

Emergency Handbook

Preparing for an Emergency: The Smart Thing to Do's and Don'ts



Centre for Disaster Management Lal Bahadur Shastri National Academy of Administration , Mussoorie-248179. INDIA





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PREFACE

Due to its unique geographical and geological conditions India is vulnerable to various natural disasters. The incidents of flood, drought and other natural disasters are on the rise and pose great challenges for the Administration. Each disaster heightens the urgency to equip ourselves better for coping and managing. The recurring incidence of such disasters necessitates learning from our own experience as well as the best practices adopted all over the world in the field of *Disaster Management*.

To ensure meaningful participation of community members and to empower them to take action during times of emergencies, we need to first raise their awarenesson what our hazards, risk and vulnerabilities are and what we can do to prevent and mitigate them. More importantly, we need to educate people on the *Do's and Don'ts* during various disaster events and small but significant actions they can take to reduce risk to their lives.

This Emergency Hand Book is one of the many efforts made by the Centre for Disaster Management (CDM), LBSNAA, Mussoorie to raise public awareness on disaster risk reduction. The handbook is easy to read with simple illustrations and provides basic information on various hazards, actions that can be taken by individuals and communities before, during and after emergency and essential first aid information.

Reducing disaster risks and extending support to those affected during emergencies is the responsibility of every citizen. Let us all work towards a "Safer India" and achieve the SDGs we set for ourselves.

Quelo

C. Sridhar, IAS Deputy Director & Director, CDM, LBSNAA

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I. INTRODUCTION

The Emergency Handbook seeks to provide local administrations as well as the general public with a basic understanding of disasters that affect the country and actions that communities can take in order to reduce risks to themselves and their families. The handbook defines the different hazards that India is prone to and provides useful information on **Do's and Don'ts** during a disaster and also outlines activities that can be undertaken to prevent and respond to an emergency. It can also be used as a simple training material for raising awareness and building capacities in communities.

II. GENERAL DISASTER PREPAREDNESS

In any disaster awareness planning, communities should:

- Determine possible risks and hazards that could affect their community through observation based on past history of disaster in the area and by observing their environment.
- Review vulnerabilities in connection to hazard threats. E.g. Is your house near a flood prone area? Is it near a forest? Near an area susceptible to landslide? etc.



• Plan for and take necessary actions to mitigate or prevent those threats.

III. FAMILY DISASTER PREPAREDNESS

Families can also take shielding steps to plan for emergencies and be prepared.

a) Family Disaster Plan

It is necessary for you and your family to know what to do during a disaster to prevent or minimize injuries. The family disaster plan involves the following:

- Look for the fastest and best routes from your home.
- Keep yourself informed about safe shelters escape and safe areas.
- Make special accommodation and plans for family members with disabilities.
- Discuss your family plan with all members and explain to your children
- Show each family member how to turn off water, gas and electricity and when to do it.





b) Family Disaster Supply Kit

In a disaster situation you and your family to know without any outside help for the first few days and without access to electricity, water or communication services.

- Store water in plastic containers, depending on the size and need of the family and change it every few months.
- Keep some match boxes, torch and batteries, thin blankets, a whistle and any other things you may need in an emergency.
- Keep in emergency food supply ready for use (popped rice, wheat flour etc.).
- keep first aid kits containing some basic medicines and first aids supplies



c) Family Disaster Communication Plan

It is important to develop an emergency communication plan:

- When you and your family could get separated. so it is important everyone knows where you all will meet afterwards and also could be a different place for different hazards (for earthquake an open ground).
- It is also important to know how you will contact each other. Select someone living in some other place as your contact in an emergency.





IV. HAZARDS AND PREPAREDNESS

1. EARTHQUAKE

Earthquake is a sudden shaking of ground due to natural causes (rock displacements, landslide, avalanche, volcanic eruption, meteoritic impact, sub-marine sea faulting, etc) so to refer it as natural earthquake. The shaking of ground may be due to several other man-made agencies, such as, explosions due to chemical blasts or nuclear blasts or rock burst due to mining activities, and reservoir induced earthquakes. It can hit anywhere at any point of time and that is why earthquake is regarded as



most unpredictable, uncontrollable and unfathomable cause of bringing disasters to both flora and faunas.

DO's AND DON'Ts FOR EARTHQUAKE

- DURING AN EARTHQUAKE, stay away from heavy furniture, appliances, large panes of glass, shelves holding heavy objects, and anything that could fall, such as lighting fixtures or furniture.
- Minimize your movements to a few steps to a nearby safe place and if you are indoors, stay there until the shaking has stopped and you are sure exiting is safe.
- DROP to the ground; take COVER by getting under a sturdy table or other piece of sturdy / fixed furniture; and HOLD ON until the shaking stops. If there isn't a table or desk near you, cover your face and head with your arms and crouch in an inside corner of the building.
- Stay in bed if you are there when the earthquake strikes. Hold on and protect your head with a pillow, unless you are under a heavy light fixture that could fall. In that case, move to the nearest safe place.
- Use a doorway for shelter only if it is in close proximity to you and if you know it is a strongly supported, load bearing doorway.





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- Stay inside until the shaking stops and it is safe to go outside. Research has shown that most injuries occur when people inside buildings attempt to move to a different location inside the building or try to leave.
- Cover your mouth with a handkerchief or clothing.
- Tap on a pipe or wall so rescuers can locate you.
- Use a whistle if one is available.
- Shout only as a last resort.
- Shouting can cause you to inhale dangerous amounts of dust.

- DO NOT use the elevators.
- Don't move from one place to another during a severe earthquake.
- Kitchens and garages tend to be the most dangerous. Also, know the safest place in each room.
- Do not light a match.
- Do not move about or kick up dust

Exits and alternative: Always know all the possible ways to exit your house and workplace in emergency situations.

2. FIRE SAFETY

Fire safety is the set of practices intended to reduce the destruction caused by fire. Fire safety measures include those that are intended to prevent explosion of an uncontrolled fire, and those that are used to limit the development and effects of a fire after it starts.

Electrical appliances: Safely use GAS / Heater / Blower etc

DO's AND DON'Ts

- Do not use an electric heater fitted with a 2-pin plug.
- Blankets etc should be away from the heater.
- Do not use an electric heater near any inflammable materials.
- Keep children away from an electric heater.





- The installation and alteration of any electric water heater must be carried out by a registered electrical contractor and a licensed plumber. Do not do it yourself.
- Switch off electric water heaters after use.

SAFETY TIPS FOR LIQUEFIED PETROLEUM GAS (LPG)

- Check rubber tubes regularly for cracks
- Strike the match first then open the burner knob of your stove.
- Fix safety cap on the valve, when cylinder is not connected.
- In case of leakage:
 - a) Do not switch ON/OFF any electrical equipment inside the house.
 - b) Do not light matches, lighter, stove, etc.
 - c) Fix the cap on the valve to stop leak.
 - d) Shut off the gas supply regulator
 - e) Open all the doors and windows
 - f) Take cylinder in an open area and contact the distributor or emergency service cell.

Symbol found on Fire Extinguishers and what they mean	Water	Foam Spray	ABC Powder	Carbon dioxide	Wet Chemical
Wood, Paper & Textiles	~	~	1	X	1
Flammable Liquids	X	~	~	1	X
Flammable Gases	X	X	~	X	X
Electrical Contact	X	X	~	~	X
Cooking Oils & Fats	X	X	X	X	~

Fire Extinguishers and their usage



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DO's AND DON'Ts FOR FIRE-SAFETY

DO's

- Fire Station (101) the moment fire breaks out.
- Don't run if your dress catches fire. Roll on the floor and try to put out the fire with blanket.
- Cling to the floor to escape from smoke and fire.
- Rescue team must know where to get buckets, water, sand, long bamboo, etc. to extinguish fire.



• Be aware that the electricity may go out or the sprinkler systems or fire alarms may turn on.

DON'Ts

- Do not use lift/elevator
- Do not take undue risk. Do not crowd the scene of fire.
- Do not tamper with any machinery during fire fighting.
- Leave them for authorized handling
- Do not argue or discuss at the scene of fire.
- Do not tamper with equipment, if you do not know its operation



TO OPERATE A HOSE REEL

- 1. Turn on the hose reel valve in the direction shown.
- 2. Pull the hose and run it to the fire
- 3. Turn on the water at the nozzle and direct it at the base of the fire.





EXITS AND ALTERNATIVE EXITS:

Always know all the possible ways to exit your house and workplace in emergency situations.

IF YOU ARE TRAPPED IN A SMOKE- LOGGED ROOM

- Cover your nose and mouth with a wet cloth and avoid inhaling through the mouth
- Get down, keep close to the ground and crawl towards the point of escape under the smoke

CRAWL LOW UNDER SMOKE



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3. FLOOD

BEFORE FLOODS

- 1. Do not litter waste, plastic bags, plastic bottles in drains
- 2. Try to be at home if high tide and heavy rains occur simultaneously
- 3. Listen to weather forecast at All India Radio, Doordarshan. Also, messages by Municipal bodies from time to time and act accordingly.
- 4. Evacuate low lying areas and shift to safer places.
- 5. Make sure that each person has lantern, torch, some edibles, drinking water, dry clothes and necessary documents while evacuating or shifting.
- 6. Make sure that each family member has identity card.
- 7. Put all valuables at a higher place in the house.

IN THE FLOOD SITUATION

- 1. Obey orders by government and shift to a safer place.
- 2. Be at safe place and then try to collect correct information.
- 3. Switch of electrical supply and don't touch open wires.
- 4. Don't get carried away by rumours and don not spread rumours.

DO's AND DON'Ts FOR FLOOD

- 1. Switch off electrical and gas appliances, and turn off services off at the mains.
- 2. Carry your emergency kit and let your friends and family
- 3. Avoid contact with flood water it may be contaminated with sewage, oil, chemicals or other substances.
- 4. Walk in standing water, use a pole or stick to ensure that you do not step into deep water, open manholes or ditches.
- 5. Stay away from power lines electrical current can travel through water, Report power lines that are down to the power company.
- 6. Listen to the radio or television for updates and information.
- 7. If the ceiling is wet shut off electricity.
- 8. Use buckets, clean towels and mops to remove as much of the water from the afflicted rooms as possible.
- 9. Place sheets of aluminium foil between furniture wet carpet.



- 1. Walk through flowing water.
- 2. Swim through fast flowing water .
- 3. Drive through a flooded
- 4. Eat any food that has come into contact with flood water.
- 5. Reconnect your power supply until a qualified engineer and alert for gas leaks
- 6. Smoke or use candles, lanterns, or open flames.
- 7. Scrub or brush mud and other deposits from materials.
- 8. Stay away from ceilings those are sagging.
- 9. TVs, VCRS, CRT terminals or other electrical equipment while standing on wet floors, especially concrete.
- 10. Attempt to remove standing water using your vacuum cleaner.
- 11. Remove standing water in a basement too fast

AFTER FLOODS

- 1. Drink chlorinated or boiled water.
- 2. Take clean and safe food
- 3. Sprinkle insecticides in the water ponds/ stagnant water.
- 4. Please cooperate with disaster survey team by giving correct information.



4. CYCLONE

Cyclone: Cyclone in meteorology refers to any low pressure area with winds spiraling inwards. Cyclones rotate clockwise in the Southern Hemisphere and anti-clockwise in the Northern Hemisphere. Cyclone is the general term for a variety of low pressure system



types, such as tropical cyclones, extra tropical cyclones and tornadoes.

DO's AND DON'TS FOR CYCLONE

- Check houses, secure loose tiles by cementing wherever necessary, repair doors and windows.
- Keep some wooden boards ready so that glass windows can be boarded.
- Promptly demolish condemned buildings.
- Those who have radio sets should ensure that the radio is fully serviceable. In the case of transistors an extra set of batteries should be kept handy.
- Keep your radio on and listen to latest weather warnings and advisories from the nearest AIR station.
- Get away from low lying beaches or other locations which may be swept by high tides or storm waves.
- If your house is out of danger from high tides and flooding from the river, and it is well built, it is then probably the best place.
- Get extra food, especially things which can be eaten without cooking or with very little preparation. Store extra drinking water in suitably covered vessel.
- Be sure that a window or door can be opened on the lee side of the house i.e. the side opposite the one facing the wind.
- If the centre of 'eye' of the storm passes directly over your place, there will be a lull in the wind and rain, lasting for half an hour or more. During this period stay in safe place.
- You should remain in shelters until informed by those in charge that you may return home.
- People should keep away from disaster areas unless you are required to assist.
- Relatives should be promptly informed about the safety of persons in the disaster area.



- Avoid being misled by rumors.
- Don't leave shelters until informed by the rescue personals.
- Don't leave the safer place during lull, however minor repairs can be carried out.
- Don't touch the loose and dangling wire from lamp post, it may have electric current

5. LANDSLIDES

A **landslide**, also known as a **landslip**, is a form of mass wasting that includes a wide range of ground movements, such as rock falls, deep failure of slopes, and shallow debris flows. Landslides can



occur underwater, called a submarine landslide, coastal and onshore environments. Although the action of gravity is the primary driving force for a landslide to occur, there are other contributing factors affecting the original slope stability.

DO's AND DON'Ts FOR LANDSLIDES

- Prepare tour to hilly region according to information given by weather department or news channel.
- Move away from landslide path or downstream valleys quickly without wasting time.
- Keep drains clean,
- Inspect drains for litter, leaves, plastic bags, rubble etc.
- Keep the weep holes open.
- Grow more trees that can hold the soil through roots,
- Notice such signals and contact the nearest Tehsil or District Head Quarters.
- Ensure that toe of slope is not cut, remains protected, don't uproot trees unless re-vegetation is planned.
- Listen for unusual sounds such as trees cracking or boulders knocking together.
- Locate and go to shelters,
- Try to stay with your family and companions.

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- Check for injured and trapped persons.
- Mark path of tracking so that you can't be lost in middle of the forest.

- Try to avoid construction and staying in vulnerable areas.
- Do not panic and loose energy by crying.
- Do not touch or walk over loose material and electrical wiring or pole.
- Do not built houses near steep slopes and near drainage path.
- Do not drink contaminated water directly from rivers, springs, wells but rain water if collected directly without is fine.



• Do not move an injured person without rendering first aid unless the casualty is in immediate danger.

6. DEATH

Every individual dies in a disaster has a right to formal identification by his/ her relatives or family members. Similarly every deceased owes the right for a dignified disposal. If it cannot be dealt individually, they still desired to be disposed ethically in a mass procedure and should be remembered that proper management of dead is one of the main pillars of disaster response, together with rescue and care of survivors and provision of basic services.

DO's AND DON'Ts

For those who haven't experienced loss firsthand, it can be difficult to know how is best to help a grieving family member or friend. To take the issue same suggestion as follows

- 1. **Be available** Let them know you're there for them and happy to listen. Sometimes it helps just to have company, even if they don't want to talk.
- 2. **Talk to them** Try to encourage them to talk, but don't pressure them if they don't want to.
- 3. Listen If they do want to talk, just listen and don't try to change the subject.

- 4. **Offer practical help** Sometimes the best thing you can do is offer to help with something specific, rather than just telling them to ask you if they need anything.
- 5. **Help them look after themselves** Stress can make people more vulnerable to illness.

- 1. **Lose contact** Many bereaved people find that they can be left without support after the funeral, so try to call them or visit them from time to time to check how they are.
- 2. **Make assumptions** Everyone reacts to grief differently and takes a different amount of time to overcome feelings of grief.
- 3. Judge them Allow them to express themselves.
- 4. **Worry about getting it wrong** People need support after they've been bereaved and avoiding them or avoiding the topic of death can leave them feeling very alone.



DISPOSAL OF DEAD

It is the most sensitive and major final step in the process of management of dead. Three main categories of disposal we have to deal in disaster scenarios are:

- Disposal of identified
- Disposal of unidentified
- Disposal of body parts/ skeletal remains

DISPOSAL OF IDENTIFIED OR UNIDENTIFIED BODIES USUALLY FOLLOW THESE STEPS:

- 1. Certification of death
- 2. Release of a body
- 3. Transportation to venue of disposal /home of deceased

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- 4. Funeral service
- 5. Disposal proper-cremation (only if identified) or burial





Exhumation

- Exhumation of temporary burials may be required for further identification of unidentified
- Usually exhumations are performed in the presence of police and forensic experts during time
- Wear appropriate protective clothing during procedure
- Cordon off surrounding area of prevent approach
- Check for the availability of documented details of burial site
- Heavy machinery should human supervision
- Manual removal of soil should be done when the body level is reached
- Close the burials site one the required bodies are removed; don't fill the extra space with non human debris; update the documents regarding exhumation.

First responders involved in conducting mass interments

- Mass burial should be conducted only during time under appropriate weather conditions.
- DO NOT overlay dead bodies during the burial to place all bodies as a single layer. Overlaying of dead will cause immense problems in Temporary burials during subsequent exhumations.

Single Row and Single layered mass burial

• Head should be oriented towards the inner aspect of grave for safety reasons if bodies are burying in two rows.



- DO NOT DUMP anything other than human remains to a mass grave mass burials are not dumping sites of disaster waste.
- Be never use backhoes to dump dead bodies laying down of dead bodies in the grave and the initial closure of it should be done manually

Identification of Victims

- Families should be informed about findings and the identification of their loved ones before anyone also.
- Identification should be conducted as speedily as possible.
- The need for relatives to *view* the bodies of their loved ones as part of the grieving process should be respected.
- Once identified, bodies should be released as quickly as possible to their next of family,

Cultural and Religious Features

- The overpowering want of relatives from all religions and cultures is to identify their loved ones.
- Advice and assistance from religious and community leaders should be sought to improve understanding and acceptance of the recovery, management, and identification of the dead bodies
- Careful and ethical management of dead bodies, including disposal, should ensured, including respect for religious and cultural sensitivities

Providing Support

- Local organizations such as the Indian Red Cross NIMHANS, NGOs and faith groups, can often provide emergency psycho-social care for those affected.
- Priority care should be given to alone minors and other susceptible groups.
- Material support may be necessary for memorial service ceremony, such as burial covering, coffins etc.
- Special legal provisions for those affected (i.e. death certificates) should be considered and exposed within the affected communities.

General Guidelines

- Use body bags in recovery, transport, storage and disposal or dead
- DO NOT involve children for any stage of management of dead
- If you have any difficulty in tolerating effects of dealing with dead related to emergency procedures consult the team leaders

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- DO NOT rush with the steps of managing dead; be methodical; have several teams of volunteers working in rotation
- Handle dead with dignity; dead from natural or man-made disasters do not cause epidemics
- All major steps of managing dead curve best operable during day time.

7. FIRST AID (ACQUIRED IMMUNE DEFICIENCY)

ABC (and sometimes D) The most common term referred to in first aid is ABC, which stands for Airway, Breathing, and Circulation. In fact, the term also is commonly used among emergency health professionals. The D stands for Deadly bleeding or Defibrillation.

- Airway the first aider needs to make sure the casualty's airway is clear
- **Breathing** -when the first aider has determined that the airways are not obstructed, he/she must determine the casualty's sufficiency of breathing, and if necessary provide rescue breathing
- **Circulation** if the casualty is not breathing the first aider should go straight for chest compressions and rescue breathing.

Primary Survey - DRAB (danger, response, airway, breathing)

- Danger- check for dangers to the casualty and to you as a first aider.
- **R**esponse- if safe to approach, is the casualty conscious? See if the patient is alert, ask questions and see if you get a response.
- Airway- is the casualty's airway open and clear? If not try to clear it. Trainers advice first aiders to have the casualty lying on their back, and then to place one hand on his/her forehead and place two finger from the other hand on the casualty's chin and gently tilt the head back while slightly raising the chin further upwards.
- **B**reathing- is the casualty breathing effectively? The first aider should look at the chest for movement, his/her mouth for signs of breathing (e.g. sounds), and get close to the casualty and see if air exhalation can be felt on the first aider's cheek.

Cardiopulmonary Resuscitation (CPR)

Cardiopulmonary resuscitation (CPR) is an emergency procedure that combines chest compressions often with artificial ventilation in an effort to manually preserve intact brain function until further measures are taken to restore spontaneous blood circulation and breathing in a person who is in cardiac arrest.



a. Perform initial assessment

Always perform the initial assessment in the position the victim is found. If victim needs to be turned on his back for CPR, move the neck and body at the same time like rolling a log.



b. Perform external chest

Compressions by placing the heel of one palm at the lower half of the breast bone and keeping fingers off the ribs, Covers this hand with the heel of the other hand.

First AID is the assistance given to any person suffering a sudden illness or injury, with care provided to preserve life, prevent the condition from degeneration recovery. It includes initial intervention in a serious condition prior to professional medical help being available, such as performing CPR while awaiting an Ambulance, as well as the complete treatment of minor conditions, such as applying a plaster to a cut. First AID is generally performed by the layperson, with many people trained in providing basic levels of first aid, and others willing to do so from acquired knowledge. Mental health first aid is an extension.



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8. BASIC ITEMS FOR EMERGENCY KIT

- Battery-powered, or solar-powered radio
- Waterproof torch or normal torch
- Spare batteries for all devices
- First aid kit and guide book
- Chlorine tablets or powdered water purifiers
- Toiletries including soap, hand wash gels, toilet paper, tissues, toothpaste and sanitary items
- Cash and a phone card
- Woollen blankets
- Candles with waterproof matches or lighters
- Drinking water (consider having 10 litres per person to last three days)
- Dried and long-life food to last three days, include a can opener and utensils
- Waterproof bags for valuable items and documents and online backup of all important documents
- Copies of essential documents such as prescriptions and insurance details or a USB stick with scanned copies
- Your written emergency survival plan including contact numbers of family, relatives or neighbours
- Items of protective clothing suitable for likely emergencies, protective footwear or rubber boots etc.



9. EMERGENCY NUMBER

A Single Helpline Number for India, and ways to achieve it

Sr. No.	Department	Number
1	Police	100
2	Fire Brigade & Emergency	101
3	Ambulance	102
4	Emergency Disaster Management	108



Lets prepare for the worst.....

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Center for Disaster Management (CDM) at Glance

Center for Disaster Management (CDM) is a research and training unit of National Institute of Administrative Research an Autonomous Registered Society under the umbrella of LBSNAA, Mussoorie. Apart from conducting training programs the centre has been involved in formulation of national strategy for adaptation of the global best practices to suit Indian conditions. The Centre is involved in training officers belonging to the IAS and other civil services at induction as well as at in-service level in various aspects of disaster management: sociological aspects, use of IT, HAM Radio, action research projects, documentation of best practices, case studies, teaching materials etc.





Since 2007 the Centre is also engaged in conducting number of tailor-made training programmes under XI Five Year Plan for the Plan Scheme "National Programme for Training of Scientists & Technologist working in the Govt. Sector" in collaboration with Department of Science & Technology, Govt. of India, New Delhi. Hundreds of scientists and technologists across the country have got exposed to the training environment of premier institute with unique pedagogical approach. The training programmes include lectures by both in-house and eminent guest faculty (Acclaimed Scientists, Management Professionals, Administrators and Policy Makers), Panel Discussions, Case Studies, Films, Group activity, Field visits, Hands on sessions and Simulation exercise.

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