Two Factors That Affect Disasters (Long Answer)

Disasters do not occur suddenly or independently; they are the result of the interaction between **hazardous events** and the **vulnerability of people, environment, and infrastructure**. Several factors influence the intensity, frequency, and impact of disasters. Among them, the following two factors play a major role:

---

1. Natural Factors (Environmental Factors)

Natural factors are those that arise from the physical environment. These factors make certain regions more prone to disasters and determine how severe a disaster can become.

a. Geological Conditions

Regions located along **tectonic plate boundaries**, fault lines, and volcanic zones are naturally vulnerable to earthquakes, tsunamis, and volcanic eruptions. For example, the Himalayan region is earthquake-prone due to active tectonic movement.

b. Climatic and Weather Conditions

Extreme climatic events such as **heavy rainfall, cyclones, droughts, heat waves, and floods** occur due to changes in atmospheric conditions. Monsoon patterns, temperature variations, and climate change significantly influence the frequency and intensity of disasters.

c. Topography and Geography

The physical features of a region, such as mountains, rivers, slopes, and coastal areas, affect disaster occurrence. For example:

- Steep slopes increase the chances of landslides.
- Low-lying areas near rivers are prone to floods.
- Coastal areas face cyclones and storm surges.

d. Climate Change and Global Warming

Rising temperatures lead to melting glaciers, rising sea levels, intense storms, and unpredictable rainfall, making natural disasters more frequent and severe.

Thus, natural factors create **conditions that allow disasters to occur**, and they largely determine the scale and impact of a natural hazard.

2. Human Factors (Anthropogenic Factors)

Human activities often aggravate natural hazards and sometimes even create disasters. These are also called **man-made factors**, and they significantly increase the vulnerability of people and the environment.

a. Deforestation and Environmental Degradation

Cutting trees increases soil erosion, leading to landslides, floods, and loss of biodiversity. Forest destruction disturbs natural water flow and increases disaster risks.

b. Unplanned Urbanization

Rapid and unplanned urban growth results in:

- Construction on unsafe land
- Poor drainage systems
- Overcrowded settlements
  These factors increase vulnerability to floods, building collapse, and fires.

c. Industrialization and Technological Hazards

Industrial accidents such as chemical leaks, gas explosions, and nuclear disasters (e.g., Bhopal Gas Tragedy) are caused by human negligence, poor safety measures, and improper waste disposal.

d. Climate Change Caused by Human Activity

Excessive burning of fossil fuels, pollution, and greenhouse gas emissions contribute to global warming, which intensifies natural disasters like heatwaves, droughts, and cyclones.

e. Poor Governance and Lack of Preparedness

Inadequate policies, weak infrastructure, poor disaster management, and lack of awareness increase the destructive effects of disasters. Communities with limited resources are more vulnerable.

Thus, human factors **worsen the impact** of natural hazards and can turn them into severe disasters.

Conclusion

Both **natural and human factors** shape the intensity and frequency of disasters. While natural factors create the conditions for disasters to occur, human factors often increase their destructive impact. Effective disaster management requires reducing human-caused vulnerabilities and strengthening preparedness to minimize loss of life and property.