

## **COURSE : DISASTER MANAGEMENT (MA/MSc PART I)**

### **Paper : I**

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### **Topic : Characteristics of Disasters**

**Disasters & Their Characteristics:** A disaster can be defined as an event that occurs in most cases suddenly and unexpectedly, causing severe disturbances to people or objects affected by it, and resulting in loss of life and harm to the health of the population, the destruction or loss of community property, and/or severe damage to the environment. Such a situation causes a disruption in the normal pattern of life, generating misfortune, helplessness, and suffering, effects on the socioeconomic structure of a region or a country, and/or the modification of the environment, to such an extent that there is a need for assistance and for immediate outside intervention.

Disasters can be caused by a natural phenomenon, by man, or can be the result of a technical failure of industrial or military systems.

Some disasters of natural cause represent threats that cannot be neutralized since their origins can hardly be forestalled, although in some cases they can be partially controlled. Earthquakes, volcanic eruptions, tidal waves (tsunamis), and hurricanes are examples of hazards that still cannot be prevented in practice, while floods, drought, and landslides can sometimes be controlled or mitigated by applying drainage systems and stabilization of soils.

Here is an extensive list of natural phenomena that can cause disasters or calamities:

- Earthquakes
- Tsunamis (tidal waves)
- Volcanic eruptions
- Hurricanes (storms, gales)
- Floods (slow, rapid)
- Massive land movements (landslides, collapses, mudflows)
- Droughts (desertification)
- Epidemics (biological)
- Pests

These are what might be called basic phenomena, since occasionally they generate other effects, as is the case with avalanches or mudslides, and the ash rains or lava flows that are directly associated with volcanic eruptions, or other kinds of phenomena that may be considered equivalents, such as tornados, tropical cyclones, or hurricanes. Most of these phenomena are cataclysmic, that is, they occur suddenly and affect a not very large area. However, there are cases such as desertification and drought which occur over a long period and affect extensive areas in an almost irreversible way.

Man-made disasters can either be deliberate or due to a technical failure, which can trigger a series of other breakdowns and cause a major disaster disaster.

Other man-made disasters include:

- Wars (terrorism)
- Explosions
- Fires
- Accidents
- Deforestation
- Contamination
- Collapses (impacts)

In general there exists a broad range of possible disasters of technological origin. At present, urban centers and ports are highly vulnerable to this type of disaster due to the high density of industry, building, and mass cargo and passenger transport systems.