**Disaster Management**

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**Important Key Words of these UPSC questions**

* + Drought
  + Earthquake
  + Urban Flood
  + Preparedness and mitigation.
  + Cloudburst
  + Tsunami
  + Risk
  + Risk Assessment.
  + Risk reduction.
  + Vulnerability
  + Landslide

**Important Terminology**

**Hazard:**

* + It is an event that has the potential of causing undesired outcomes of substantial scale and which can cause loss of life, property, etc.
  + There is no event that does not have the potential to cause damage if not handled properly. Hence the hazard is not the event itself but rather the improper handling of events.

* + **Types of Hazards:** It can be classified into two types that are natural hazards and manmade hazards.
    - Natural Events grouped into hazardous events are geophysical hazards, hydrological hazards, meteorological hazards, climatological hazards, biological hazards.
    - **Geophysical hazards**: It includes Volcanoes, tsunamis, etc.
    - **Hydrological hazards**: It includes drought, floods, landslides (it is a special type of mass movement), etc.
    - **Meteorological hazards**: It includes hazards caused by the short live micro to meso level extreme weather conditions. Cyclones, Western disturbance, storm surge, cold wave, tornado, etc.
    - **Climatological hazards**: It includes drought, frequent forest fires, Glacial Lake outburst flood, etc.
    - **Biological hazards**: Different types of associated diseases, etc.
  + **Manmade Hazardous Events:** They are collectively referred to as Chemical, biological, Radiological hazards, Nuclear Hazards (CBRN).

* + **Vulnerability:**
    - In any disaster situation, there would always be an affecting event and affected side or group. The things we wrote above is affecting an event. The affected side experiences the outcomes of the events on the basis of the sheer size or magnitude of the events and the preparedness or capacity of the population that faces them.
    - Hence simply said that characteristic and circumstance of the community (living components), system, or asset (non-living component) that it makes susceptible to the damaging effect of the Hazard broadly on the basis of its capacity or preparedness as well as the size and magnitude of the hazardous events.
    - The vulnerability is affected side or group.

**Types of the Vulnerability**

* + In any vulnerable situation, there will be the community (living part), assets (resources the community has created and system (environment in which the living body resides). They could be vulnerable due to the material vulnerability to the environment and assets.
  + Vulnerability to life and health. There could be a social vulnerability, that depends on the social capital.
  + **Ecological Vulnerability**: How strong is the ecosystem to withstand the disaster. Capacity to recover after degradation.
  + **Organizational Vulnerability:** The organization that has been created in the existential threat during the disaster.
  + **Educational Vulnerability:** When you do not educate society about different types of hazards and preparation regarding them.
  + **Attitudinal and motivational Vulnerability:**Lack of the right attitude to learn such as the mock drills.
  + **Political Vulnerability:** It could take place in democracy as well as in the autocratic political system.
    - Limited access to power to take any organizational action.
  + **Cultural Vulnerability:** We have a culture of doing things that is vulnerable. Example use of the crackers during Diwali.
  + **Physical Vulnerability**: Lack of the strength of the infrastructure and people to act during the disaster.

**Reasons for the increasing overall Vulnerability due to various Hazards**

* + Increasing population and settlement of humans everywhere.
  + Wherever Human settles it degrades the environment.
  + Increased rate of Urbanization. It concentrates the human population in the regions that increase the physical vulnerability.
  + Poverty in society. It makes the people with less capacity to intervene.
  + Blind adherence to cultural practices. For example idol submergence during different types of religious ceremonies, use of crackers, etc.
  + Gender Inequality led vulnerability.
  + War and civil strikes.
  + Lack of developmental planning and only reactive actions.

**Risk**

* + Risk as per the UNDP report of 2004 on reducing the disaster risks described the risk as to the probability of harmful consequences or expected loss of the life of people and community or damage to property and environment.
  + It is the mathematical outcome of the hazard and multiplied by the vulnerability.
  + Risk is divided by capacity. It means higher the capacity lesser will be the vulnerability.

### Disaster

* + As per the DM Act 2005 as well as the UN’s definition "the occurrence of the sudden and major misfortune disrupting the basic fabric and normal functioning of the society and community caused by the natural and man-made events either by accidents and negligence and of the magnitude as to be beyond the coping capacity of the society and community".

**DISASTER MANAGEMENT**

* + Disaster management as per Act 2005, is a continuous and integrated process of planning, organising, coordinating and implementing measures that are necessary for -
    - Prevention of danger or threat of any disaster;
    - Mitigation or reduction of risk of any disaster or its severity or consequences;
    - Capacity-building;
    - Preparedness to deal with any disaster;
    - Prompt response to any threatening disaster situation or disaster;
    - Assessing the severity or magnitude of effects of any disaster; evacuation, rescue and relief;
    - Rehabilitation and reconstruction

* + **Development/ Evolution of Different approaches internationally -**
    - **Declaration of 1990-2000 as International Decade for National disaster Reduction**
      * Objectives- National Assessment; Mitigation plans at all levels, Easy access for **local warning system; Globally, Nationally and locally.**

* + **World Conference on National Disaster Reduction in the 1994 - Yokohama Conference**
    - Focusing on - Risk assessment; prevention and preparedness; Integrating with developmental policies; Developing capacities; Effective early warning; Local Participation; Proper design and development; Technology share; environmental protection; Primary responsibility lies on the country.

* + **International Strategy for Disaster Risk Reduction (2000-2010)** Focusing on Risk management; Hazard mitigation and sustainable development

* + **Hyogo Framework (2005-2015)** Disaster Risk Reduction
    - Assess and monitor disaster risk and Enhance Early warning
    - Use knowledge and innovation to create **a culture of safety**
  + **Sendai Framework-**which has a list of 7 Global targets and 4 Priorities. 4 Priorities include-
    - Understanding the disaster risk.
    - Strengthening the governance of disaster risks for managing disaster risks.
    - Investments in disaster risk reduction for resilience
    - Improving the disaster preparedness to ensure effective response for **Build Back Better** in recovery, reconstruction and rehabilitation.
  + In 2015, SDGs were also adopted. And we also had the Paris agreement which was the COP 21 of UNFCCC.
  + Hence, Globally our approach Towards Disaster management Post-2015 brings together the Sendai framework and SDGs where the 5 targets of Sendai have mutual Re-enforcement with 3 Goals of SDGs and also common concerns between the Paris Agreement and DRR as per Sendai.

**Approaches:**

* + Based on this new pro-active approach to Disaster management has globally evolved which was also accepted as our National Approach to Disaster Management Act,2005
  + Before this period throughout the 1990s and earlier and before the release of the 2nd ARC report on Crisis management, India's approach towards disaster management was a **Broadly Reactive approach**

* + **Pro-Active Approach-**
    - Presently, the focus of Disaster Management Primarily focuses on DRR in the Pre-disaster management phase.
    - Whereas in the Post-Disaster Management Phase with continual efforts are being put on **Build Back Better**so as to ensure that the post-disaster phase integrates well with the continued Pre-Disaster phase of the next cycle.
    - Our Disaster Management approach has been broadly a Patchwork till the beginning of the 1990s.
    - To the extent, there is **No provision for Disaster Management in the Constitution of India.**None of the 3 lists (Union, State and Concurrent) has any provision for Disaster management.
    - There was no Disaster management department in the union government or state government till the 1990s. Every time a disaster took place Reactive action was done by the respective Governments.
    - The Venkatachaliah Commission; Veerappa Moily in the 2nd ARC as well as J.C. Pant Commission were the high powered committee on the crisis management
      * All recommended **Adding of Disaster management in the Concurrent List.**
    - In 1990 after the declaration of IDNDR the GOI set up **The Disaster Management cell under the Ministry of Agriculture.**
    - Further on the Recommendations of the JC Pant Commission in 1999 the Disaster management department was shifted in the year 2002 to the**Ministry of Home Affairs**
    - And Further On its recommendation, The DM ACT 2005, was enacted Which was a comprehensive act with a Proactive disaster management approach.
    - Prior to the DM act, there were two committees that were primarily set up as Adhoc committees - the Cabinet committee on the management of natural calamities and the CCS (Cabinet Committee on Security)
    - These used to meet and take decisions when a calamity hit and the **National Crisis Management Committee (Headed by the Cabinet Secretary)**
    - Because the cabinet committees were Adhoc hence our approach was mostly Reactive. As there was no Permanent Body for Disaster management Body and Hence no Pre-disaster management activities
    - In NDM ACT, created the provision of a Disaster management Institutional framework at the State and District level. Hence, Creating legal and permanent Bodies with a permanent workforce For Disaster Management. So that both Mitigation and Response activities could be smoothly implemented.

* + **National Disaster Management Institutional Mechanism**
  + 2005- DM ACT
  + 2009-NPDM (NATIONAL POLICY ON DISASTER MANAGEMENT)
  + The National Disaster Management Plan (NDMP) was **first released in 2016**. **NDM *guidelines*** for Specific Disasters.