

Key Terms: Natural Hazards

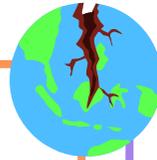


Natural Hazards

Natural Hazard: A natural event that poses risks to people and property.

Types of Natural Hazards: Tectonic (e.g., earthquakes, volcanoes), atmospheric (e.g., storms), geomorphological (e.g., landslides), and biological (e.g., diseases).

Hazard Risk: The likelihood of a natural hazard affecting people or property, influenced by vulnerability, capacity to cope, and nature of the hazard.



Tectonic Hazards



Plate Tectonics Theory: The Earth's crust is divided into plates that move due to mantle convection.

Plate Margins:

- **Constructive:** Plates move apart (e.g., Mid-Atlantic Ridge).
- **Destructive:** Plates collide, one subducts (e.g., Andes).
- **Conservative:** Plates slide past each other (e.g., San Andreas Fault).

Earthquake: Shaking caused by sudden movement of tectonic plates.

Volcanic Eruption: Release of magma, ash, and gases due to tectonic activity.

Primary Effects: Immediate impacts (e.g., destruction, injuries).

Secondary Effects: Indirect impacts (e.g., disease, economic losses).

Immediate Responses: Actions taken immediately after a hazard (e.g., rescue efforts).

Long-Term Responses: Measures to rebuild and reduce future risks (e.g., improved infrastructure).

Living in Hazard Zones: Reasons include fertile soil, economic opportunities, and cultural ties.

Risk Management:

- **Monitoring:** Observing signs of hazards.
- **Prediction:** Forecasting when hazards might occur.
- **Protection:** Building designs to withstand hazards.
- **Planning:** Preparing evacuation routes and emergency plans.



Weather Hazards



Atmospheric Circulation: Movement of air in pressure belts, driving global weather patterns.

Tropical Storms: Intense low-pressure systems (hurricanes, cyclones, typhoons).

Formation of Tropical Storms: Warm seas, rising moist air, and spinning due to the Coriolis effect.

Features of Tropical Storms: Eye, eyewall, high winds, and heavy rainfall.

Effects of Tropical Storms:

- **Primary:** Flooding, infrastructure damage.
- **Secondary:** Disease, homelessness.

Responses to Tropical Storms:

- **Immediate:** Evacuation, aid distribution.
- **Long-Term:** Infrastructure rebuilding, risk education.

Climate Change and Storms: Increased frequency, intensity, and changes in distribution due to global warming.

UK Weather Hazards: Storms, floods, droughts, heatwaves, and snow.

Extreme Weather Example: Case study (e.g., 2018 UK Beast from the East):

- Causes, impacts (social, economic, environmental), and management strategies.

Evidence of Extreme Weather: More frequent & intense events in UK.



Climate Change

Quaternary Period: The last 2.6 million years, marked by glacial and interglacial periods.

Evidence of Climate Change: Rising temperatures, melting ice, and sea-level rise.

Causes of Climate Change:

- **Natural:** Orbital changes, volcanic activity, solar output.
- **Human:** Fossil fuel use, deforestation, agriculture.

Effects of Climate Change:

- **People:** Displacement, food insecurity.
- **Environment:** Habitat loss, extreme weather.

Managing Climate Change:

- **Mitigation:** Reducing causes (e.g., renewable energy, reforestation).
- **Adaptation:** Responding to effects (e.g., flood defenses, changing farming practices).

