

Geography of disasters

Since the terrific Tsunami of last year, one shake of the earth crust in any corner of the globe makes us afraid, especially when it is somewhere in the islands or coastal areas. All of us are living on disaster prone areas, may be of different natures, types and intensities, and the interesting fact is that disasters vary in terms of nature, type and intensity as per the geographical locations.

Around the Pacific Ocean, there is the 'Ring of Fire' where active breaking of the earth's crust occurs causing earthquakes. The earth's crust is divided into several semi-mobile layers called plates (resembling layers of thermocol over the surface of water) that floats over the ocean surface. Important plates interacting in the region are the South American Plate, the Nasca Plate, the Pacific Plate, and the Philippine Plate. There are smaller plates in the inland seas that surround this region. Numerous countries here have been affected by catastrophic earthquakes, such as Chile, Peru, Ecuador, Colombia, Central America, Mexico, Philippines, Guam, People's Republic of China, Marianas, Indonesia, Papua-New Guinea, Solomon Islands, Vanuatu, New Zealand, Australia and other regions that border chains of volcanic islands in the Pacific.

Volcanoes are located mainly along the Pacific Rim that cover the Philippines, Indonesia, Japan, Papua New Guinea, New Zealand, Solomon Islands, Tonga and Vanuatu. Tsunamis, tidal waves generated by earthquakes, affect many of the coastal areas of the region. Tropical cyclones or typhoons are common in the Asia-Pacific region specially over the north-west Pacific, during June and November. Here examples have been cited from some countries of Asia to show how the locational factors matter to cause disasters.

Armenia

- Located on Alpen-Himalayan and Balkan-Carpathian seismic zone that becomes a plate-boundary, and therefore hit by earthquakes frequently.

Bangladesh

- Located on a path of cyclones spawned at Bay of Bengal makes Bangladesh one of the most affected country by windstorms.
- The devastating damage by cyclones to this country in terms of the number of disasters and the damages.
- Bangladesh is located in flat land with less than 20 metres above sea-level except the North and the steep range of hills in the south-east, and accordingly monsoon floods cause damage.

Cambodia

- Floods of the Mekong River caused by the monsoon.
- Landslides causing devastating damage
- Paddy field damage by drought.

China

- About 80 per cent of China's territorial area, 60 per cent of its large cities and 70 per cent of its urban areas with populations over 1 million, are located in seismic zones and is effected by earthquakes allmost every year.
- It owns a vast land and large population, and also has been hit by various natural disasters. The numbers of people killed and affected by natural disasters are the largest in the world.
- Floods cause the most massive impact on the country, followed by droughts and earthquakes.

India

- Located in a natural disaster-prone area, affected by windstorms such as cyclones, originating at the Bay of Bengal and the Arabian Sea, causes floods in several coastal parts of India.
- Earthquakes caused by active crustal activity of Himalayan mountains.
- Floods caused by monsoon.
- Drought in arid/semiarid areas. Historically, drought damages are the largest in the country.

Indonesia

- Earthquakes affect because there are seismic belts running through the country, and moreover there are 129 active volcanoes and accordingly volcanic eruptions often happen in the country.
- Floods tend to occur in rainy season and drought in dry season.

Japan

- Located not only in typhoon prone area, but also on Pacific earthquake belt and the volcanic zone that are on very active plate boundaries. It is located in the Pacific-Rim Seismic Zone and suffers, on average, a massive earthquake (Richter scale 8.0 or more) once every 10 years and a large scale earthquake (magnitude 7.0) once a year.
- Also it is attacked by various other natural disasters such as typhoons, heavy rains, heavy snowfalls, debris flow, landslides, volcanic eruptions, etc. every year.
- The economic damage due to natural disaster is the largest in the world.

Kazakhstan

- Located at the foot of Tian Shan and Altai Mountains and often has an impact of earthquakes caused by crustal deformation and natural disasters such as debris flow and floods.

Kyrgyztan

- Covered with 94 % of mountain range that is over 1,000 metres above sea level and the 40 % of the range is alpine area with over 3,000 metres high altitude. They inherit distinctive natural disasters of mountainous range such as earthquakes accompanied with active crustal deformation.
- Floods are caused by melt water of snow and landslides. ■

Source: <http://unpan1.un.org/intradoc/groups/public/documents/APCITY/UNPAN009693.pdf>
<http://www.rrcap.unep.org/apeol/Chp1b-nathazards.html>