

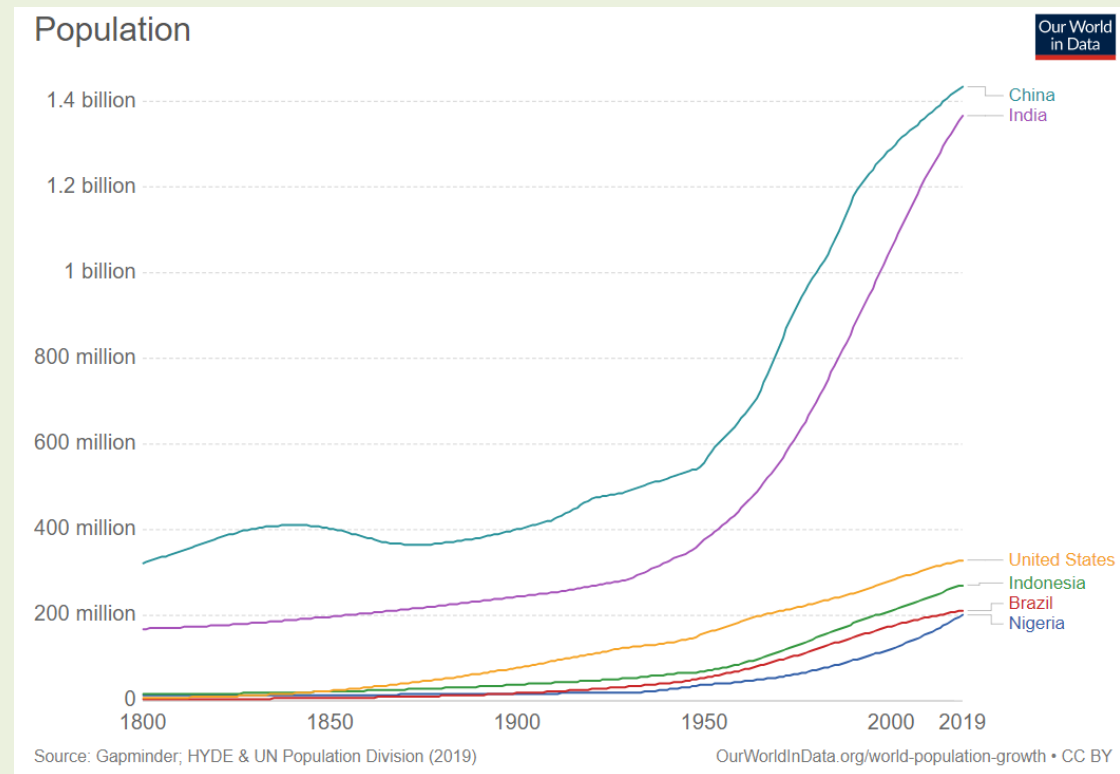
A photograph of a lush green forest. In the upper left, a waterfall cascades down a mossy rock face. The surrounding area is covered in dense, vibrant green vegetation, including various ferns and leafy plants. At the bottom of the image, a stream flows over dark, wet rocks, creating a smooth, blurred effect. The overall scene is serene and natural.

# Environment and Human Population

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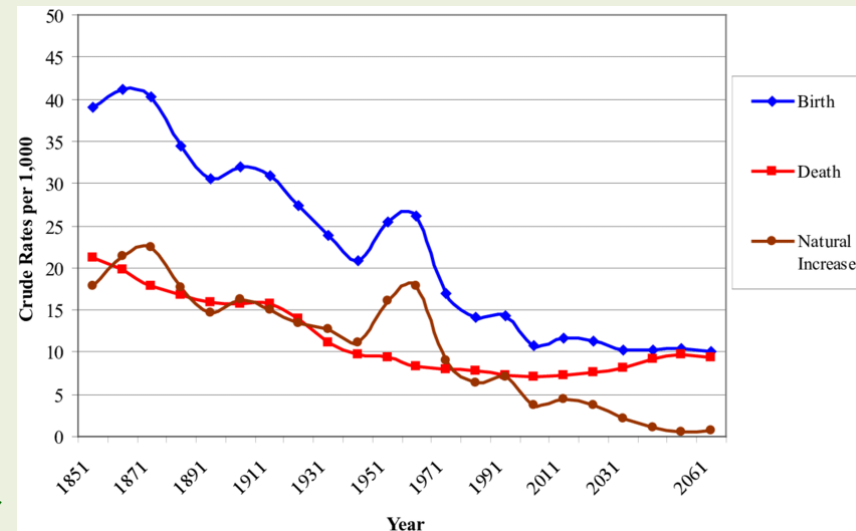
# Human Population and Environment

- Human population of the world has got doubled during the last 50 years.
- The carrying capacity of the planet earth will be greatly stretched and exceeded if the present rate of population growth continues.



# Population Growth

- The increase in the number of individuals in a population is known as population growth.
- Demography
  - The study of human population trends is called demography
- Factors Deciding the Growth or Decline of Population
  - Birth Rate - Number of births per thousand people in a geographical area.
  - Death rate - Number of deaths per thousand people in a geographical area.
  - Migration - Rate of change in population for a specific area.



# Population Growth

- Causes of Population Growth
  - Availability of cure for many life-threatening diseases
  - Preference for sons
  - Custom of early marriages
  - Improvement in public health
  - Illiteracy
- Effects of Population Growth
  - Excessive exploitation of natural resources
  - Unemployment
  - Lack of proper health and sanitation facilities
  - Environmental pollution



# Resettlement and Rehabilitation

- Reasons for Displacement of Human Habitation
  - Natural hazards – Earthquakes, cyclones, landslides, floods, drought, volcanic eruptions, and epidemic diseases
  - Anthropogenic factors – Developmental activities such as construction of dams, roads, tunnels, etc., which increase the risks of calamities such as floods and landslides. Other factors include accumulation of wastes and environmental pollution



# Problems Faced by Displaced People

- The compensation for the lost land is often not paid or the payment is delayed.
- Basic infrastructure and amenities are not provided in the new area.
- Very often, temporary camps become permanent settlements.
- Ethnic and caste differences make it difficult for the refugees to live peacefully with the communities already living in the area.



# Environmental Ethics

- Creating a moral sense of environmental conservation in each person is called environmental ethics.
- The Contrasting Views of environmental ethics
  - Utilitarian justification
  - Ecological justification



# Environmental Ethics

- Environmental Equity and Priority Principle
  - Always respect all nature especially in cases where strong human rights are at stake.
- Environmental ethics: Possible Solutions.
  - One should respect the power of environment and apply it for the benefits of humankind.
  - One should place the highest priority on health, safety, and environmental protection while using environmental products.
  - One should be sensitive to ethical and social issues regarding the environment.



# Public Awareness

- The methods to generate environmental awareness generally falls in two categories :
  - Formal Method
    - Introduction of Environmental Studies as a course in schools and colleges.
  - Non Formal Method
    - Mass media such as newspapers, magazine, radio, T.V., etc.
    - Organizing meetings, seminars and conferences
    - Organizing various competitions
    - Through folk songs, street plays, TV serials, etc.



# Disaster Management

A *disaster* is defined as a sudden event or calamity that causes large-scale damage and destruction of human life and property.

## Types of Disasters

### Natural Disasters

- Air-related – Hurricanes, cyclones, storms, etc.
- Water-related – Floods, drought, etc.
- Earth-related – Earthquakes, landslides, volcanic eruptions, etc.

### Man-made Disasters

- Industrial accidents
- Wars, riots, terrorism, etc.
- Toxic spills
- Transportation accidents

# Disaster Management

## **Objectives:**

1. Reduce, or avoid, losses from disasters
2. Assure assistance to victims
3. Achieve rapid and effective recovery

## **Disaster management:**

4. Mitigation: Minimizing the possible effects of a disaster
5. Preparedness: Planning how to respond to a disaster
6. Response: Taking immediate measures to save life and property, providing medical relief, etc.
7. Recovery: Returning the community to normal conditions

# Earthquake

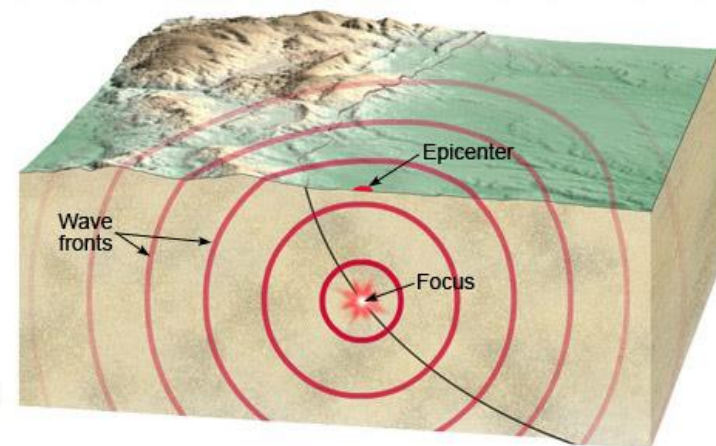
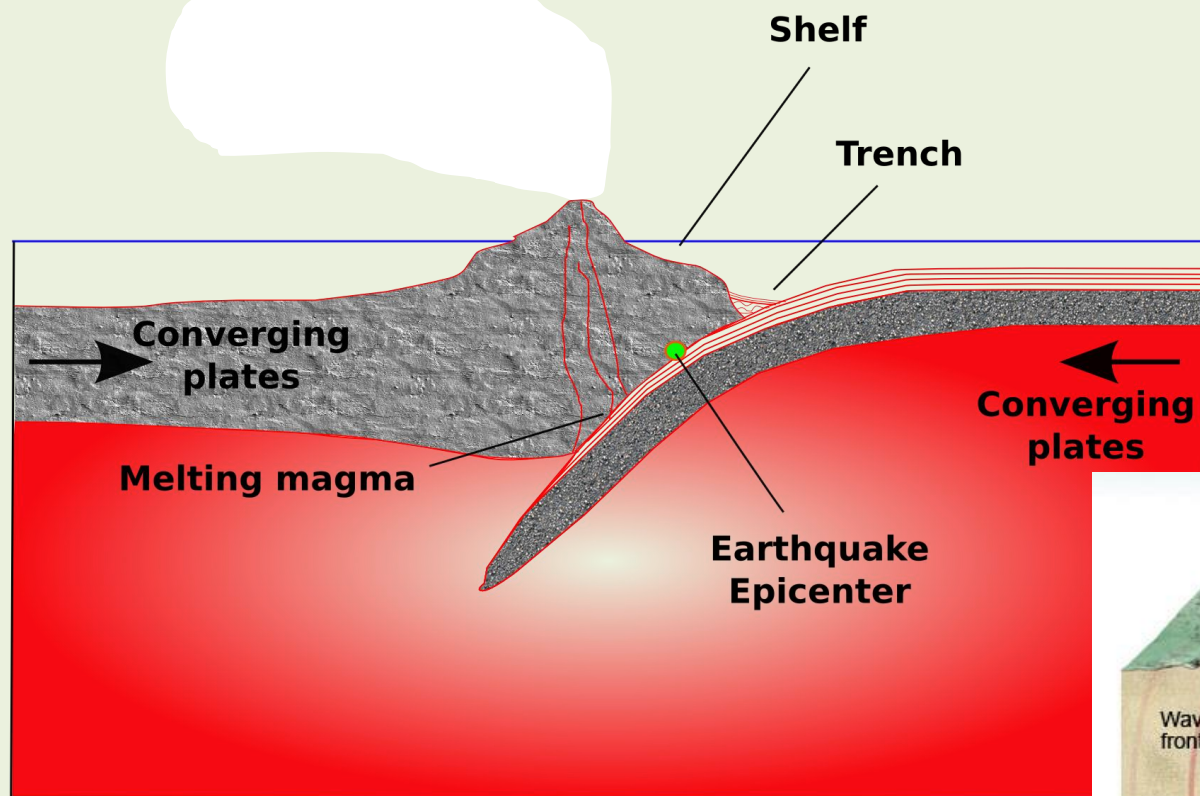
The term *earthquake* is used to describe any seismic event, caused naturally or as a consequence of human activities, that leads to the generation of devastating seismic waves.

## Causes of Earthquake

- Movement of hot gases and magma
- Volcanic activities
- Stress buildup due to water pressure
- Tectonic stress generated by movement of tectonic plates







This PPT should be used as reference only. Reading books (mentioned in syllabus) is mandatory for the preparation of the examinations.

# Effects of Earthquake

- Destruction and demolition of buildings, dams, etc. Large-scale damage to life and property
- Increased incidence of fire, landslides, etc.
- Increased incidence of *tsunami* waves.



# Management of Earthquakes

- Marking earthquake-sensitive areas
- Construction of houses, factories, dams, bridges, etc., with appropriate design and materials and strategically placed vibration absorbers
- Forecast and early prediction of earthquakes
- Creating public awareness regarding the steps to be taken during emergencies
- Relief measures through timely support by individuals, government, and non-governmental organizations

# Landslides

Landslides are natural phenomena during which large amounts of landmass slide downwards from hilly areas, mainly because of gravity, destroying everything lying in the path.

## Causes of Landslides

- Earthquakes
- Glaciers and Torrential rain
- Construction of dams, bridges, tunnels, roads, etc
- Use of explosives for breaking rocks during mining
- Deforestation of mountain slopes



# Effects of Landslides

- Rocks, large debris, and sliding landmasses destroy urban and rural habitation
- Damage to roads, dams, bridges, etc.
- Obstruction of river flow increasing the incidence of flood
- Severe damage to crops and agricultural lands

## Management of Landslides

- Construction activities should be done only after properly evaluating the geological and geographic conditions.
- Regulating rate of water flow also helps in controlling landslides.
- Agriculture at slopes should be avoided as far as possible.
- Relief task through economic help supporting resettlement and rehabilitation of affected people at individual community and organizational levels should be available
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