

Disaster Management

Human Induced Disaster

How natural hazards are natural? Have you ever tried to analyse this question? Let us take an example of the floods in Mumbai. What led to the huge loss of life and property? Is it only heavy rains which caused this massive destruction? No, there are various other reasons that led to this large destruction. Let us list some of them.

- a. Unplanned growth of cities
- b. No proper drainage facility
- c. Increased growth of population etc.

If we look at the causes, all of them are human induced and if we take care of them many such disasters can be stopped. So we can say that natural hazards are not always natural, but human beings have a major role to play.

The disasters that are caused because of human negligence or deliberately by an individual or a group can be termed as Human-made. These disasters cost the most in terms of human suffering, loss of life and long term damage to a country's economy and productive capacity.

Let us now look at different human made disasters briefly.

Accident related Disasters

Road, rail and air accidents are some of the disasters that one faces every day. The rapid development and expansion of the road network for better connectivity and the increase in number of motor vehicles have led to a substantial rise in levels of both passenger and freight movement. The number of road accidents and fatalities has been growing in recent years.



In India about eighty thousand people are killed in road crashes every year which is thirteen percent of the total fatality all over the world. More than half of the people killed in traffic crashes are young people within the age group of 15-44 years who are often the bread winners of the family. In most of the cases crashes occur either due to carelessness, restlessness, overspeed, violation of traffic rules, drunken driving, poor maintenance of the vehicle, bad weather conditions etc. All these add to the rising number of accidents and road fatalities. It has been estimated that in the year 2000 more than 3 percent of the Gross Domestic Product (GDP) was lost due to accidents. Hence, road safety education is as essential as any other basic skills of survival. The Road Safety Week is observed in January, every year throughout the country. The theme of the Road Safety Week in 2006 was 'Road Safety and no Accident'.

Here are some dos and don'ts for you while you are walking to school or going by bus.

No matter how old you are, it is important to know the traffic rules which are for your safety and the safety of your near and dear ones.

Dos	Don'ts
Drive if you have a legal license and have attained the age of 18.	Don't be impatient on the road and don't run on the road.
Always walk on the footpath. If no proper footpath, walk on the extreme right hand side of the road.	Never cross the road at a corner/curve as the motorist while taking the turn will not be able to see you in time.
Cross only at Zebra crossing and at traffic signals. Where such facilities are not available look for a safe place to cross and look on either side before crossing the road.	Don't run to catch the bus/ rickshaw as you might slip and fall.
Know the road signals and honour them.	Don't board a bus other than the one decided by the school.
Be at the bus stop 5 minutes before, leave home well in time. Board the bus when it has come to a halt and without rushing or pushing follow the queue.	Don't shout or make noises in the bus as it distracts the bus driver and diverts the attention.
Hold on to the railing of the bus, if at all you have to travel standing in the moving bus.	Don't sit or stand on the footboard of the bus.
If you are riding a two wheeler then do wear helmets so that your head is protected.	Don't put any part of your body outside a moving or stationary vehicle.
When exiting the bus, be careful that clothing and book bags with straps don't get caught in the handrail or door. Cross the vehicles from the front only, not from back.	If you drop something near or under the bus, tell the bus driver. Never try to pick it up. The driver may not see you and begin to drive away.

The following people should not be driving vehicles:

- Having consumed alcohol.
- Have been taking any medicine or drug that affects their responses.
- Are tired, as tiredness affects the driving skills and reaction time.
- Are sick or injured.
- Are angry or upset.

You as a student or a volunteer can do wonders to reduce the number of deaths by creating more awareness on road safety. In case you see a victim, you may call for 108. You can seek the help of the policemen or the local people and ask for medical help if necessary.

Rail Accidents

Railway transportation appeared at earlier times to be safe due to slower speeds, shorter trips and lower density traffic.

With the largest network in the world, the number of railway accidents has increased in India. The most common type of rail accidents are derailment which takes place due to lack of proper maintenance, human error or sabotage. This causes huge losses to life and inflicts injuries and disabilities to many more. The transportation of various highly inflammable products like coal, oil etc. also leads to accidents.



The 150 year old shabby Ulta Pool bridge in Bhagalpur district of Bihar collapsed apparently due to poor maintenance and the Howrah-Jamalpur Superfast passenger train passing below the bridge killing at least 35 people on December 1st 2006.

We hear of such horrifying stories every now and then. Let us try to identify some safety measures that could be taken up to reduce the number of such accidents.



Fig. 23.1: Rail accidents.

Dos

- At railway crossings pay attention to signal and the swing barrier.
- In case of unmanned crossing, get down the vehicle and look at both the sides of the track before crossing the track.

Don'ts

- Don't get underneath the signal barriers and cross them.
- Don't stop the train on a bridge or tunnel where evacuation is not possible.
- Don't carry flammable materials.
- Don't stand or lean out of the door in a moving train.
- Don't put any part of your body outside a moving or stationary train.
- Don't smoke in the train. If you see anyone doing so you can request them not to do it.
- Don't cross the railway tracks. Use the foot bridge to change platforms.
- Don't touch objects which are suspicious. Never play on the tracks or in the railroad yards. Railroad cars can move suddenly and unexpectedly.
- Never throw anything at the train. Severe injuries and even deaths have occurred from objects thrown at trains.

Air Accidents



Air India Flight 182 Kanishka was blown up mid-flight on 23 June 1985 by a bomb. The flight was on the first leg on its Montreal-London-Delhi-Bombay (Mumbai) flight when it exploded off the coast of Ireland. The plane crashed into the Atlantic Ocean. All 307 passengers and 22 crew on board died.

Across the world including India, air accidents have increased. Many factors govern the safety of the passengers in the aircraft like increase in the number of aircrafts, technical problems, fire, landing and take off condition, the environment that the airline operates in (mountainous terrains or frequent storms), factors like airport security in cases of hijackings, bomb attacks etc.



Fig. 23.2: Air Accident.

Some safety measures that can be taken up are given below.

On boarding the aircraft there are some things that you need to remember:

- Pay attention to the flight crew safety demonstration.
- Carefully read the safety briefing card, that is there in the seat pocket.
- Know where the nearest safety emergency exit is and know how to open in case of emergency.
- Always keep your seat belt fastened when you are in seat.

If in case you are involved in an air accident, you should remember the following things:

- Stay calm. Listen to the crew members and do what they say. The cabin crew's most important job is to help you.
- Before you try to open any emergency exit yourself, look outside the window. If you see a fire outside the door, don't open it as flames may spread into the cabin. Try to use the alternate exit route.
- Remember smoke rises. So, try to stay down if there is smoke in the cabin. Follow the track of emergency lights embedded on the floor, they lead to an exit. If you have a cloth, put it over your nose and mouth.

Fire Accidents

The 2004 fire in a school in Kumbakonam, Tamilnadu sparked off debates and arguments on the safety of schools in the country. 93 innocent lives were charred to death. The main causes of this fire were lack of awareness amongst children and teachers as to what to do in case of a fire, lack of preparedness, kitchen close to the classroom



Fig. 23.3: Fire.

etc. However, incidents like these are not new.

Such incidents show huge loss to life and property because of human negligence or lack of awareness.

Fire is a phenomenon of combustion manifested in intense heat and light in the form of a glow or flames. Around 30,000 precious lives are lost because of fire related incident every year. Heat, fuel, and oxygen/ are the three



ingredients which cause a fire. By cutting the supply of any one we can control fire.

Dos and Don'ts at the time of Fire Accidents:

- If you see smoke or flames, raise the alarm.
- Get out of the building as soon as possible. Cover yourself if you can. Use steps instead lift in case of fire. Keep the escape routes clear in the corridors.
- Find a phone and call 101. Ask for the fire brigade, and then give your address slowly and clearly to reach soon.
- If there's smoke, crawl along the floor, as the air is cleanest there. Hot air rises up. If your escape route is blocked, go into a room with a window, put things round the door to stop smoke getting in, open the outside window and call for help.
- A closed door slows down the spread of a fire. While evacuating it is necessary that we close the doors.
- Switch off all the electrical appliances. The best thing one could do is to turn off the main switchboard.
- Check for worn or tape up cables or leads. These are dangerous and you should replace them. In case the plug points are at a very low level it is necessary that they are taped especially in the primary section of the school as the children might put their fingers inside which might lead to an accident.
- Wherever you are watch out for damaged wiring in the school. In case there are walls that soak or wet then the walls should be immediately repaired and the wires must be replaced.

Don'ts

- Don't go back into the building - not for toys or even pets. Fire fighters can search the house much more quickly than you can.
- Never hide in a cupboard or under a bed. You need to raise the alarm and get out.
- The cables shouldn't be put under the carpets or mats where they can become worn out. This is mainly seen in the administrative unit of the school.
- Lights shouldn't be positioned near the curtains and other materials that could burn easily.

Activity

From the nearest fire station, find out what are the other simple Dos and Don'ts that you can follow and awareness to reduce fire accidents.

Mahatma Gandhi preached *ahimsa* or non-violence and truth as the tools for peaceful resolution of issues between people, communities or countries. Over the years, as science and technology progressed, so did man's inherent greed for power and wealth, along

with increased hostility between various groups of people in the world. Contrary to the hope of the integration of population across the globe into a 'world community' in harmony with each other, which was expected as a result of development, war and internal conflicts have plagued the world, causing immense suffering to vast numbers of people.

- Find out the terrorist attacks taken place recently in India. Discuss what effect is there on children.

Terrorism has become a common in certain areas of the world, including parts of India. In these areas, children live in constant fear of attacks and violence. Often they do not attend formal schools and don't lead normal lives.



Fig. 23.4: Terrorist attack on Taj Hotel, Mumbai.

In case terror strikes in your area, here are some things that you need to do.

- Remain calm and relaxed and be patient.
- Follow the advice of local emergency officials.
- Listen to your radio or television for news and instructions.





Fig. 23.5: Bomb blast at Dilsukhnagar (Hyderabad)-2013

- If the disaster occurs near you, check for injuries. Give first aid and get help for seriously injured people.
- Noticing any unidentified briefcases, bags, cycles, tiffin boxes and inform police. Be away from those things.
- Shut off any other damaged utilities.
- Confine or secure your pets.
- Call your family contact. Do not use the telephone again unless it is a life-threatening emergency.
- Check on your neighbors, especially those who are elderly or disabled.

Activity

Identify recent terrorist acts that have taken place in India, and discuss the possible effects of these acts on children.

Be alert, Be vigilant and Be safe...

1. Inform police if you see any unowned objects like bags, suitcase etc. lying in public place or in a public transport as it could contain explosive device.
2. Call police Control Room on Telephone No. 100. Every citizen has the right to call up.
3. After informing the police try to keep a watch on the suspected object and caution others to keep away from it.
4. Be alert of any suspicious behavior, parked vehicle.

For Parents

- First and most important, adults need to focus on the children in their lives in the aftermath of the horrific events.
- Helping children to separate fact from fiction is also important.
- Adults should try to discuss known facts with children, and help avoid speculation or exaggeration.

Citizen safety is the concern of all. Different measures are adopted by various agencies to create awareness on safety. Police has issued some posters that can help us fight terrorism and help us in leading a safe life. Read them carefully and try to follow the tips and guidelines in your life.

Key words

1. World community
2. Terrorism
3. Vigilant
4. Hijacking
5. Disaster
6. Railway crossing



Improve your learning

1. Explain how a natural hazard becomes a disaster? AS₁
2. What is Terrorism? What are the motives of terrorists? AS₁
3. What safety measures should be followed to avoid fire accidents? AS₁
4. What are the main causes of road accidents? How can we reduce the road accidents? AS₁
5. Terrorist attacks cause loss of life and wealth. What are the precautions to be taken to prevent these activities? AS₄
6. Identify the causes of rail accidents? AS₁
7. List out the reasons risk inducing factors in your home, school or village. AS₄
8. Locate the following places attacked by terrorists in the India map. AS₅
a) Mumbai b) Hyderabad c) Bhagalpur d) Kumbakonam e) Bangalore
9. Write about an incident related disaster you know. AS₆
10. Read the para under the title 'Fire' of page 281 and comment on it. AS₂

Project

1. Collect information from newspapers and magazines about the human induced disaster that has taken place in the past few years in your state. Find out, what measures are being taken in your area to reduce such risks in future.
2. List the various losses incurred due to terrorism.