rendered by a group of specially trained personnel, who rescue and attend to the casualties under adverse conditions, where life is at threat. Search and rescue is organized in close cooperation with the community and in a team approach. The search and rescue activities are undertaken in two ways;

1. **Community Local Rescuers:** With adequate safety measures, rescue immediately after any natural calamities such as cyclone , flood, earthquake and fire in a community.
2. **Outside Community Resources:** Circumstances where the situation is grave and the local rescuers do not have required efficiency and equipments, then specialist assistance from outside the community is required.

Rescuers to immediately take up; the rescue activities after a cyclone, flood, earthquake and fire where people might be trapped by fallen debris and in need to be rescued without delay. The community rescuers shall have to be in readiness to respond quickly, when a cyclone is likely to strike .The rescuers efficiency level to be maintained thorough practice and demonstrations / mock-drills during the non-disaster period. The rescue team should undergo standard training from time to time.

1.1 Objectives;

- To rescue the survivors trapped under the debris, from the damaged buildings or from a cyclonic storm surge, flood, earthquake and fire.
- To provide First Aid services to the trapped survivors and to dispatch them for medical care.
- To take immediate necessary actions, as necessary, for temporary support and protection to endangered collapsed buildings to structures.
- To hand-over, recover and dispose-off the bodies of the deceased.
- To train, demonstrate and raise awareness on how to use the local materials for self-rescue amongst the community people.

1.2 Team Composition.

Physically and Psychologically sound volunteers male and female, having demonstrated ability, capacity and willingness to work in an emergency, could constitute a rescue team.

Volunteers, of both the sex, above 18 years of age, with a minimum education level to read and write in local language.

Preference would be given to ex-military or army personnel and artisans from the village or from the locality.

It is essential that each safe shelter form a rescue group, comprising of 8 members, out of which a minimum of 2 members should be skilled persons. The members should be from the safe shelter, community and from the periphery villages.

Team leader:	1
Skilled persons:	2
Members:	5

The members should have interest to participate in the training courses on search and rescue organised by the Government, Civil Society Organisation or any other NGOs.

1.3 Duties of the Rescuer

ASSESSMENT:

Proper assessment saves time and improves better performance. Collect information on the extent of; the damage, approach to the damaged area, particulars of the damage, and if any further damage is likely to occur. The assessment can be done in two methods.

INFORMATION:

Information provided by the local leaders or the group leader or from the Disaster Preparedness Committee is important.

OBSERVATION:

Follow the 3 key principles during the survey or assessment

- I. **LOOK:** See physically the incidents and make a thorough visual inspection.
- II. **LISTEN:** Listen to all sources of information from the community, from the people, Government records etc. Assess the community data regarding people in danger.
- III. **FEEL:** Feel convinced regarding the facts, the gravity of the dangers and your own capacity to respond.

1.4 Plan

Rescue is a team effort that needs coordination and planning amongst the members for an optimum response operation. After the assessment, the Rescue team would be in a position to adequately plan the Rescue Operation based on the following details and specifications;

Manpower
Equipments
Methods

1.5 Rescue Stages

Stage-1

Surface Causality (Emergency Rescue)

To locate the surface casualty the rescue is conducted from the outer-edges of the damaged area and rescued shall be provided First Aid services. In case the rescued is more severely injured, after providing the First Aid services, dispatch as quickly as possible to the nearest hospital for medical care.

Stage-II

Search in Slightly Damaged Buildings (Immediate Rescue)

The rescue team should move towards the slightly damaged buildings after responding to the surface casualty. It might happen that some persons trapped can be contacted but cannot be reached easily. In such events, before entering to the damaged building or house, a careful analysis of the methods best suited to safely rescue the trapped is to be made. The team leader has to take proper decisions without risking the lives of the rescuers or the injured. Safety at all points is to be ensured. The same procedures shall be followed in the case of the trapped people or cyclone/flood -marooned people.

Stage-III

Search of Possible Survival Points (Specialized Rescue)

Any chances of a person being trapped or injured are to be searched at all possible places and all options. The rescue team should try with all means to rescue with the appropriate method. Consider safety as top priority.

Stage-IV

Selected Debris Clearance (Specialized Rescue)

The rescue team should search until all the persons are accounted for and identities are ascertained.

Stage-IV

General Debris Clearance (Specialized Rescue)

Clear up the debris and reach to the trapped persons, when all possible ways of contacting the trapped persons has failed.

Specialized Rescue Teams should preferably carry out the last three stages.

EMERGENCY RESCUE

Sometimes rescue materials are not available to the rescue team at site in emergency situations. There are various other methods, which could be useful for rescue. Such methods are known as, “Emergency Methods of Rescue”. The adequate methods of rescue is to be determined depending upon the nature of the casualty, the nature of the injuries and the position in which the casualty is found.

2.1 Rescues with One Rescuer

2.1.1. Human Crutch.

The rescuer acts as crutch to the injured. This method is used when the casualty is in a position to help them. The rescuer stands and assists the injured to place their arm around the shoulder. The rescuer grasps it with the hand. At the same time, the rescued place the other hand around the injured person’s waist and assist the person to move. This is called “Human Crutch”.

2.1.2 Pick-a-back

This method is applicable only when the casualty is conscious, without any injury but not able to walk. The rescuer lifts the injured person onto his/her back. The victim holds on with his legs and arms around the waist and neck of the rescuer. The rescuer passes both hands behind and back or under the knees and supports the injured person. This is known as “Pick-a-Back” method.

2.1.3. Pick-a-Back (Reverse)

This method is required when the casualty is conscious with an injury such as a burn on the belly or chest, wound on the neck or face (upper part of the body). The rescuer supports the patient as leans backward against the rescuer. The rescuer passes both hands backwards and grips around the waist of the injured person. The rescuer leans forward and lifts the injured person off their feet and upon the rescuer’s back. This method is known as the “Pick-a-Back (Reverse).

2.1.4. Fireman’s Lift.

“Fireman’s Lift” is a nine-step method to lift the casualty and carry, If the casualty is unconscious but without injury to the body. It is an easy method for a single rescuer to carry the casualty down from the higher elevated areas or bring the casualty up from the basement via upper stairs and ladders also.

- a. If the casualty is laying on his / her back, the rescuer kneels on one knee.
- b. The rescuer turns the casualty on his/ her back gently, supporting the face of the casualty with one hand and the forearm of the casualty with other.
- c. The rescuer then puts his/ her hands underneath the armpits of the casualty and lifts the chest of the injured, first onto the rescuer’s knees.

- d. The rescuer then gradually lifts the casualty up to a kneeling position of the casualty.
- e. The hands of the rescuer are then passed the casualty is lifted on to their feet around the body of the casualty.
- f. The casualty is lifted on to their feet. The body of the casualty is to be supported against the body of the rescuer.
- g. The rescuer then faces the casualty sideways and holds any wrist of the casualty, passed over the shoulder of the rescuer, with the other hand.
- h. The rescuer then bends down and picks up the casualty on to the shoulder, one hand of the rescuer now passes in between the legs and the other hand holds the wrist of the casualty.
- i. The rescuer now lifts the casualty and transports.

2.1.5. Rescue Crawl

This method is applicable when the casualty is found unconscious, in a smoke filled room, or in a confined place limiting movement or the casualty is too heavy.

Steps:

Gently turn the casualty on their back and tie their wrist together using a triangular bandage or handkerchief, napkin etc.

The rescuer kneels astride the casualty facing their head, and place their head through the loop formed by their arms. In one palm hold and neck and head of the casualty to avoid sweating or further injury.

The rescuer crawls forwards on; their hands and knees and drags the casualty forwards along the ground.

2.1.6. Removal Downstairs:

This method is applicable when a casualty is found on the up-stair floors but not in position to be transferred via the staircase. The rescue of the casualty has to be done with specific procedures as detailed below;

To move a casualty downstairs, lay him/her on his/her back and tie his/her wrists together. With his /her head pointing downwards on the stairs, the rescuer will keep their arm under his /her armpits so; that his /her head rest on the rescuers arm, and ease him/ her downstairs.

2.1.7. Bowline Drag

This method of rescue is useful, when a casualty is found in a narrow space/ confined area. Turn the casualty onto his /her back and tie his/her wrist together using a triangular bandage, handkerchief, napkin etc.

- I. Use a sash cord of 15 feet (4.5mtrs) length or 40 ft. (12mtrs) lashing line, tie a Bowline at each end to form the loops.
- II. Place one loop over the casualty's chest and under his /her armpits, with the knot resting under his/her head so that it will keep his /her head off the ground while he /she is being pulled.

- III. The rescuer will place the other loop over their shoulders and under the armpits, forming a harness with the knot in line with the center of the back or between the shoulders.
- IV. The rescuer drags the casualty out by crawling on their hands and knees.

2.1.8. Toe Drag

This method of rescue is required when a casualty is found in a narrow place where the Rescuer finds difficulty enters.

The rescuer sits down at the casualty's head-side and places his/her feet under the casualty's armpits.

With both hands free, the rescuer pulls himself/herself back and at the same time drags the casualty with his / her feet.

2.2 More than Two Rescuers

These methods are suitable when two or more rescuers are available for rescue.

2.2.1 Two-Handed Seat

Two rescuers face one another on either side of the casualty, bend down, and pass his/her arm under the casualty's back, below the shoulders, and grip his/her clothing.

The casualty's back is raised and the rescuers slip their other arms under the middle of his/her thighs holding their hands with a handgrip. The casualty is lifted and the rescuers move with short pace.

2.2.2. Three-Handed Seat

This method is used for carrying a casualty who is conscious, heavier or might have bleeding or injured to one of the legs.

1. Two rescuers face each other and keep their hands to form a three-handed seat as shown in the picture.
2. One of the rescuers provides support and holds the injured person's limb in the free hand.
3. The rescuers support the casualty to sit on; the three-handed seat. The victim is carried and the rescuers supports his/ her injured limb.

2.2.3. Four-handed Seat

This method is useful when the victim is heavy but without any injury.

1. Two rescuers face each other and keep their hands as positioned in the picture to form a four handed seat.
2. The rescuers support the casualty to sit onto the so formed seat and the casualty puts one arm or both arms around the necks of the rescuers. The rescuers transfer the causality with short paces.

2.2.4. Fore and Aft Method

In this method a casualty who has an injury in the abdomen and is unable to move can be rescued. The rescuers place the casualty onto his /her back. One rescuer raises and holds the casualty through the shoulders passing his/her hands under the arms from behind and clasping them in front of the chest as shown in the picture. The other rescuer takes one leg under each arm and the casualty is transported.

2.2.5. Two-Person Human Crutch

This method can be used when the victim is injured conscious and can help, but is unable to walk.

- ❑ Rescuers take up their positions either side of the casualty.
- ❑ Place the victim's arms round the shoulders and grasp his/her wrists with the other hands.
- ❑ Pass the arms round the victim's waist, grasping the clothing at the hip and assisting him/her as crutches.

3.1. Clothes Lift

This method is applicable when the casualty is found in a condition that he /she cannot move himself /herself nor any equipment is available with the rescuers for transportation of the casualty.

Four rescuers are required for this lift. Two rescuers kneel on either side of the casualty, at the shoulders and hips, and turn him / her onto his / her back.

The rescuers hold the casualty's clothing and the collar of person's shirt or dress behind the neck with one hand, and with the other hand holds the clothing at his her side.

The rescuers will hold clothing at the casualty at the hips with one hand, and at the same time control the casualty's arms. With the other hand they hold the casualty's trousers, pant or dress, thus supporting his /her legs. Now the rescuers can move with short places.

3.2. Blanket Lift

This method is applicable when the rescuers do not have a stretcher to carry the casualty who is found in a grave condition and is to be shifted in a flat position.

- ❑ In line with the casualty, place the blanket lengthwise on; the ground and roll up half of its width. Carefully turn the victim onto their side.
- ❑ Place the rolled-up portion of the blanket close to the victim, and gently place onto their back upon the unrolled portion of the blanket.
- ❑ Unroll the rolled portion accordingly so that the victim lies in the center of the blanket.
- ❑ Roll up the two edges of the blanket against the casualty's body, hold by two rescuers on either side of the casualty and support the head shoulders, hips and legs.

RESCUE FROM DAMAGED BUILDING

Precautions Before Entering the Damaged Building;

- Observe the construction of the building and collapsed portions
- Check whether the walls need any supporting.
- Be careful for possible hazards, which may occur from the exposed household equipment.
- Precautions when Entering the Damaged building
- Use a helmet
- Work in pairs
- Listen for possible sounds
- Keep calling
- Do not touch or disturb any damaged walls or blocked doors which are broken and /or projecting.
- Treat all necked wires as live wire

Precautions Whilst Moving Inside the Damaged Building

- Do not ignite fire.
- Keep close to the walls
- Be careful in all of your movements.
- Do not pull anything projecting out from the collapsed portions.

SEARCH AND RESCUE

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Rescuers to immediately take up, the rescue activities after a cyclone, flood, fire and earthquake where people might be trapped by fallen debris and in need to be rescued without delay. The community rescuers shall have to be in readiness to respond quickly, when a cyclone or flood is likely to strike. The rescue or wet ropes. Single sheet bend is formed by making a loop in the thicker one of the two ropes, hold the rope in one hand, enter the thinner rope upwards through the loop forming a half hitch around the two thickness or rope.

4.1. Double Sheet-Bend

This is required to join two ropes of different materials or when there is a great difference in the sizes of the ropes. It is formed some what like the Single Sheet-Bend, except that after having made the Half Hitch with the thinner rope, continue turning its short end to make another round turn around the two thickness of the thickness of the thicker drops and towards the bight.

4.1. Chair Knot

It is useful for rescue, and then recovers the rope very easily. The chair knot is used to rescue a sling in which a person may be lowered from heights. Grasping the rope near its center in the left hand palm downward, right hand palm upwards forms it. Turn the left palm upwards forming a loop (anti-clock wise) and turn; the right hand palm down forming a loop. Pass the standing part through the loops of the opposite hand pulling them through, thus forming two loops with a knot in the center adjust the loop, and make a half hitch on each loop. The Chair knot is prepared.

This is useful to recover the casualty from under the debris or from basement, where the rescuer has to crawl to the casualty and back again. Take the running end of the rope in one hand, pull it across the upturned palm of the left hand, through the fingers of the left hand, forming a loop to required size, pass the running end, which is; held in the right hand, up through the loop. Tighten the two ends. It can also be converted into a running Bow-line by simply passing the knot under the standing part. A running baseline can be put on a ring bold or object to drag an object floating debris, animals or human body standing from a remote place.

4.2. Lashings

Lashing means to “tie something firmly to something else”. Lashing is mainly used to secure two or more poles together. There are four common types of lashings.

4.2.1 Square Lashing

This is used for lashing together two poles that touch and cross at right angles. Put a clove hitch around the spar or leg and below the crosshead or ledger. Marry the running end to the standing parts tie up and around both the poles as shown in the figure. Repeat this circuit three to four times, drawing the rope as tightly as possible. Then take three to four flapping turns around the whole lashing between the poles. Tighten off with a clove hitch on the vertical pole above the horizontal.

4.2.2. Diagonal Lashing

This is used for lashing two poles where they cross at an angle and the poles are likely to spring apart when put under load or strain. Put a hitch around both the poles horizontally.

Then take four vertical turns and draw them tight. Then take four horizontal runs and draw them tight. To finish put four turns over the lashing and between the poles. Draw them tight and end with a clove hitch.

4.2.3. Figure of Eight Lashings

This is used for lashing three poles together to form a tripod's before lashing, insert spacers between the poles. Marry the ends and working upwards continue lashing in the figure of eight fashion with 6-8 turns. Add two to three turns between each pole and round the lashing. Finish with a clove hitch above and on the opposite to the starting pole.

4.2.4. Round lashing

This is used for lashing two poles together, when they are parallel to each other to form a sheer leg. This is also called sheer lashing. Before starting, insert spacers between the poles. Put a clove hitch around one pole and marry the ends and continue with 6-8 close turns around both; the poles, going upwards Add 2 or 3 turns around both the poles going upwards. Add 2 or 3 turns around the lashing and between the poles. End with a clove hitch above and on the opposite pole to the starting pole.

STRETCHER AND CASUALTY TRANSPORTATION

Wounded casualty is to be transported with utmost safety to avoid further risk. It may happen that the trained rescuers have to rescue the casualties from a collapsed structure, to from a confined place, or on the uneven ground with obstacles. Different techniques are required for different ground conditions. The knowledge of First Aid Services and adequate transportation of the casualty is important for the rescuers. In case of shock or serious injuries, the patient needs warmth, which could be provided by using blankets.

5.1. Standard Ambulance Stretcher

The standard stretchers used in the Ambulances are 230 cm pole length, 180 cms canvas 57 cms width, and 15cms height from the ground and weight about 14 kgs.

5.2. Improvised Stretcher Preparation

Very often the rescuers do not find a standard stretcher in rural areas or during a big emergency, in such situations stretchers could be improvised from the locally available materials.

Collect two or three shirts or thick materials. Inserted two equal sized bamboo poles in between the shirts. Keep both the poles separated by tying both sides with short pieces of bamboo. The stretcher is prepared.

Collect two paddy/sugar sacks, make small holes in both edges (vertical) of the sacks and insert two poles. The stretcher is prepared.

Wooden planks, doors covered with straw or clothes can be used as stretchers.

The charpai (rope bed) can be used as a stretcher.

5.3. Stretcher Carriage

Between two rod four bearers of equal height can carry a stretcher. The stretcher could be carried by hand or on the shoulders. Two bearers are sufficient on a level ground and without obstacles.

5.4. Four Stretcher Bearer Loading

Keep the stretcher at about 1mtr. Distance from the casualty. Three rescuers on one side and one on the other side will lift the patient onto the knees of the three rescuers side. The 4th rescuer will prepare the stretcher with the blanket, and place the stretcher under the patient. Then all four rescuers will lower the casualty onto the stretcher. The rescuers will all simultaneously lift the stretcher at one to avoid patient imbalance.

5.5. Two Stretcher Bearer Loading

Two bearers will prepare the stretcher and place it parallel to the casualty. Both the bearers stand at the hand and the foot of the casualty, together they lift and place the patient.

5.6. Securing the Casualty to a Stretcher

A casualty has no danger of slipping upward to downward on a level ground when carried horizontally on a stretcher, however the casualty needs securing to the stretcher to prevent from slipping in more uneven terrains. It may happen that the casualty needs to be carried by a stretcher from the basement, lowered from an upper floor, or carried over rough ground. Where the bearers may stumble and the casualty may stumble and the casualty into the stretcher. Tie the right hand side of the stretcher handle with clove hitch and pass the rope of about inches and take a round over the chest of the casualty and under the stretcher with Half-Hitch knot. The second and third round is made over the body. The third round should be placed below the knees. Secure the feet and the ankles with rope. Tie the end with the handle. The casualty is secured to the stretcher.

Precautions:

The lashing should not be secured so tightly around the casualty as to hurt the injured part or to interfere with their breathing.

The hitch around the feet and ankles must be sufficiently tight to hold the casualty firmly, when the stretcher is held up vertically.

WATER RESCUE

Flood and cyclone disasters take thousands of human lives every year; rescue from water related disasters is one of the important challenges for the rescuer. The rescuers must be equipped with swimming and floating aids and should have adequate swimming capacity for rescuing the drowning casualty. The rescuers must have knowledge and practice of swimming in order not to risk himself /herself whilst rescuing the victims.

6.1. Use of life Jackets

Life Jackets in rescue are important for water rescue. A life jacket is a standard life saving equipment, which gives confidence to the rescuee that he /she is safe. The life jacket is made out of waterproof canvas and is filled with; fine cotton, weighing about 4 kgs equivalent 8.82 (pounds). Normally the life jacket is to be worn like a jacket, and has three tying ropes to secure the jacket.

Improvised Swimming and Floating Aids

Standard manufactured life jackets may not be available in rural areas or during an emergency, however swimming and floating aids could be improvised from the locally available materials.

6.2. Empty Tins and Jerricanes.

Steps for preparing floating equipment:

1. Collect 20 ltr. Capacity empty tins.
 2. Seal the openings of the empty tins.
 3. Collect two equal size 4 feet (120 cm) bamboo pieces.
 4. Place both the tins with a gap of 1.5 feet (45 cms) from each other or equal to the width of the chest of the rescuer.
 5. Tie the empty tins with the bamboo poles at two places with coconut fiber ropes by square lashing, and tighten as far as possible to prepare the floating aid .
 6. This can help to float a person in the water. The rescuer can use the device for water rescue also.
- Empty and airtight 15 ltr. Capacity Jerricanes also could be used as floating aids

6.3. Empty glass bottles

1. Collect 8 empty bottles of 750 ml capacity.
 2. Seal the openings of the bottles with polythene or waterproof materials to make them airtight
 3. Tie each bottle at two places at the bottom edge and at the neck edge by using clove hitch and thumb knots in a series to prepare the floating aid as shown in the picture
- This can help to float a person in the water.

6.2.1. Dry Coconuts

Collect dry coconuts. Continue adding the numbers of coconuts until, these can carry the weight of the rescuer. Tie the dried coconuts with coir fibbers to prepare the swimming aid.

This can help to float a person in the water.

6.2.2. Bamboo Bundles

Collect bamboo pieces of 1.5feet to 2 feet length (45 cms- 60 cms). Continue adding the numbers of the bamboo pieces until sufficient amount that can carry the weight of the rescuer. Tie the bamboo pieces with coir fibbers to prepare the swimming aid.

The swimming aid can help to float a person in the water.

6.2.3. Metal pitcher

Collect 2 metal pitchers. Cover the openings with polythene or any waterproofing materials

Place the two pitchers within a gap of 1.5d feet (0.5 mtr) or according to the width of the rescuer.

Tie the two pitchers with two bamboo pieces of 4 feet (120 cms) length with coconut fibber ropes and tighten as strong as possible.

The swimming aid is prepared. This can help to float a person in the water. The rescuer can use the device for water rescue also. This is also known as “ pot water wing”.

6.2.4. Motor Tubes

Collect good leak-proof motor tubes (Jeep, Truck, Car, Bus only). Fill up with air.

The swimming aid is prepared. This can help to float a person in the water. This also can be used for water rescue.

6.2.5. Raft

During flood or cyclones availability of boats for rescue is likely to be difficult. Rafts could be improvised from locally available materials and used for rescue and relief activities

Collect 4 good quality empty barrels of 200 ltrs capacity (Kerosene barrels). Seal the empty barrels to make watertight. Tie the empty watertight barrels with a bamboo frame as shown in the figure. Ensure the Raft is fixed properly with ropes and becomes compact.

8-10 persons with safety can be transported on one Raft.

Breast- Line (Life-Lines)

Water rescuers and lifeguards practice “Breast-line-Throw” for life saving. Breast-line-Throw is life saving skill. This can help and save the life of an individual who is drowning in water. This method has the additional advantage that the person who is throwing the

line will be standing either in a boat or on the ground, steadily able to rescue the individual who is drowning.

Rules of Breast-Line-Throwing:

Breast- Line should be a minimum of 40 to 60 feet long (16 mtrs to 20 mtrs), of 1.5 inch rope (3.5 cms) thickness. Breast- Line should be thrown in the same fashion as we do in case of a “ Discuss Through or Fishing Net”, the only difference being, that while doing a Breast-line throw we do not take a full circle but throw the rope by swinging the hands.

RESCUE EQUIPMENT

7.1. Personal Equipments for Rescuer

- Helmet
- Torch
- Life-line
- Gum-Boots
- Life-Jackets (Water Rescue)
- Whistle

7.2. Team Equipments for Rescuer

- Rope-3-inch (7 cms) diameter of 200 ft (61.5 mtrs)
- Lashing lines-1.5 inches (3.8cms) circumference of 40 ft (12.32 mtrs) length
- 6 Sash-cord-inch (2.54cms)
- Pulley blocks with different sheaves
- Ladder (Wood/Bamboo)
- Small cutting tools
- First Aid Box
- Life Buoy
- Crow Bar
- Hammer
- Stretcher
- Blanket

SAFETY TIPS

FLOODS

This guide lists simple things you and your family can do to stay safe and protect your property from floods.

Before flooding occurs.

- All your family members should know the safe route to nearest shelter/ raised pucca house.
- If your area is flood-prone, consider alternative building materials. Mud walls are more likely to be damaged during floods. You may consider making houses where the walls are made of local bricks up to the highest known flood level with cement pointing.
- Have an emergency kit on hand which includes a:
 - o A portable radio, torch and spare batteries;
 - o Stocks of fresh water, dry food (chura, mudi, gur, biscuits), kerosene, candle and matchboxes;
 - o Waterproof or polythene bags for clothing and valuables, an umbrella and bamboo stick (to protect from snake), salt and sugar.
 - o A first aid kit, manual and strong ropes for tying things

When you hear a flood warning or if flooding appears likely

- Tune to your local radio/TV for warnings and advice.
 - o Keep vigil on flood warning given by local authorities
 - o Don't give any importance to rumours and don't panic
 - o Keep dry food, drinking water and clothes ready
- Prepare to take bullock carts, other agricultural equipments, and domestic animals to safer places or to higher locations.
- Plan which indoor items you will raise or empty if water threatens to enter your house
- Check your emergency kit

During floods

Drink boiled water.

- Keep your food covered, don't take heavy meals.
- Use raw tea, rice-water, tender coconut-water, etc. during diarrhoea; contact your ANM/AWW for ORS and treatment.
- Do not let children remain on empty stomach.
- Use bleaching powder and lime to disinfect the surrounding.
- Help the officials/volunteers distributing relief materials.

If you need to evacuate

- Firstly pack warm clothing, essential medication, valuables, personal papers, etc. in waterproof bags, to be taken with your emergency kit.
- Take the emergency kit
- Inform the local volunteers (if available), the address of the place you are evacuating to.
- Raise furniture, clothing and valuables onto beds, tables and to the top of the roof (electrical items highest).
- Turn off power.
- Whether you leave or stay, put sandbags in the toilet bowl and over all laundry / bathroom drain-holes to prevent sewage back-flow.
- Lock your home and take recommended/known evacuation routes for your area.
- Do not get into water of unknown depth and current.

If you stay or on your return

- Stay tuned to local radio for updated advice.
- Do not allow children to play in, or near, flood waters.
- Avoid entering floodwaters. If you must, wear proper protection for your feet and check depth and current with a stick. Stay away from drains, culverts and water over knee-deep.
- Do not use electrical appliances, which have been in floodwater until checked for safety.
- Do not eat food, which has been in floodwaters.
- Boil tap water (in cities) until supplies have been declared safe. In case of rural areas, store tube well water in plastic jars or use halogen tablets before drinking.
- Be careful of snakes, snakebites are common during floods.

CYCLONE

SAFETY TIPS

Before the Cyclone Season

- Keep watch on weather and listen to radio or TV. Keep alert about the community warning systems – loudspeakers, bells, conches, drums or any traditional warning system.
- Get to know the nearest cyclone shelter / safe houses and the safest route to reach these shelters.
- Do not listen to rumours.
- Prepare an emergency kit containing:
 - o A portable radio, torch and spare batteries;
 - o Stocks dry food – Chura, Chhatua, Mudhi, gur, etc.
 - o Matches, fuel lamp, portable stove, cooking utensils, waterproof bags
 - o A first aid kit, manual, etc.
 - o Katuri, pliers, small saw, axe and plastic rope
- Check the roof and cover it with net or bamboo. Check the walls, pillars, doors and windows to see if they are secure. If not, repair those at the earliest. In case of tin roofs, check the condition of the tin and repair the loose points. Cover the mud walls with polythene or coconut leaves mats or straw mats on a bamboo frame. Bind each corner of the roof with a plastic rope in case of thatched roof.
- Trim dry tree branches, cut off the dead trees and clear the place/courtyard of all debris, including coconuts and tree branches.
- Clear your property of loose materials that could blow about and cause injury or damage during extreme winds.
- If your area is prone to storm surge, locate safe high ground or shelter.
- Keep important documents, passbook, etc. in a tight plastic bag and take it along with your emergency kits if you are evacuating.
- Identify the spot where you can dig holes to store food grains, seeds, etc. in polythene bags.
- Keep a list of emergency addresses and phone numbers on display. Know the contact telephone number of the government offices /agencies, which are responsible for search, rescue and relief operations in your area.

If you are living in an area where CBDP exercises have taken place, ensure:

- Vulnerability list and maps have been updated

- Cyclone drill including search & rescue, first aid training have taken place
- Stock of dry food, essential medicines and proper shelter materials maintained

Upon a cyclone warning

- Store loose items inside. Put extra agricultural products/ stock like paddy in plastic bags and store it by digging up a hole in the ground, preferably at a higher elevation and then cover it properly. Fill bins and plastic jars with drinking water.
- Keep clothing for protection, handy
- Prepare a list of assets and belongings of your house and give information to volunteers and other authorities about your near and dear ones.
- Fill fuel in your car/motorcycle and park it under a solid cover. Tie bullock carts, boats securely to strong posts in an area, which has a strong cover and away from trees. Fallen trees can smash boats and other assets.
- Close shutters or nail all windows. Secure doors. Stay indoors, with pets.
- Pack warm clothing, essential medications, valuables, papers, water, dry food and other valuables in waterproof bags, to be taken along with your emergency kit.
- Listen to your local radio / TV, local community warning system for further information.
- In case of warning of serious storm, move with your family to a strong pucca building. In case of warning of cyclones of severe intensity, evacuate the area with your family, precious items and documents and emergency kit. Take special care for children, elders, sick, pregnant women and lactating mothers in your family. Do not forget your emergency food stock, water and other emergency items. **GO TO THE NEAREST CYCLONE SHELTER.**

On warning of local evacuation

Based on predicted wind speeds and storm surge heights, evacuation may be necessary. Official advice may be given on local radio / TV or other means of communication regarding safe routes and when to move.

- Wear strong shoes or chappals and clothing for protection.
- Lock your home, switch off power, gas, water, and take your emergency kit.
- If evacuating to a distant place take valuable belonging, domestic animals, and leave early to avoid heavy traffic, flooding and wind hazards.
- If evacuating to a local shelter or higher grounds carry the emergency kit and minimum essential materials.

When the cyclone strikes

- Disconnect all electrical appliances and turn off gas.
- If the building starts crumbling, protect yourself with mattresses, rugs or blankets under a strong table or bench or hold on to a solid fixture (e.g. a water pipe)
- Listen to your transistor radio for updates and advice.
- Beware of the calm `eye'. If the wind suddenly drops, don't assume the cyclone is over; violent winds will soon resume from the opposite direction. Wait for the official **"all clear"**.
- If driving, stop – but well away from the sea and clear of trees, power lines and watercourses. Stay in the vehicle.

After the cyclone

- Do not go outside until officially advised it is safe.
- Check for gas leaks. Do not use electric appliances, if wet.
- Listen to local radio for official warnings and advice.
- If you have to evacuate, or did so earlier, do not return until advised. Use a recommended route for returning and do not rush.
- Be careful of snake bites and carry a stick or bamboo
- Beware of fallen power lines, damaged bridges, buildings and trees, and do not enter the floodwaters.
- Heed all warnings and do not go sightseeing.

EARTHQUAKES

SAFETY TIPS

Earthquakes usually give no warning at all.

Prepare your family

Before the earthquake

Now is the time to formulate a safety plan for you and your family. If you wait until the earth starts to shake, it may be too late. Consider the following safety measures:

- Always keep the following in a designated place: bottled drinking water, non-perishable food (chura, gur, etc), first-aid kit, torchlight and battery-operated radio with extra batteries.
- Teach family members how to turn off electricity, gas, etc.
- Identify places in the house that can provide cover during an earthquake.
- It may be easier to make long distance calls during an earthquake. Identify an out-of-town relative or friend as your family's emergency contact. If the family members get separated after the earthquake and are not able to contact each other, they should contact the designated relative/friend. The address and phone number of the contact person/relative should be with all the family members.

Safeguard your house

- Consider retrofitting your house with earthquake-safety measures. Reinforcing the foundation and frame could make your house quake resistant. You may consult a reputable contractor and follow building codes.
- Kutchha buildings can also be retrofitted and strengthened.

During quake

Earthquakes give no warning at all. Sometimes, a loud rumbling sound might signal its arrival a few seconds ahead of time. Those few seconds could give you a chance to move to a safer location. Here are some tips for keeping safe during a quake.

- Take cover. Go under a table or other sturdy furniture; kneel, sit, or stay close to the floor. Hold on to furniture legs for balance. Be prepared to move if your cover moves.
- If no sturdy cover is nearby, kneel or sit close to the floor next to a structurally sound interior wall. Place your hands on the floor for balance.
- Do not stand in doorways. Violent motion could cause doors to slam and cause serious injuries. You may also be hit by flying objects.
- Move away from windows, mirrors, bookcases and other unsecured heavy objects.
- If you are in bed, stay there and cover yourself with pillows and blankets
- Do not run outside if you are inside. Never use the lift.
- If you are living in a kutchha house, the best thing to do is to move to an open area where there are no trees, electric or telephone wires.

If outdoors:

- Move into the open, away from buildings, streetlights, and utility wires. Once in the open, stay there until the shaking stops.
- If your home is badly damaged, you will have to leave. Collect water, food, medicine, other essential items and important documents before leaving.
- Avoid places where there are loose electrical wires and do not touch metal objects that are in touch with the loose wires.
- Do not re-enter damaged buildings and stay away from badly damaged structures.

If in a moving vehicle:

Move to a clear area away from buildings, trees, overpasses, or utility wires, stop, and stay in the vehicle. Once the shaking has stopped, proceed with caution. Avoid bridges or ramps that might have been damaged by the quake.

After the quake

Here are a few things to keep in mind after an earthquake. The caution you display in the aftermath can be essential for your personal safety.

- Wear shoes/chappals to protect your feet from debris
- After the first tremor, be prepared for aftershocks. Though less intense, aftershocks cause additional damages and may bring down weakened structures. Aftershocks can occur in the first hours, days, weeks, or even months after the quake.
- Check for fire hazards and use torch lights instead of candles or lanterns.
- If the building you live in is in a good shape after the earthquake, stay inside and listen for radio advises. If you are not certain about the damage to your building, evacuate carefully. Do not touch downed power line.
- Help injured or trapped persons. Give first aid where appropriate. Do not move seriously injured persons unless they are in immediate danger of further injury. In such cases, call for help.
- Remember to help your neighbors who may require special assistance-infants, the elderly, and people with disabilities.
- Listen to a battery-operated radio for the latest emergency information.
- Stay out of damaged buildings.
- Return home only when authorities say it is safe. Clean up spilled medicines, bleaches or gasoline or other flammable liquids immediately. Leave the area if you smell gas or fumes from other chemicals. Open closet and cupboard doors cautiously.
- If you smell gas or hear hissing noise, open windows and quickly leave the building. Turn off the switch on the top of the gas cylinder.
- Look for electrical system damages - if you see sparks, broken wires, or if you smell burning of amber, turn off electricity at the main fuse box. If you have to step in water to get to the fuse box, call an electrician first for advice.
- Check for sewage and water lines damage. If you suspect sewage lines are damaged, avoid using the toilets. If water pipes are damaged, avoid using water from the tap.
- Use the telephone only for emergency calls.

- In case family members are separated from one another during an earthquake (a real possibility during the day when adults are at work and children are at school), develop a plan for reuniting after the disaster. Ask an out of state / district relative or friend to serve as the “family contact”. Make sure everyone in the family knows the name, address, and phone number(s) of the contact person (s).

LAND SLIDE

During a Landslide:

- Stay alert and awake. Many debris-flow fatalities occur when people are sleeping. Listen to a Weather Radio or portable, battery-powered radio or television for warnings of intense rainfall. Be aware that intense, short bursts of rain may be particularly dangerous, especially after longer periods of heavy rainfall and damp weather.
- If you are in areas susceptible to landslides and debris flows, consider leaving if it is safe to do so. Remember that driving during an intense storm can be hazardous. If you remain at home, move to a second story if possible. Staying out of the path of a landslide or debris flow saves lives.
- Listen for any unusual sounds that might indicate moving debris, such as trees cracking or boulders knocking together. A trickle of flowing or falling mud or debris may precede larger landslides. Moving debris can flow quickly and sometimes without warning.
- If you are near a stream or channel, be alert for any sudden increase or decrease in water flow and for a change from clear to muddy water. Such changes may indicate landslide activity upstream, so be prepared to move quickly. Don't delay! Save yourself, not your belongings.
- Be especially alert when driving. Embankments along roadsides are particularly susceptible to landslides. Watch the road for collapsed pavement, mud, fallen rocks, and other indications of possible debris flows.

What to Do if You Suspect Imminent Landslide Danger:

- Contact your local fire, police, or public works department. Local officials are the best persons able to assess potential danger.
- Inform affected neighbors. Your neighbors may not be aware of potential hazards. Advising them of a potential threat may help save lives. Help neighbors who may need assistance to evacuate.
- Evacuate. Getting out of the path of a landslide or debris flow is your best protection.

Media and Community Education Ideas:

- In an area prone to landslides, publish a special newspaper section with emergency information on landslides and debris flows. Localize the information by including the phone numbers of local emergency services offices, the Red Cross, and hospitals.
- Report on what city and county governments are doing to reduce the possibility of landslides. Interview local officials about local land- use zoning regulations.

- Interview local officials and major insurers. Find out if debris flow is covered by flood insurance policies and contact your local emergency management office to learn more about the program.
- Work with local emergency services to prepare special reports for people with mobility impairments on what to do if evacuation is ordered.
- Support your local government in efforts to develop and enforce land-use and building ordinances that regulate construction in areas susceptible to landslides and debris flows. Buildings should be located away from steep slopes, streams and rivers, intermittent-stream channels, and the mouths of mountain channels.

After the Landslide:

- Stay away from the slide area. There may be danger of additional slides.
- Check for injured and trapped persons near the slide, without entering the direct slide area. Direct rescuers to their locations.
- Help a neighbor who may require special assistance - infants, elderly people, and people with disabilities. Elderly people and people with disabilities may require additional assistance. People who care for them or who have large families may need additional assistance in emergency situations.
- Listen to local radio or television stations for the latest emergency information.
- Watch for flooding, which may occur after a landslide or debris flow. Floods sometimes follow landslides and debris flows because they may both be started by the same event.
- Look for and report broken utility lines to appropriate authorities. Reporting potential hazards will get the utilities turned off as quickly as possible, preventing further hazard and injury.
- Check the building foundation, chimney, and surrounding land for damage. Damage to foundations, chimneys, or surrounding land may help you assess the safety of the area.
- Replant damaged ground as soon as possible since erosion caused by loss of ground cover can lead to flash flooding.
- Seek the advice of a geotechnical expert for evaluating landslide hazards or designing corrective techniques to reduce landslide risk. A professional will be able to advise you of the best ways to prevent or reduce landslide risk, without creating further hazard.

Media and Community Education Ideas:

- In an area prone to landslides, publish a special newspaper section with emergency information on landslides and debris flows. Localize the information by including the

phone numbers of local emergency services offices, the American Red Cross chapter, and hospitals.

- Report on what city and county governments are doing to reduce the possibility of landslides. Interview local officials about local land- use zoning regulations.
- Interview local officials and major insurers regarding the National Flood Insurance Program. Find out if debris flow is covered by flood insurance policies from the National Flood Insurance Program and contact your local emergency management office to learn more about the program.
- Work with local emergency to prepare special reports for people with mobility impairments on what to do if evacuation is ordered.
- Support your local government in efforts to develop and enforce land-use and building ordinances that regulate construction in areas susceptible to landslides and debris flows. Buildings should be located away from steep slopes, streams and rivers, intermittent-stream channels, and the mouths of mountain channels.

Before a Landslide: How to Plan:

Develop a Family Disaster Plan. Please see the "[Family Disaster Plan](#)" section for general family planning information. Develop landslide-specific planning.

Learn about landslide risk in your area. Contact local officials, state geological surveys or departments of natural resources, and university departments of geology. Landslides occur where they have before, and in identifiable hazard locations. Ask for information on landslides in your area, specific information on areas vulnerable to landslides, and request a professional referral for a very detailed site analysis of your property, and corrective measures you can take, if necessary.

If you are at risk from landslides:

- Talk to your insurance agent.
- Develop an evacuation plan.
- Discuss landslides and debris flow with your family. Everyone should know what to do in case all family members are not together. Discussing disaster ahead of time helps reduce fear and lets everyone know how to respond during a landslide or debris flow.

FIRES-AWARENESS

BEFORE :

- The schools to be given license only after checking up its safety.
- The schools must have sufficient exit routes.
- Identify the fire hazards and where fires might start
- Teachers/school staff to have training in fire safety.
- Students to be made aware about the do's & don't's.
- School to have an emergency plan and put up fire notices
- Keep electrical inspection and testing up to date and carry out repairs.
- Kitchen has to be in secured and safe location only.
- Check the adequacy of fire fighting apparatus and its maintenance.
- Ensure fire escape routes and fire exit doors/ passageways are unobstructed and doors open correctly.
- Have first aid kits.
- **Conduct fire drills.**
- Consult with and implement recommendations of the local fire brigade.

DURING :

- Exit from the school to an open area.
- Contain the fire if possible. If not, get outdoors immediately.
- Execute evacuation plan and practiced fire drills.
- Call the Fire Brigade.
- Do not allow children and teachers to panic.
- Do not let anyone hide. Teachers to ensure that nobody is trapped in toilet/indoors.
- If the room is filled with smoke, ask children to stay low to the ground during exit.
- Feel any closed door to see if they are hot before they are opened.
- If the door is hot, use the nearest window or another exit.
- Children and teachers should go to pre – arranged locations, teacher to take roll call.
- Teachers should comfort distressed children.
- Nearest hospital/authority to be alerted.
- Do not allow children to leave on their own, or to be taken home by strangers.

AFTER:

- DON'T Re- enter or permit anyone to enter the school building, unless the fire officials have given permission to enter.
- Teachers to confirm that all students have reached their homes safely.
- Review the fire risk management plan and evacuation plan.
- Implement / execute recommendations by Fire Department and /or building professional before reopening school for classes.