



## Causes and Remedies of Natural Calamities: Analysis of People Perception

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**Abstract:** *Natural calamities originate in highly dynamic process whose elemental nature expresses It self in their unpredictable and uncontrollable characters. Those natural calamities and causes of losses human life and great material damage to economies are called disaster and catastrophes.*

*Natural calamities includes the earthquakes, volcanoes, mass movements, debris flow, mud flow, flood and drought, cyclones, thunder storms, snow fall, heavy rainfall, cloud bursting and diseases epidemics etc.*

### Objectives-

- 1- To study out the each type of natural calamities on a region/ area/ earth surface.
  - 2- To analysis the total damage of human beings property like agricultural, industrial sectore conomietc.
  - 3- To analyse the role of people/ community that for facing against these natural calamities.
  - 4- To examines the main causes of natural calamities.
  - 5- To find out the remedies on that natural calamities.
- Methodology- The information/data is collected by primary and secondary bases in which questunaires as collected to people and books/journals/research /news papers etc.

**Types of natural calamities-** Natural calamities comprising of earthquakes, volcanoes, tsunami, flood, cloud bursting, cyclones, hurricane, typhoon, heavy rainfall, acid rainfall, snow fall, sever flood, diffusing of disease and so on landslids etc.

**Earthquake-** Whenever the earth surface is vibrated due to sudden movement or isostatic adjustment, then it is said to be an earthquake take place. An earthquake is result of a sudden disturbance in the earts crust, resulting either from an explosive volcanic eruption or from some

dislocation of the rock within a few kilometers of the surface. Causes of Earthquake.

**1. Volcanic Eruption-** Volcanoes and earthquake are interrelated to each other. Whenever the hot magma, have been tried to overcome on the earth surface, it shakens the earth surface near and at the volcanic event area. Due to the getting of magma from the interior of the earth on the earth surface, it imparts some shake to the country rocks and overline rock surfacial area. The volcanic earthquakes are common and abundan and either at present active, dormant, or recently extinct. There are common along the fire ring belt in Paccific Ocean.

### 2. Isostatic Adjustment-

The issostaic balance between the raised and depressed blocks of land on the surface of the earth is not always maintained. When erosion takes place on the mountain, it results in deposition on the sea bed and the isostatic balance is disturbed.

In order to mountain the balance magma frm the neighbouring areas lows undr the raised surface and the earthquake occur at zones of weakness. An earthquake take place only in the isostatic adjustment is sudden and quick the earthquake which hit Utter Kashi in December 1991 was due to isostatic adjustment.

**3. Faulting and Elestic Rebound theory-** The horizontal and vertical movement caused by endogenetic forces result into the formation of fault and folds which in turn cause isostatic disequellibrium in the crustal rocks which ultimetley causes earthquakes

**Key words-** Natural calamities, dynamic process, elemental nature.

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of varying magnify depending on the nature and magnitude dislocation of rocks block caused by faulting and folding. Infact, sudden (famous earthquake of 1872 of California was caused) dislocation of rock blocks caused by both tectonic and compressive force trigger immediate earth tremors due to sudden maladjustment of rock block. The 1950, the earthquake of Assam was believed to have been caused due to disequilibrium in crustal rocks, introduced by crustal fracture.

**4. Hydrostatic pressure and Anthropogenic causes-** Through the earthquakes are natural phenomena and are caused by the endogenous forces coming from within the earth but certain human activities such as pumping of ground water and oil, deep underground mining, blasting of rocks by dynamite for constructional purposes, nuclear explosion, large scale of water storage in vast reservoirs etc also causes earth tremors of serious consequences. Eg Koyno earthquake of 1967 due to Koyno reservoir construction in 1962.

**5. Plate Tectonic Theory-** Plate Tectonic movement is the most causes of the earthquakes. Spatial Distribution of Earthquakes

**The earthquake belts in the world are-**

1. The circum-pacific belt (convergent plate boundaries).
2. The mid Atlantic belt (divergent plate boundaries).
3. The mid continental belt.
4. Interplate seismicity.

Major Earthquake Regions of India  
Major Earthquake regions of World

**Consequences of Earthquakes-** The major consequences of earthquake are deformation of ground surface, damage and destruction of human establishment and structures such as building, railway lines, roads bridges, dams, towns and cities. A lot of losses of human and cattle lives and devastating fires, floods, landslides and disturbance in the underground levels. Kathmandoo and adjacent area of the Nepal and as well as entire of India has been badly affected due to earthquakes of 25th April-2015. In which above 12345 population and animals dead and a lot of buildings, roads and other goods and commodities are damaged.

**Remedies in Earthquakes-** Making a forecast about the occurrence of an earthquake in a region, place and time is still difficult proposition. The seismologists are increasing concentrating on the aspect of earthquake forecasting. One approach for making predictions is to examine the history of each plate boundary and determine the frequency of earthquake in the past. Seismologists then construct maps that provide an estimate of expected earthquake activities. Areas that are quite and over due for the earthquake are termed as seismic gaps therefore a place that has accumulated strain. The Chinese on the basis of seismographic studies on animal behavior, made fairly accurate predictions in the seventies. The Chinese seismologists provided a list of indicative animal behavior.

Before the earthquakes, cattle refusing to enter corrals and ducks refusing to enter the water, snakes coming out of hibernation and fish jumping out of water.

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