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CHAPTER-1

INTRODUCTION



CONCEPTS AND DEFINITIONS:

- Disaster
- Hazard
- Vulnerability
- Risks- severity
- Frequency and details
- Capacity
- Impact
- Prevention
- Mitigation

• DISASTER:

- A **disaster** is a serious problem 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.





- **DISASTER:**

A disaster is an occurrence disrupting the normal conditions of existence and causing a level of suffering that exceeds the capacity of adjustment of the affected community.

(WHO)

A disaster can be defined as an occurrence either nature or man made that causes human suffering and creates human needs that victim cannot alleviate without assistance.

(American Red Cross)

HAZARD:

- A dangerous phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.
- A hazard is natural event while the disaster is its consequence. A hazard is perceived natural event which threatens both life and property.....

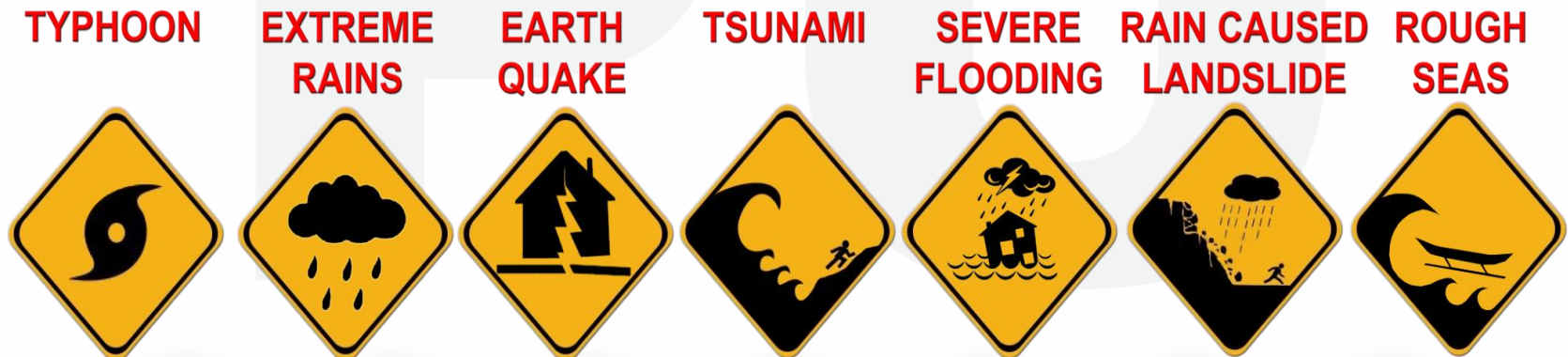
A disaster is a realization of this hazard.”

-John Whittow

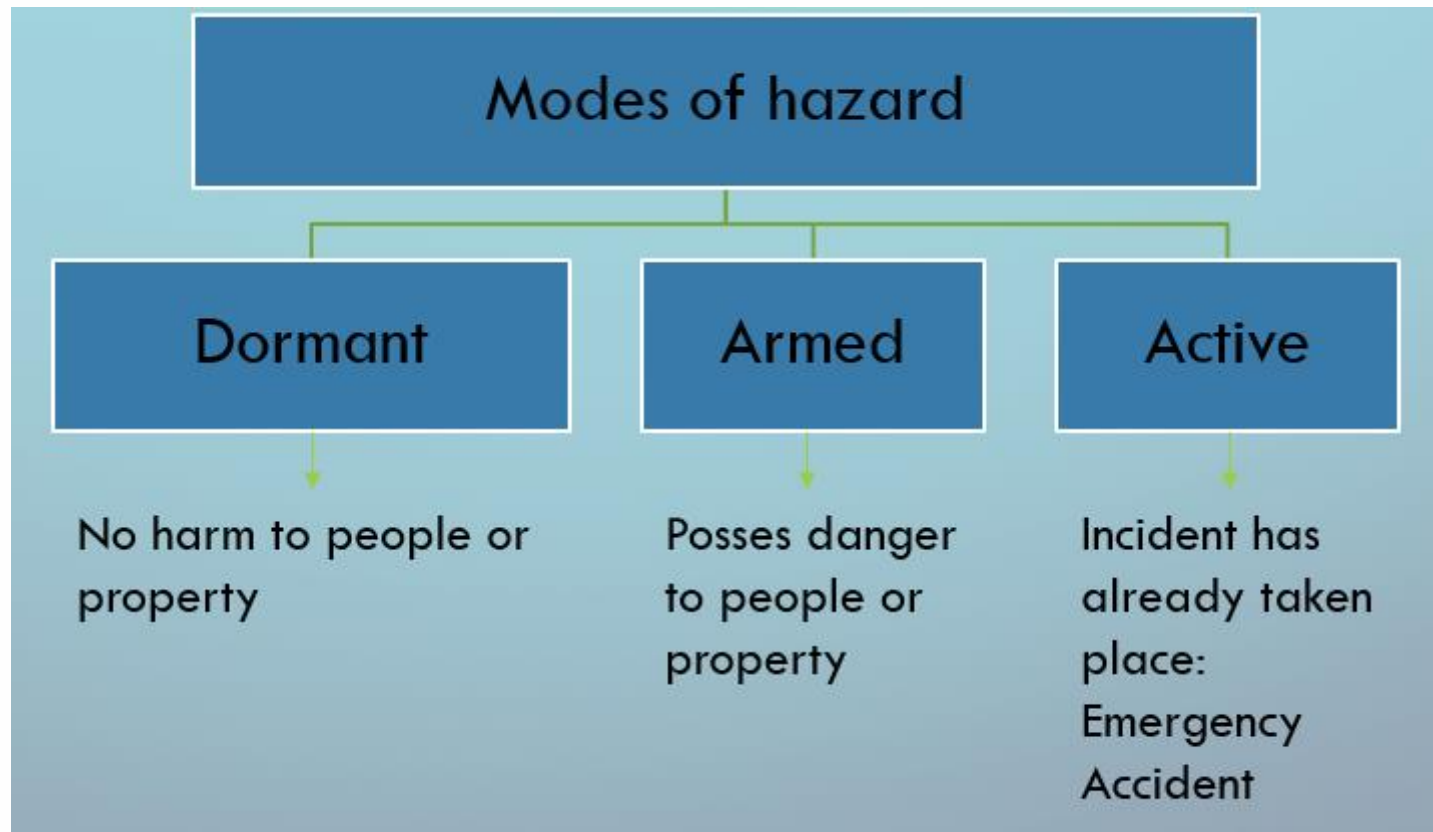
- When hazard involves elements of risks and vulnerable situation, they can turn into disasters.
- Hazards may be inevitable but disasters can be prevented.

HAZARD:

- It is a **dangerous phenomenon, substance, human activity or condition** that may cause loss of life, injury or other health impacts, property damage, loss of livelihood & services, social & economic disruption or environmental damage.
- It could be natural or human-induced.



HAZARD:



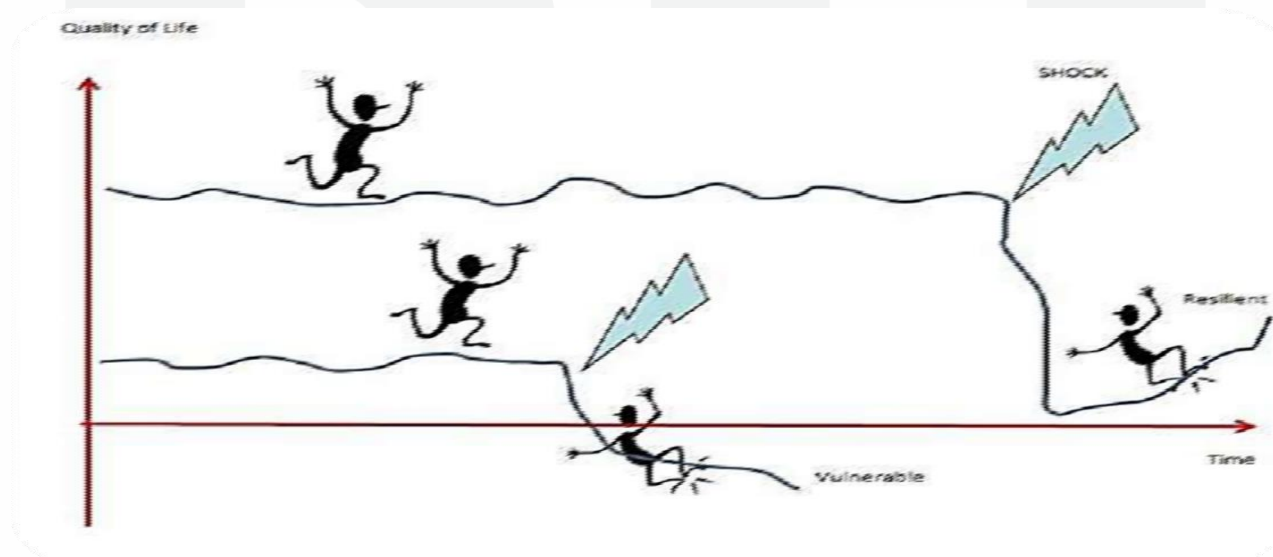
VULNERABILITY

- The characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard.



VULNERABILITY

- The Vulnerability describes the characteristics and circumstances of a community, system or asset that make it **susceptible to the damaging effects of a hazard**. There are many aspects of vulnerability, arising from various physical, social, economic, and environmental factors.





RISKS- SEVERITY:

- The extent of the damage to the institution, its people, and its goals and objectives resulting from a risk event occurring.
- Risk is the combination of Probability of an event to happen and its negative consequences.

$$R = \frac{\text{HAZARD} \times \text{VULNERABILITY (exposure)}}{\text{CAPACITY}}$$

FREQUENCY AND DETAILS

- The frequency of a natural hazard event is the number of times it occurs within a specified time interval. Magnitude. The magnitude of a natural hazard event is related to the energy released by the event.



CAPACITY

- The combination of all the strengths, attributes and resources available within a community, society or organization that can be used to achieve agreed goals.
- Capacity development: The process by which people, organizations and society systematically stimulate and develop their capacities over time to achieve social and economic goals, including through improvement of knowledge, skills, systems, and institutions.

IMPACT

- In a disaster, you **face the danger of death or physical injury**. You may also lose your home, possessions, and community. Such stressors place you at risk for emotional and physical health problems. Stress reactions after a disaster look very much like the common reactions seen after any type of trauma.



PREVENTION

- Prevention is defined as **regulatory and physical measures to ensure that emergencies are prevented**, or their effects mitigated and mitigation is defined as measures taken in advance of a disaster aimed at decreasing or eliminating its impact on society and environment.



MITIGATION

- Disaster Mitigation is the **cornerstone of emergency management.**
- Mitigation involves keeping homes away from floodplains, engineering bridges to withstand earthquakes, creating and enforcing effective building codes to protect property from hurricanes, and more.



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