India, with its vast population and unique geographical characteristics, is one of the world's most “Disaster-Prone” countries. Natural hazards such as cyclones, earthquakes, droughts, floods or landslides occur in different parts of India in varying intensity. The East and the South-East part of India are frequently affected by cyclones. In the interior of the plateau or in the Himalayas, earthquakes, and in the Ganga-Brahmaputra plain floods are more common. Rajasthan and Rayalaseema often experience severe drought, as do other areas in South India. This means that we are all “vulnerable” in different degrees to these hazards. People living in an area may be vulnerable to more than one hazard. For instance, people residing in coastal areas may face floods and cyclones frequently, while being located in an earthquake zone. Such an area is called a Multi-Hazard Zone.

The damage caused due to a hazard increases when people are not adequately prepared to face the “disaster.” For instance, if a flood is a hazard when it occurs, and if people are not prepared to face it, it may wash away persons, homes, cattle and valuables. Then the flood becomes a disaster.

**Types of Disasters**
Disasters can be categorised into various types based on the speed and origin cause:

1. Based on speed, a disaster can be termed as slow or rapid.
2. Slow onset disaster: A disaster that prevails for many days, months or even years like drought, environmental degradation, pest infection, famine are some examples of a slow onset disaster.
3. Rapid on set disaster: A disaster that is triggered by an instance causes shock. The impact of this disaster may be short lived or long-term. Earthquake, cyclone, flash floods, volcanic eruptions are some examples of rapid onset disasters.
4. Natural disaster: A natural disaster is an event that is caused by nature and leads to human, material, economic and environmental losses. The types of natural disasters:
   a. Earthquakes
   b. Cyclones
   c. Floods
   d. Droughts
   e. Tsunamis
   f. Land slides
   g. Volcanoes etc.

5. C. Tsunamis can occur at any time of day or night.
6. B. Tsunami can move at 50 km per hour on coastal plain, faster than a person can run.

**What to do BEFORE Tsunami?**

- Have disaster supplies on hand.
- Discuss tsunami with your family.
- Plan evacuation routes from your home, school, work place or any other place you could be where tsunami present a risk.
- Practise your evacuation routes.
- Have disaster supplies on hand.
- Discuss tsunami with your family.

**Detecting Tsunamis**

- Coastal tidal gauges can stop tsunami close to the shore, but they are useless in deep oceans. Tsunami detectors, linked to land by submarine cables, are deployed 50 odd kms out at sea.
- *Tsunameters* transmit warnings of tsunami early. Warning depends on the distance of the epicenter from the coast line. The nearer the distance of the epicenter from the coast line, the more time will be available to provide warning. Once the tsunami is detected, warning is given to all the coastlines.
- **50 minute warning** which may give necessary warning to coastal areas and to satellites.

**What to do DURING A Tsunami?**

- If you are at home and hear a tsunami warning, you should make sure your entire family is aware of the warning.
- The tsunami hazard prone areas should be evacuated.
- Inform your family of the location and route.
- Don’t try to rescue others in flooded areas.
- Take your Disaster Supplies Kit. Having supplies will make you more comfortable during the evacuation.
- If you evacuate, take your animals with you.

**What is disaster management?**

Disaster management covers the range of activities designed to maintain control over disasters’ emergency situations and to provide a framework for helping people to avoid, reduce the effects of, or recover from impact of a disaster. These activities may be related to preparedness, mitigation, emergency response, relief and recovery (reconstruction and rehabilitation) and may be conducted before, during or after a disaster.

- The Teachers and students are an integral part of the community and have an important role to play in being prepared for disasters. Students are effective carrier of messages to educate their parents and the community. Teachers have an important responsibility to guide the students in this regard.

Did you know?

- A. A tsunami consists of a series of waves and the first wave may not be the largest.
- B. Tsunami can move at 50 km per hour on coastal plain, faster than a person can run.
- C. Tsunamis can occur at any time of day or night.

**What to do AFTER Tsunami?**

- Continue using a radio or television for updated emergency information.
- Check yourself for injuries and get first aid if necessary before helping injured or trapped persons. If someone needs to be rescued, call professionals with the right equipment to help. Many people might get killed or injured while trying to rescue others in flooded areas.
Help people who require special assistance - infants, elderly people, those without transportation, large families who may need additional help in an emergency situation, people with disabilities.

Avoid disaster areas. Your presence might hamper rescue and other emergency operations and put you at further risk from the residual effects of floods, such as contaminated water, crumbled roads, landslides, mudflows and other hazards.

Use the telephone only for emergency calls. Telephone lines are frequently overloaded in disaster situations. They need to be cleared for emergency calls to get through.

Stay out of a building if water remains around it. Tsunami water, like floodwater, can undermine foundations, causing buildings to sink, floors to crack, or walls to collapse.

When re-entering buildings or homes, be very careful! Tsunami-driven floodwater may have damaged buildings where you least expect it. Carefully watch every step you take.

Wear long pants, a long-sleeved shirt and sturdy shoes. The most common injury following a disaster is foot cuts.

Use battery-powered lanterns or flashlights when examining buildings. Battery powered lighting is the safest and easiest to use and it does not present a fire hazard for the user, occupants or building. Do not use candles.

Examine walls, floors, doors, staircases and windows to make sure that the building is not in danger of collapsing.

Inspect foundations for cracks or other damage. Cracks and damage, to a foundation can render a building uninhabitable.

Look for fire hazards. There may be broken or leaking gas lines, flooded electrical circuits, or submerged furnaces or electrical appliances. Flammable or explosive materials may have come from upstream. Fire is the most frequent hazard following floods.

Watch out for wild animals, especially poisonous snakes that may have come into buildings with the water. Use a stick to poke through debris. Tsunami floodwater flushes snakes and animals out of their homes.

Watch for looters. There may be broken or leaking gas lines, flooded electrical circuits, or submerged furnaces or electrical appliances. Flammable or explosive materials may have come from upstream. Fire is the most frequent hazard following floods.

A slow onset disaster, gives us ample time in every five years.

Rayalaseema and Telengana regions the receive less rainfall. These are called geographical location are more likely to certain regions due to their probability of drought occurrence is twice in every five years. Impacts of Drought

There is a sequential impact of drought:

Scarce of drinking water; fall in crops; fall in employment; fall in purchasing power; loss of livelihoods; and animal loss.

Deficient -20 percent to -59 percent of the average rainfall

Scanty -60 percent or less of the average rainfall

Certain regions due to their geographical location are most likely to receive less rainfall. These are called ‘drought prone areas’. For example, in Rayalaseema and Telengana regions the probability of drought occurrence is twice in every five years.

Impact of Drought:

There is a sequential impact of drought:

Scarcity of drinking water; fall in water table; decline in crop acreage; fall in employment in the agricultural sector due to slow down of agricultural activity; fall in purchasing power of those engaged in agriculture; scarcity of food grains; scarcity of fodder; loss of cattle life; malnutrition, especially among children.

Ill health and spread of diseases like diarrhoea, dysentery or cholera and ophthalmia caused by starvation. Distress sale and mortgage of land, jewellery and personal property. Migration of people in search of employment.

Water Management

Under the Ministry of P.D & R, the Government has taken the initiative to bring in awareness amongst local officials and other key players to implement proper utilisation of natural resources. Land use based on its capability helps in proper utilisation of natural resources.

Agricultural practices which are built for this purpose. In certain places, with simple filtering, rainwater can be stored in sumps/tanks which are built for this purpose. In certain places, with simple filtering, rainwater can be stored in sumps/tanks. In urban areas all rainwater as it falls over roofs of houses should be harvested. The easiest thing is to divert it into soak pits for recharge of groundwater. The rainwater may also be stored in cisterns to be of use in crop irrigation strategies etc.

Water harvesting

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Water harvesting

The government is implementing Integrated Watershed Management Programme (IWMP) in drought prone areas to reduce the impact of droughts. The main objective is to strengthen the community and enable them to plan for proper utilisation of natural resources. Land use based on its capability helps in optimal use of land and water and can prevent misuse. The main activities include harvesting rainwater in the fields, afforestation, promotion of crops/trees that require less water and alternative livelihoods.

Are you a water saver or spender?

Find whether you are a water saver or spender with the help of the following questionnaire. Check how much water you can save and whether you are a water hero or villain!

On an average, the water you use and check your ranking:

- Eco Hero: <200 lt.
- Water saver: 200 – 400 lt.
- Water user: >400 lt.
- Water villian: >600 lt.

Key words

1. Multi Hazard Zone
2. Human Induced Hazard
3. Famine
4. Pest Infection
5. Environmental Degradation

Improve your learning

1. Describe any disaster that occurred in your area or that you watched on TV? What measures could have been taken to reduce its impact?
2. How was that disaster managed?
3. Do you suggest any precautions to the people?
4. Have you ever observed any disaster in your locality? Explain?
5. How can the disaster be prevented/managed?
6. Discuss elder’s experience with regard to the disasters and the management and write a note.

Drought is basically a disaster situation caused by lack of rainfall. The deficiency in rainfall is defined as meteorological drought. While in a year there may be normal rainfall, there might be wide gap separating two consecutive spells of rain resulting in crop failure which is termed as agricultural drought. Thus the quantum as well as the distribution of rainfall are important.
VI. Appreciation and Sensitivity:

V. Mapping skills:

IV. Reflection on contemporary issues and questioning:

III. Information Skills:

1. How is the implementation of Forest Laws in your area? Though the Laws are in vogue, the forests are disappearing day by day. What might be the reasons?

2. Are there any Self Help Groups in your village? Do you think the members of Self Help Groups benefit really? Analyse with reasons.

3. Why are the people approaching private hospitals though the government hospitals are functioning? Write your opinion on this issue.

4. Our constitution consists of many values. All should inculcate them. But to what extent these are inculcated in the society now-a-days? What might be the reasons?

V. Mapping skills:

1. Select any two places in the Atlas. Compare the life styles of the people of those two places.

2. Locate the Tundla region on the world map. Mark the important countries of that region with colours.

3. Locate the following on the India map:
   1) Ganjam; 2) Awdh; 3) Hyderabad; 4) River Godavari

4. Observe the map of the Hyderabad state in the chapter. Compare this with that of our present state. Write the differences.

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