Course Code:MCC102A
Course Title:Environmental Studies

Lecture No: 18

Title: Disaster management

Course Leader : Ms. Priyanka N

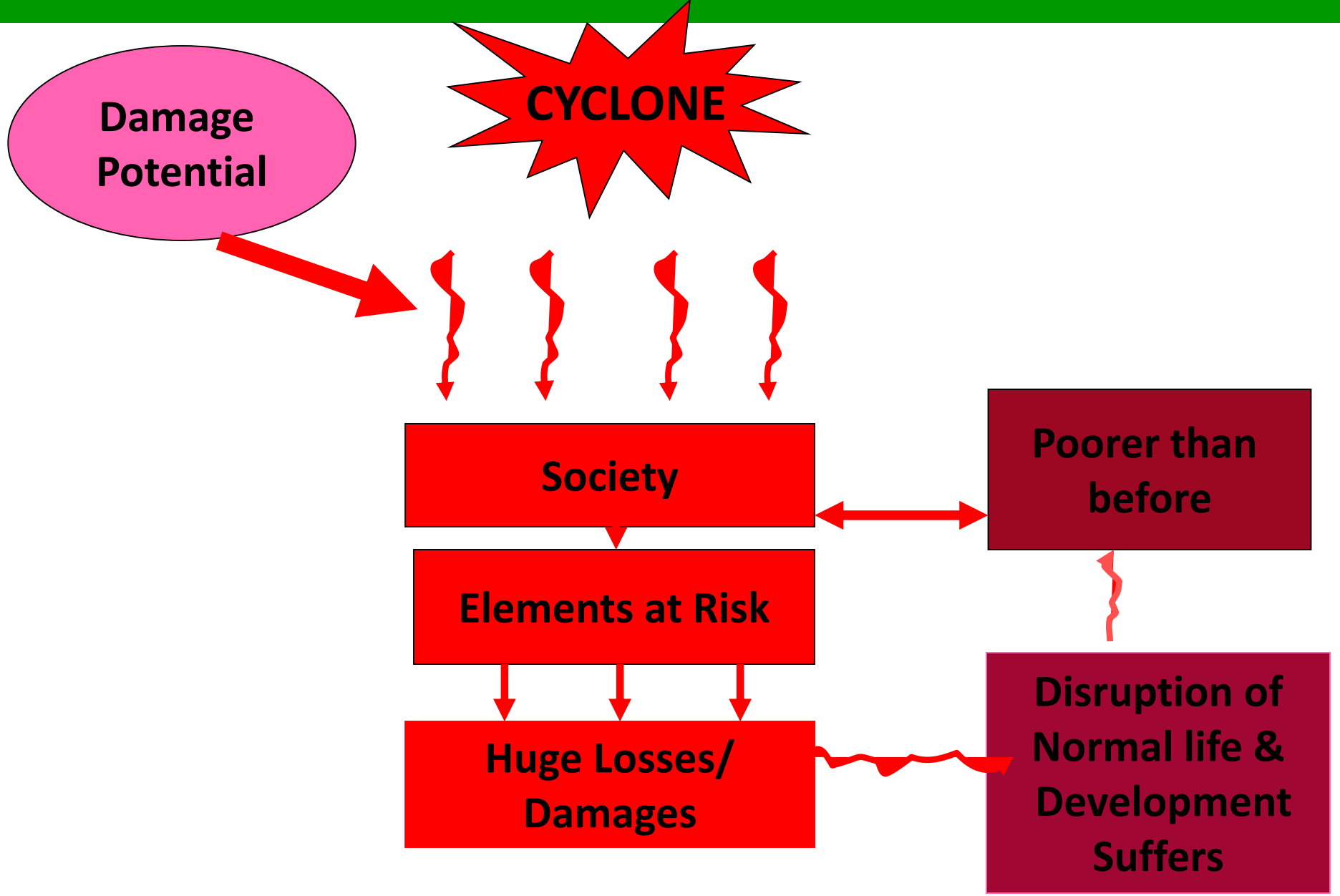
Lecture-18
Intended Learning Outcomes

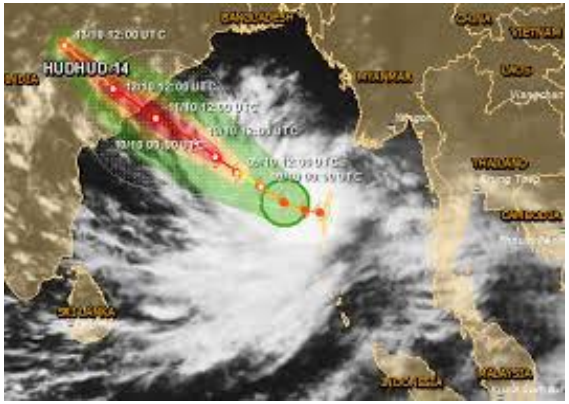
At the end of this lecture, students will be able to

- Define Cyclone, Landslide, Earthquake and floods
- Explain different stages of disaster management
- Discuss various aspects of disaster management

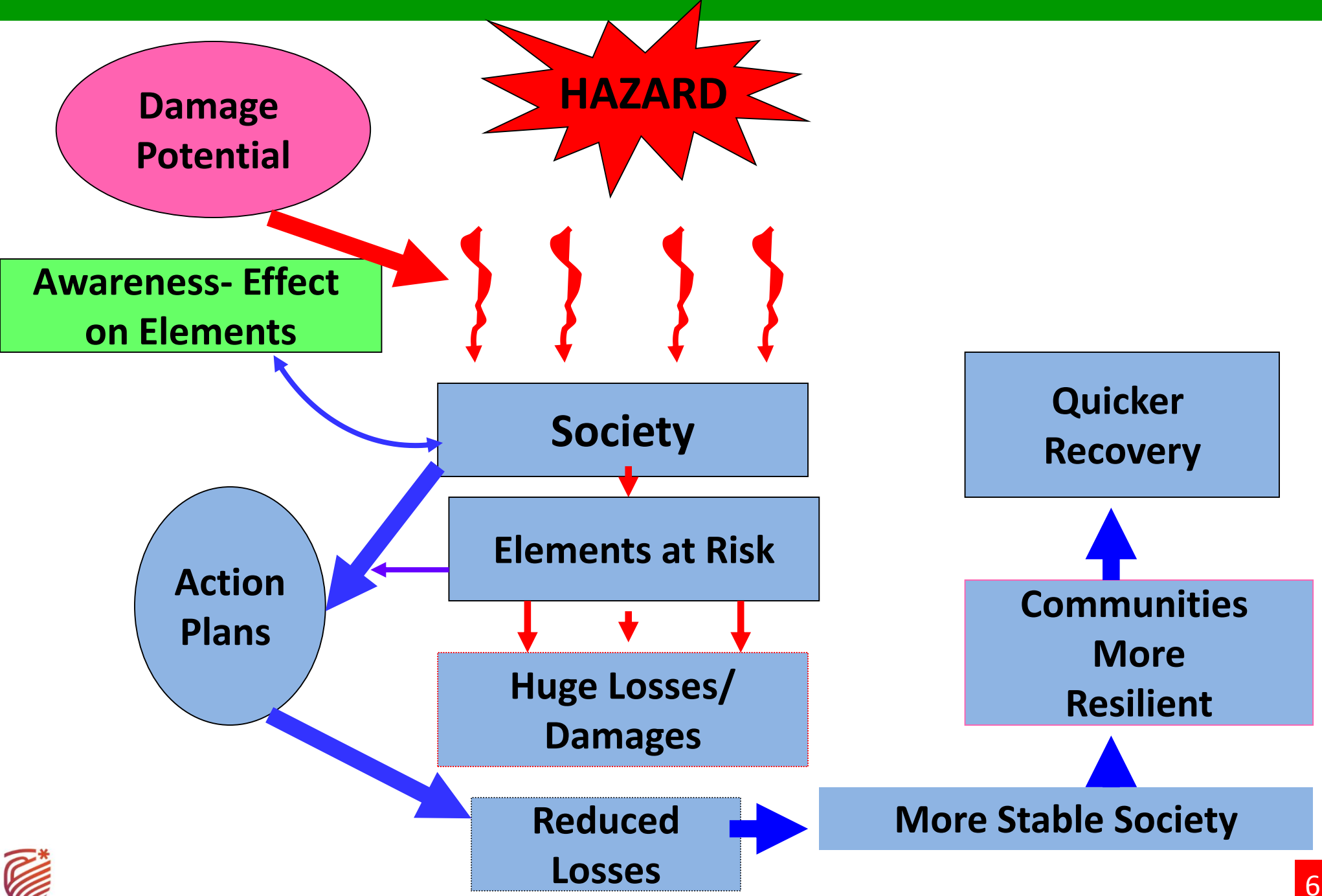
Disaster management

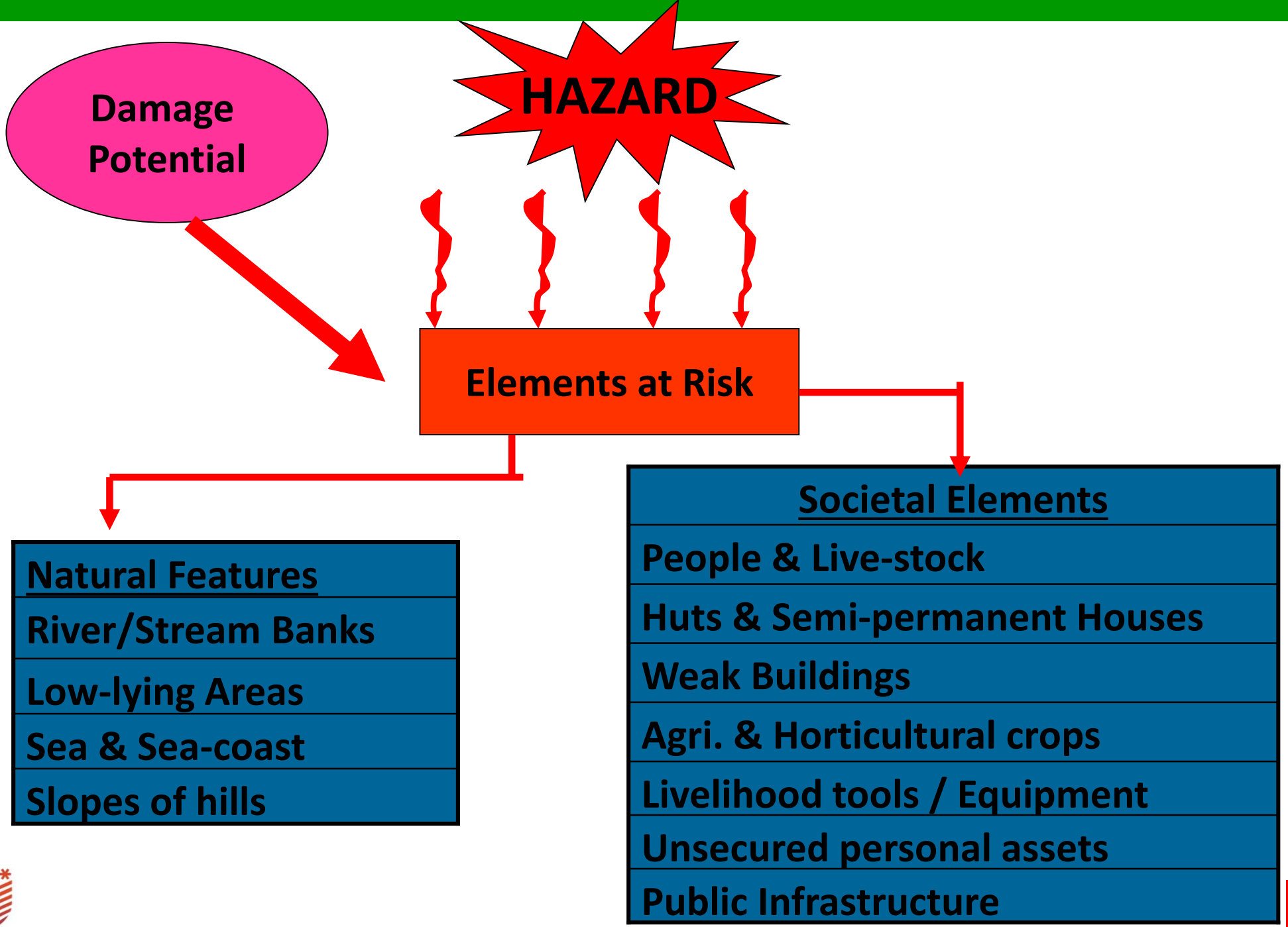
Disaster management (Emergency management) is the creation of plans through which communities reduce vulnerability to hazards





Hud hud cyclone

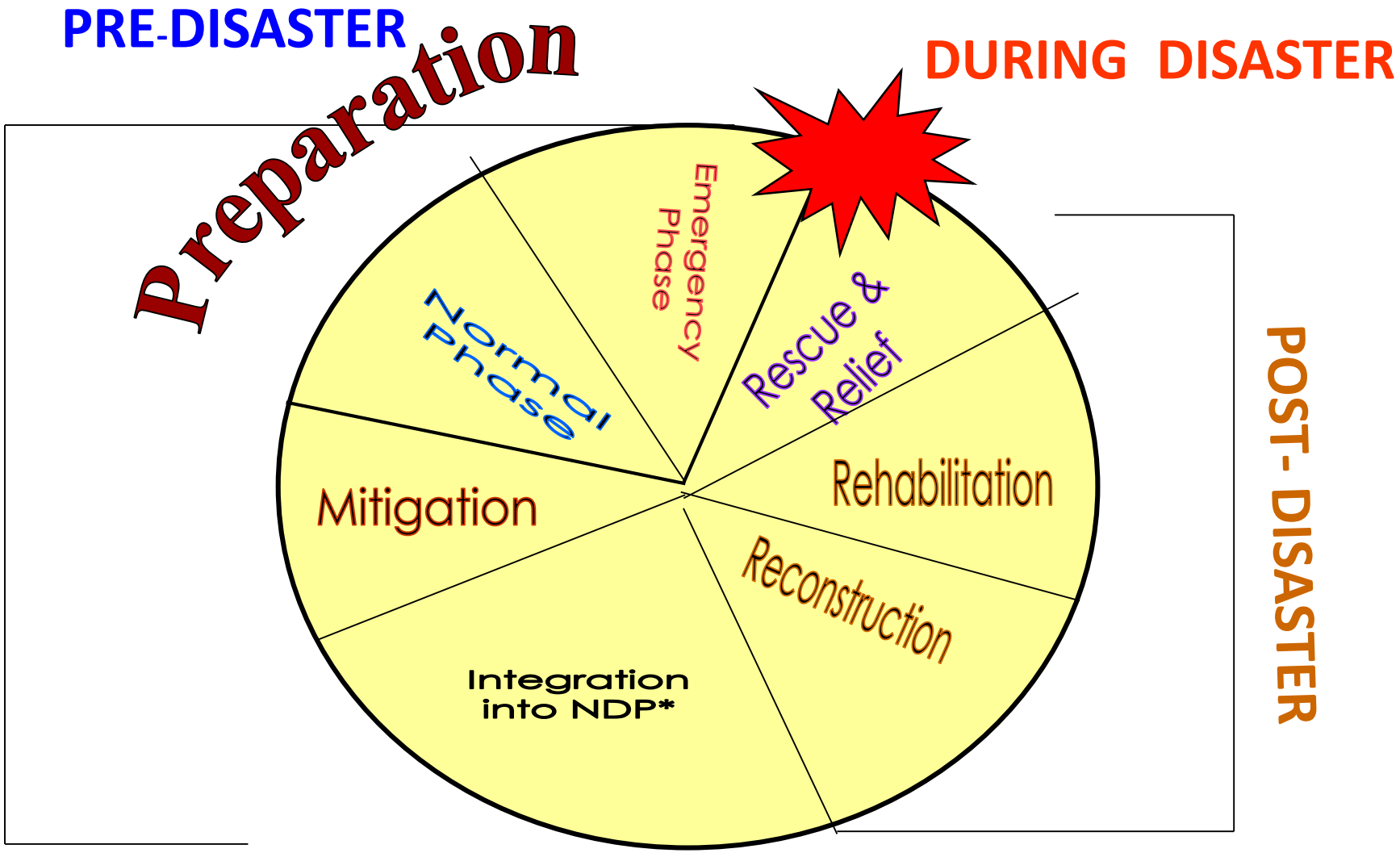




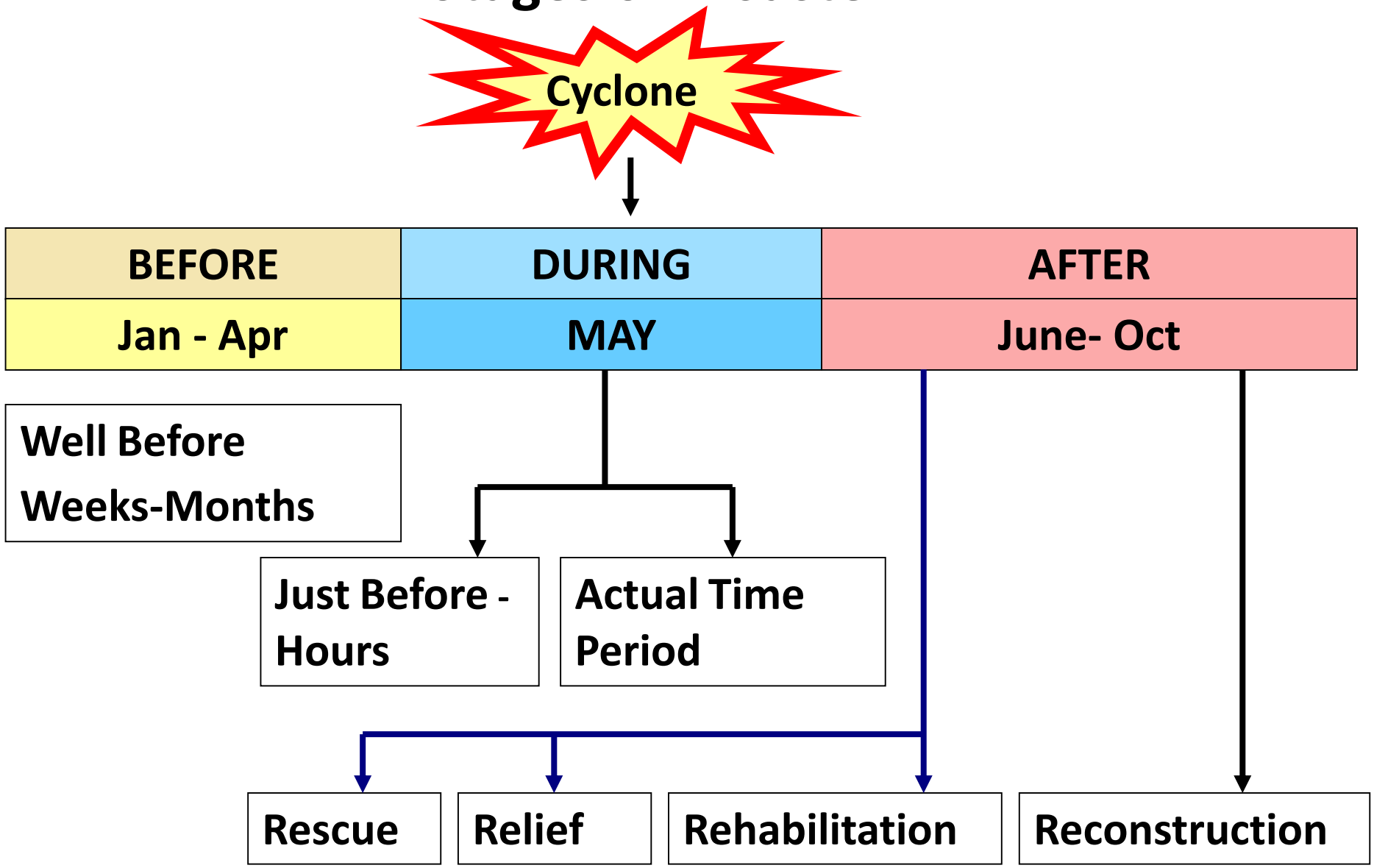
Aims Of Disaster Management

- Reduce (Avoid, if possible) the potential losses from hazards.
- Assure prompt and appropriate assistance to victims when necessary
- Achieve rapid and durable recovery

Disaster Management Cycle



Stages of Disaster



Role Players in Disasters

- People : Individuals, House -Holds, Volunteers
- Gram Panchayat : Sarpanch, Panchayati Secretary, Panchayati Members
- Village Elders : Caste/Community/Religious Leaders, Teachers, Doctors, Engineers, Retired Army & Police Personnel
- Govt. Deptl. Officers : Agriculture, Medical,Engineers (Housing, Roads & Buildings, Irrigation) Revenue Department, Public Health, Police etc. NGOs

Disaster Preparedness

- Disaster preparedness aims at minimizing the adverse effects of a hazard through effective precautionary actions

- Ensure timely, appropriate and efficient organization and delivery of emergency response following the impact of a disaster.

Disaster Preparedness

- Vulnerability Analysis and Mapping to include Resources.
- Assess strengthening requirements and execute.
- Funding for preparedness must be arranged.
- Peoples cooperation through Political leaders, elders, Volunteers and NGOs
- Create lead time by interpreting Warnings
- Plan to include movement of resources with time frame.
- Aim to reduce the destructive potential of cyclones, timely & appropriate relief to victims and quick & durable recovery

Examples of landslide disasters

1970 - Yungay, Peru:

- A minor earthquake loosened a small mass of glacial ice and rock on the flanks of Mt. Huascaran in the Peruvian Andes.
- It fell 650 m and landed on a mass of unconsolidated rock.
- The resultant debris avalanche cascaded downvalley for a distance of 65 km, reaching speeds of >400 km/h.
- Some 25,000 to 45,000 people died in the town of Yungay and neighbouring villages.

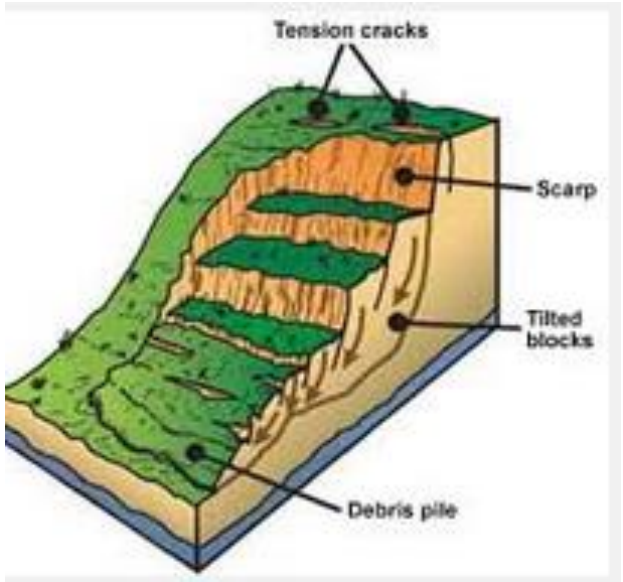
Examples of Landslide Disasters

1903 - Frank, Alberta

- A rock avalanche (30 M m^3) slid off the eastern face of Turtle Mountain, covering 3 km in about 100 seconds.
- The avalanche buried the outskirts of the mining town of Frank.
- Some 75 people died.

Landslide

- The downward sliding of a relatively dry mass of earth and rock.
- The term landslide includes a wide range of ground movement, such as rock falls, deep failure of slopes, and shallow debris flows.



Effects on the Environment

- Destroys the slope/hill
- Eliminates all vegetation
- Buries houses and sometimes entire villages
- Weakens the slope and makes it more susceptible to further landslides

What causes a landslide?

- Erosion causing extremely steep slopes
- Powerful earthquakes
- Excess weight on unstable soil
- Volcanic eruptions
  - Ash
  - Great force

Summary

- Cyclones are large revolving vortices in the atmosphere extending horizontally from 150 to1000 km and vertically from the surface to 12 to 14 km

- A flood is an overflow of water that submerges land which is usually dry

- An earthquake is the result of a sudden release of energy in the Earth's crust that creates seismic waves