



Human Population Growth & its effects on the Environment

Presented by-

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Population

- **Population** refers to a group of individuals of a particular species occupying a particular area at a specific time.
- The whole number of people or inhabitants in a country or region, constitutes its population.
- **Demography**- The scientific and statistical study of human population.
- **Census**- Process of recording or counting the number of individuals living in a country at a given time.

Characteristic features of Human Population

- **Population Density**- size of a population per unit area at a given time
- **Natality**- increase in the number of individuals (Birth) per unit time
- **Mortality**- loss of individuals (death) per unit time
- **Age distribution**- individuals of various age
- **Sex ratio**- number of females per thousand males
- **Biotic potential**- maximum capacity of an organism to reproduce

Population Growth

- Determined by the difference in the natality and the mortality in a particular time.
- **Population growth rate** = the per cent increase in the population.
- **Population growth forms-** graphical presentation of the distribution of the growth of the population over time and geographical regions.
- **J- shaped and S- shaped** growth forms

Population growth forms

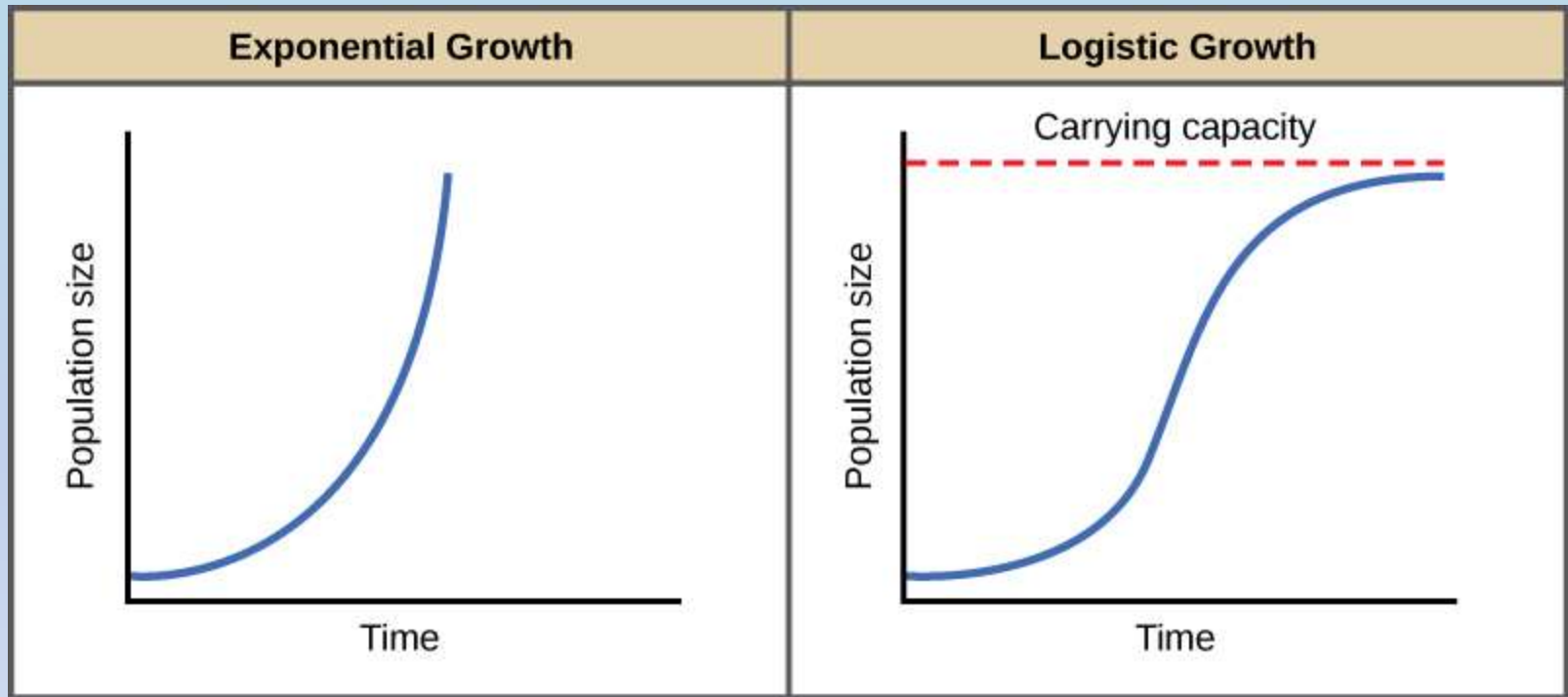
J- shaped growth form-

- Exponential growth (increase in a fixed proportion of its own size at any time).
- Population grows rapidly & after attaining peak, it crashes due to limited resources.

S- shaped or sigmoid growth form-

- Gradual increase followed by an exponential growth leading to gradual stability.
- Abundant resources and absence of limiting factors

Population growth forms



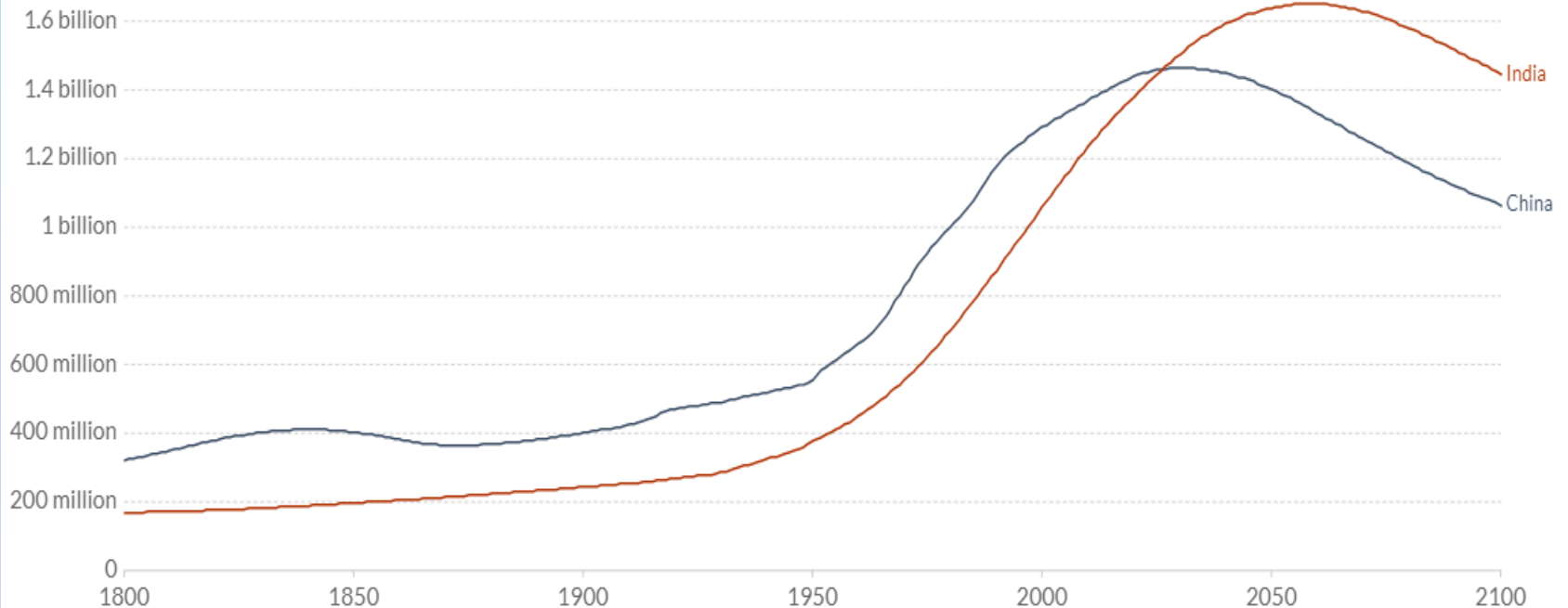
Carrying capacity- Maximum population size that can be supported by the environment with proper resources.

Population, 1800 to 2100

Historical estimates of population, combined with the projected population to 2100 based on the UN's medium variant scenario.

Our World
in Data

+ Add country



Source: Gapminder & UN Population Revision (2019) Medium Scenario
Note: Historical country data is shown based on today's geographical borders.

OurWorldInData.org/future-population-growth • CC BY

Population of India surpassing China

Compiled by Anamika Das

Problem of population Growth

- **Overpopulation** is an undesirable condition where the number of the existing **human population exceeds the actual carrying capacity** of Earth.
- Overpopulation is caused by a number of factors.
 - Low mortality
 - Better medical facilities
 - Immigration
 - Lack of family planning

Problem of population Growth (Effects)

1. **Depletion of Natural Resources-** The Earth can only produce a limited amount of water and food, which is falling short of the current needs. It includes cutting down forests, hunting wildlife in a reckless manner, causing pollution, and leading to other problems.
2. **Degradation of Environment-** The exponential rise in the number of vehicles and industries has badly affected the quality of air. The rise in the amount of CO₂ emissions leads to global warming.

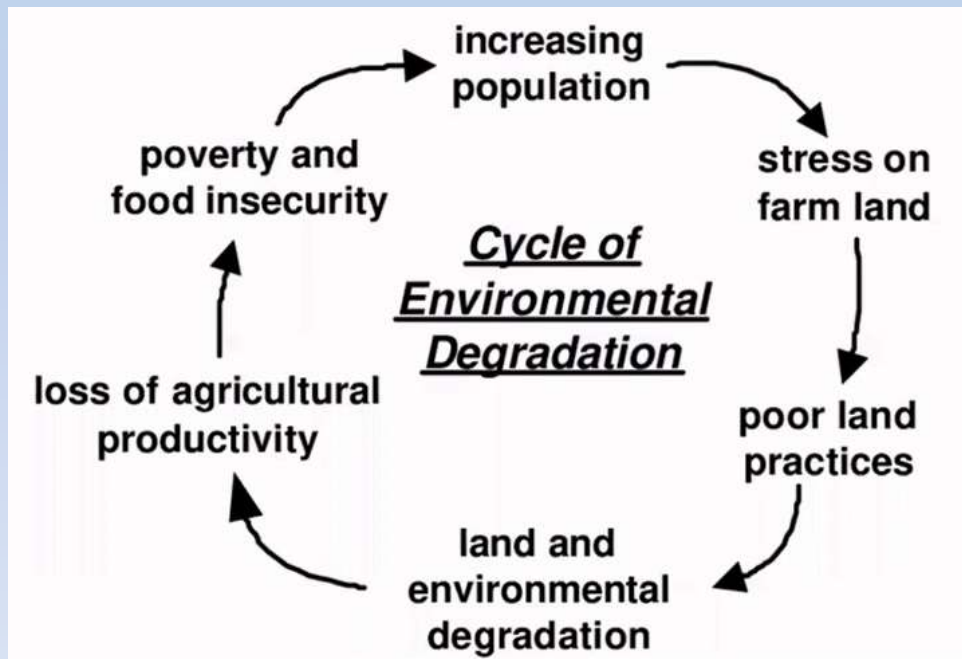
3. **Conflicts and Wars-** Conflicts over water are becoming a source of tension across the borders, which could result in wars.
4. **Rise in Unemployment-** When a country becomes overpopulated, it gives rise to unemployment as there are fewer jobs to support a large number of people.
5. **High Cost of Living-** As the difference between demand and supply continues to expand due to overpopulation, it raises the prices of various essential commodities, including food, shelter, and healthcare.

6. **Pandemics and Epidemics-** High densities of population increase the chance of the emergence of new pandemics and epidemics.
7. **Malnutrition, Starvation and Famine-** When the availability of resources is scarce, starvation, malnutrition, along with ill health and diseases caused by diet-deficiency.
8. **Faster Climate Change-** Roughly 1% of the world's water is fresh and accessible. Overpopulation is a major issue that creates immense pressure on the world's freshwater supplies.

- 9. Increased Intensive Farming-** With the growth of population over the years, farming practices have evolved to produce enough food required to feed a larger number of people. However, this intensive farming methods cause damage to local ecosystems and the land that may pose problems in the future.
- 10. Extinction-** The impact of overpopulation on the world's wildlife is severe. As demand for land grows, the destruction of natural habitats, such as forests, becomes common.

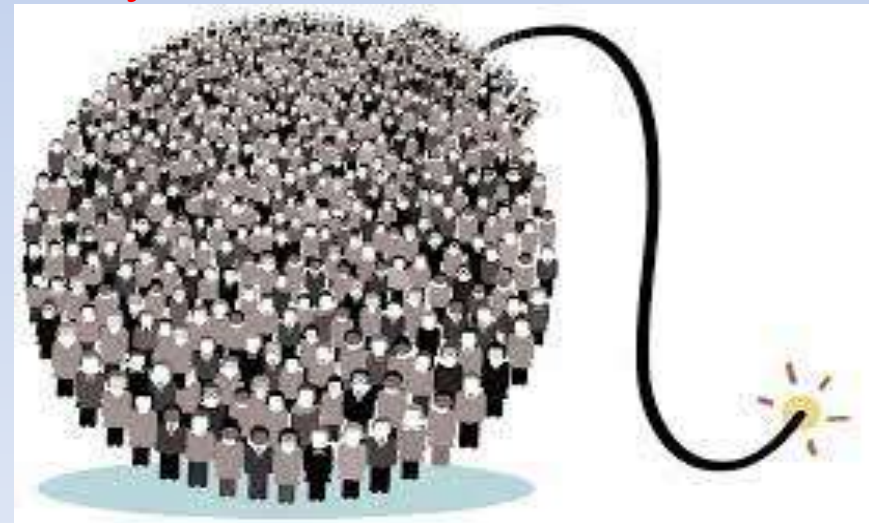
Poverty and Environment

- The inter-relationship between poverty and environmental damage is complex and is heavily influenced by a range of social, economic, cultural, physical and behavioral factors.



Population Explosion

- The sudden and dramatic increase in the number of human beings over a short period of time.
- The major factors that are responsible for population explosion are illiteracy, reduced mortality, increased birth rate, and an increase in life expectancy.
- Major Effects of Population Explosion are unemployment and poverty



Family Welfare Programme

- Family welfare includes not only planning of birth, but they welfare of wholes family by means of **total family health care**.
- FWP mainly includes: Family planning information, counseling and services to women for healthy reproduction, education about safe delivery and post-delivery treatment of the mother and the baby and the treatment of women before pregnancy, health care for infants' immunization against preventable diseases.

Family Welfare Programme in India

- Started in 1952 & a.k.a National Family Planning Programme
- Objective- To ensure adequate, qualitative, preventive & curative health care to people of the State
- The minimum legal age for marriage was raised from 18 to 21 (male) & 15 to 18 (female)- 1978
- Target of zero population growth
- The Ministry of Health and Family Welfare is the government unit responsible for formulating and executing family planning in India.

Thank You