1. Definition

An unusual event caused by natural forces or human actions that results in the loss of lives and destruction of property. Disasters have severe impact on the economy and social life that exceeds the community's ability to cope with using its own resources and requires International assistance.

The World Health Organization (WHO) defines Disaster as "any occurrence that causes damage, ecological disruption, loss of human life, deterioration of health and health services, on a scale sufficient to warrant an extraordinary response from outside the affected community or area."

2. Types of disasters and their consequences

Disasters are divided into two main types based on their time occur: Suddenly and Creeping

2.1 Sudden disasters

Occur with slight or prior alarm, they seriously and immediately disrupts the functioning of humans and their activities, as well as the State economy system and community.

Sudden Disasters are divided into:

1. Natural: Such as torrents, floods, earthquakes and hurricanes.
2. Man-made: Biological or Chemical events, war, riots and civil commotions at the State level.

2.2 Creeping disasters

A situation in which the community ability to maintain the standard of living is slowly declines until it reaches a point threatening the survival of people. This situation could arise as a result of environment, social, economic or political effects.

Creeping disasters are divided into two types:

1. Natural: Such as drought, locust invasion and epidemics.
2. Man-made: Such as a small conflict or regular ethnic persecution.

Effect \ Disaster	Earthquakes	Winds with or without floods	Waves and floods	Slow floods	Earth's slide	Volcanoes
Death	Many	little	Many	little	Many	Many
Serious injuries which require intensive remedy	Many	Medium	little	little	little	little
Increased danger from diffuse of diseases	Potential risk follows all major disasters			Increase potentiality to occur in crowded places and exhausted facilities		
Devastation of Health Services	Severe Building and equipment	Severe	Severe but domestic	Severe ,only equipment	Severe but domestic	Severe Building
Destruction of Water Resources	Severe	Light	Severe	Light	Severe but domestic	severe
Lack of food	It is possible to happen due to some economic and logistic elements		Familiar	Familiar	Unusual	Unusual
Large population displacement	Unusual Possible to occur in the urban areas that have been largely destroyed			Usual but generally limited		

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3. Main components of disaster management

3.1 Hazard

Hazard may be defined as "a dangerous condition or event, that threat or have the potential for causing injury to life or damage to property or the environment." Hazards can be grouped into two broad categories namely natural and manmade. Natural hazards are hazards which are caused because of natural phenomena (hazards with meteorological, geological or even biological origin). Examples of

natural hazards are cyclones, tsunamis, earthquake and volcanic eruptions which are exclusively of natural origin. Landslides, floods, drought, fires are socio-natural hazards since their causes are both natural and man made. For example flooding may be caused because of heavy rains, landslide or blocking of drains with human waste. Manmade hazards are hazards which are due to human negligence.

Manmade hazards are associated with industries or energy generation facilities and include explosions, leakage of toxic waste, pollution, dam failure, wars or civil strife, etc. The list of hazards is very long. Many occur frequently while others take place occasionally. However, on the basis of their genesis, they can be categorized as follows:

Various Types of Hazards

Type	Hazards	
Geological Hazards	1. Earthquake 2. Tsunami 3. Volcanic eruption	4. Landslide 5. Dam burst 6. Mine Fire
Water & Climatic Hazards	1. Tropical Cyclone 2. Tornado and Hurricane 3. Floods 4. Drought 5. Hailstorm	6. Cloudburst 7. Landslide 8. Heat & Cold wave 9. Snow Avalanche 10.Sea erosion
Environmental Hazards Biological	1. Environmental pollutions 2. Deforestation 1. Human / Animal Epidemics 2. Pest attacks	3. Desertification 4. Pest Infection 3. Food poisoning 4. Weapons of Mass Destruction
Chemical, Industrial and Nuclear Accidents	1. Chemical disasters 2. Industrial disasters	3. Oil spills/Fires 4. Nuclear
Accident related	1. Boat / Road / Train accidents / air crash Rural / Urban fires Bomb /serial bomb disasters blasts 2. Forest fires	3. Building collapse 4. Electric Accidents 5. Festival related 6. Mine flooding

Source: CBSE (2006)

3.2 Vulnerability

Vulnerability may be defined as "The extent to which a community, structure, services or geographic area is likely to be damaged or disrupted by the impact of particular hazard, on account of their nature, construction and proximity to hazardous terrains or a disaster prone area." Vulnerabilities can be categorized into physical and socio-economic vulnerability. Physical Vulnerability: It includes notions of whom and what may be damaged or destroyed by natural hazard such as earthquakes or floods. It is based on the physical condition of people and elements at risk, such as buildings, infrastructure etc; and their proximity, location and nature of the hazard. It also relates to the technical capability of building and structures to resist the forces acting upon them during a hazard event.

Socio-economic Vulnerability

The degree to which a population is affected by a hazard will not merely lie in the physical components of vulnerability but also on the socioeconomic conditions. The socioeconomic conditions of the people also determine the intensity of the impact. For example, people who are poor and living in the sea coast don't have the money to construct strong concrete houses. They are generally at risk and loose their shelters when ever there is strong wind or cyclone. Because of their poverty they too are not able to rebuild their houses.

3.3 Capacity

Capacity can be defined as "resources, means and strengths which exist in households and communities and which enable them to cope with, withstand, prepare for, prevent, mitigate or quickly recover from a disaster". People's capacity can also be taken into account. Capacities could be classified into physical and socio-economic capacities.

Physical Capacity: People whose houses have been destroyed by the cyclone or crops have been destroyed by the flood can salvage things from their homes and from their farms. Some family members have skills, which enable them to find employment if they migrate, either temporarily or permanently.

Socio-economic Capacity: In most of the disasters, people suffer their greatest losses in the physical and material realm. Rich people have the capacity to recover soon because of their wealth. In fact, they are seldom hit by disasters because they live in safe areas and their houses are built with stronger materials. However, even when everything is destroyed they have the capacity to cope up with it.

Hazards are always prevalent, but the hazard becomes a disaster only when the frequency or likelihood of a hazard and the vulnerability of the community increases the risk of being severely affected.

3.4 Risk

Risk is a "measure of the expected losses due to a hazard event occurring in a given area over a specific time period. Risk is a function of the probability of particular hazardous event and the losses it would cause." The level of risk depends upon:

• Nature of the hazard;

• Vulnerability of the elements which are affected;

• Economic value of those elements.

A community/locality is said to be at 'risk' when it is exposed to hazards and is likely to be adversely affected by its impact. Whenever we discuss 'disaster management' it is basically 'disaster risk management'. Disaster risk management includes all measures which reduce disaster related losses of life, property or assets by either reducing the hazard or vulnerability of the elements at risk.