

# **Concepts and definitions:**

Disaster, hazard, vulnerability, risk, capacity, impact, prevention, mitigation



# Definitions

- ❖ **Disaster** :- A disaster is a sudden, calamitous event that seriously disrupts the functioning of a community or society and causes human, material, and economic or environmental losses that exceed the community's or society's ability to cope using its own resources. Though often caused by nature, disasters can have human origins
- ❖ **Hazard** :- A hazard is any object, situation, or behavior that has the potential to cause injury, ill health, or damage to property or the environment
- ❖ **Vulnerability** :- vulnerability refers to the inability (of a system or a unit) to withstand the effects of a hostile environment.



- ❖ Risk :- In simple terms, **risk** is the possibility of something bad happening.
- ❖ Impact :- Impact is defined as the actual process of contact between an event and a society or a society's immediate perimeter.
- ❖ Prevention :- to prevent means to keep the event from happening, and thus, prevention is the aggregate of approaches and measures taken to ensure that human actions or natural phenomena DO NOT cause or result in the occurrence of an event related to the identified or unidentified hazard
- ❖ Mitigation :- any process that is undertaken to reduce the immediate damage otherwise being caused by a destructive force on the society.



# Disaster

- A disaster is a sudden, calamitous event that seriously disrupts the functioning of a community or society and causes human, material, and economic or environmental losses that exceed the community's or society's ability to cope using its own resources. Though often caused by nature, disasters can have human origins
  
- A **disaster** is a serious disruption occurring over a short or long period of time that causes widespread human, material, economic or environmental loss which exceeds the ability of the affected community or society to cope using its own resources.

# HAZARD



- ◆ All disasters are related to a specific hazard or combinations of hazards whether of a natural phenomenon or a result of human actions.
- ◆ A hazard is anything that may pose a danger; thus, it is used in this discussion to mean a natural or manmade phenomenon or a mixture of both that has the potential to adversely affect human health, property, activity, and/or the environment.

# RISK



- ❖ Risk is the objective (mathematical) or subjective (inductive) probability that something negative will happen.
- ❖ For example, the probability of an earthquake occurring in the northern Europe is quite low compared to such a hazard becoming realized in California or Turkey.
- ❖ The probability of a cyclone becoming realized in India or Central America is huge compared to the probability that such an event will occur in Canada
- ❖ **Risk applies only to one specific hazard.**

# PREVENTION



- ◆ To prevent means to keep the event from happening, and thus, prevention is the aggregate of approaches and measures taken to ensure that human actions or natural phenomena DO NOT cause or result in the occurrence of an event related to the identified or unidentified hazard.
- ◆ It does NOT mean decreasing the amplitude, intensity, scale, and/or magnitude of the event.

# IMPACT



- ◆ Impact is defined as the actual process of contact between an event and a society or a society's immediate perimeter.
- ◆ The impact refers to both positive and negative influences produced by the event on the environment.



# MITIGATION



- ◆ In this context - any process that is undertaken to reduce the immediate damage otherwise being caused by a destructive force on the society.



# DAMAGE

- ❖ Damage is defined as harm or injury impairing the value or usefulness of something, or the health or normal function of persons.
- ❖ Damage is the negative result of the impact of an event on the society and environment.
- ❖ Damage may manifest in multiple ways and forms.
- ❖ Events may produce damage that may or may not be of sufficient magnitude to result in a disaster.



- ◆ It is the amount and characteristics of the damage that result from an event, tempered by the place of occurrence, society and culture, level of development, and degree of preparedness that determine whether an event results in a disaster.
- ◆ Damage may involve humans, other creatures, and/or the environment.
- ◆ The severity of the damage is a function of the magnitude of the event buffered by the resilience of the society and the environment impacted.

# VULNERABILITY



- ◆ In this context, vulnerability means the susceptibility of the population and environment to the type (nature) of the event.
- ◆ The resilience of the population/environment against the event is its pliability, flexibility, or elasticity to absorb the event.

# DISASTER MANAGEMENT



- ◆ Disaster Management is the aggregate of all measures taken to reduce the likelihood of damage that will occur related to a hazard(s), and to minimize the damage once an event is occurring or has occurred and to direct recovery from the damage.
- ◆ The effectiveness of disaster management determines the final result of the impact of the event on the environment and society impacted.