Earthquake and flood Hazard

Geological processes like earthquake, volcano es, flood, landslide are normal natural events which have resulted in the formation of hazards and disasters on the earth. However, they are disappeares in their impacts When they affect human settlement. So there is a slight difference in between hazard and disaster. The precondition of a disaster is called Hazards and when it is effective to the human settlement and human being. This mainly referred to as disaster. Human societies have witnessed a large number of such natural hazards in different parts of the world have tried to learn to control this processes to some extends.

Earthquake Hazards :- Due to sudden movement of Earth's crust short-term vibration occurred on the earth surface, these violent vibrations are called as Earthquake. One of the reason put forward as to why earthquake occur is the motion of the plate tectonic although there are some other causes. There plates of slid rock on earth crust more slowly on their boundaries & due to the friction or any other reason a stress builds up. As a result there may be earthquake along the plate boundaries. The point as a fault where the first moment occurs usually lies at a depth of 20-700 Km and this point are called **Focus** on an earthquake. The point on the surface directly above the focus is called **epicenter**.

The Severity and intensity of on earthquake is measure on Richter scale. The following tables show the severity of the earthquake measured by a Seismography as per Richter scale.

Richter scale	Severity of earth
Less than 4	Insignificant
4 - 4.9	Moderate
5 - 5.9	Damaging
6 - 6.9	Destructive

7 - 7.9 More than 8	Major Great

The greatest earthquake recorded so far occurred on 22 may 1960 in chile in South America. With estimated magnitude of 9.5 on Richter scale. This earthquake killed more than 6000 people and affects the large area covering some 90,000 sq. mile. Similarly a devastating earthquake at Bhuj in India (Gujrat) on January 26, 2001 with a Richter scale reading 8.1 killed more than 50,000 people causing extensive damages.

There was also a severe earthquake. Lathur (Maharashtra) on September 30, 1993 which damage human settlement and property with seven earth on August 15, 1950 with a Richter scale reading of 3,7 and January 10, 1986.

Human Activity such as-

1. Construction of big dams for hydro electric project.
2. Underground nuclear testing.
3. Deep well disposal of liquid waste etc may also cause or enhance earthquake frequency.

Earthquake generated water waves called Tsunamis can severely affect coastal areas. The giant seawalls. Can move at the speed of up to 1000 km per house on even faster. While approaching the sea Shane they may often reach 15 m or sometimes up to 65 m. in height and cause massive devastation in coastal areas. For eg- In 1976 in China such wave kill 8.3 lakhs peoples and in 1556 such Tsunamis kills ,more than 50,000 people.

Depending upon the intensity time interval and the time of occurrence and earthquake may be more less devastating construction of Earthquake resistant building in the earthquake prone areas and public awareness regarding precautions to be taken may save the affected people. It is also found that wooden houses are

more preferred in earthquake prone areas as in Japan rather contracture of heavily reinforced building.

Flood Hazard :- Due to heavy rain or sudden snow melt or through any other natural & artificial reason the quantity of water in springs and river exceed their capacity and water flows the banks or embankments. The surrounding areas inundated and this is known as flood. In the present day context most of the countries in the world suffers from river flood to various extends.A Flood Generally does not damage property or causes causalities to an extends as done by other natural Disaster.

Human Activities have been the main causes for increasing the severity and frequency of flood. Construction of roads, perking space and building that cover the earthquake handle allows infiltration of water into the soil and speeds up the run off. Similarly clearing of forest for agriculture has also increase the severity of flood.

In India and Uttaranchal is considered to be among the worst flood hit states of the country. It has warily 20% of the 40 million hectares of flood prone zone of the countries. The other states like Bihar, W.B., Orrisa, Assam etc. are also the flood phone state of India where there is a threat for loss of property and epidemics.

Floodplain the low-lying areas which get inundated during flood help to reduce flood. Building up to flood control structure like flood walls or deepening river channel have only transfer the problems downstream. So the occurrence of flood is a natural Hazard in our country. On an average every year major disaster in India causing huge economic loss and lots of human life. There is a need for systematic study and strategies to involve a disaster management plan for our country.

To check the flood efforts needs to restore wetlands, Replace ground cover. It is suggested that floodplain should be use for wildlife habited, parks, recreational area and other uses which will help in control flood damage.