Population growth, variation among nations

Presented By:
Harsh Rastogi,
Nursing Tutor,
M.S. Institute of Nursing,
Lucknow

Population

Group of individuals of species occupying a definite geographic area at a given time.



Global Population Growth Trends

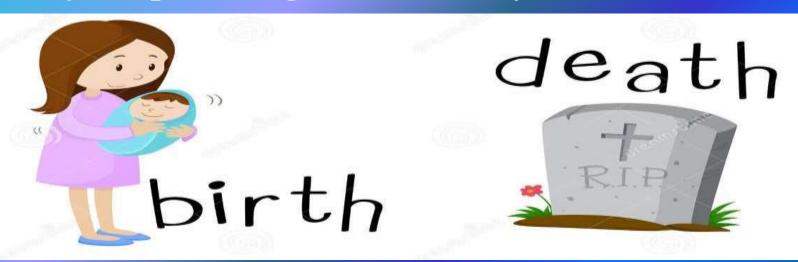
Year	Population (in billion)
Tear	
1700	0.6
1850	1
1930	2
1960	3
1987	5
2000	6.1
2050	9.1

- The population will continue to grow till equilibrium is achieved, i.e.
- Number of births = Number of deaths
- Population growing by 90 million/year.
- Of which 93 % in developing countries.



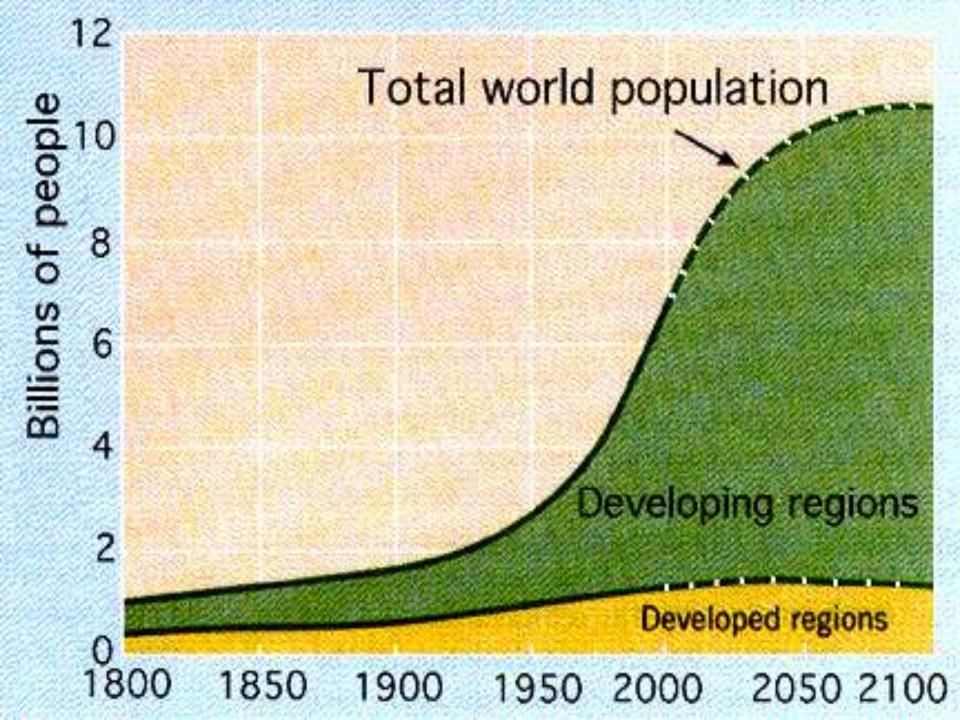
Reasons for growth

- Spread of public health programmes in developing countries.
- Rise in food production after World War II.
- Every second 4-5 children are born and 2 people die.
- Nearly 2.5 persons get added every second.



First 10 largest Countries (Projected for 2050)

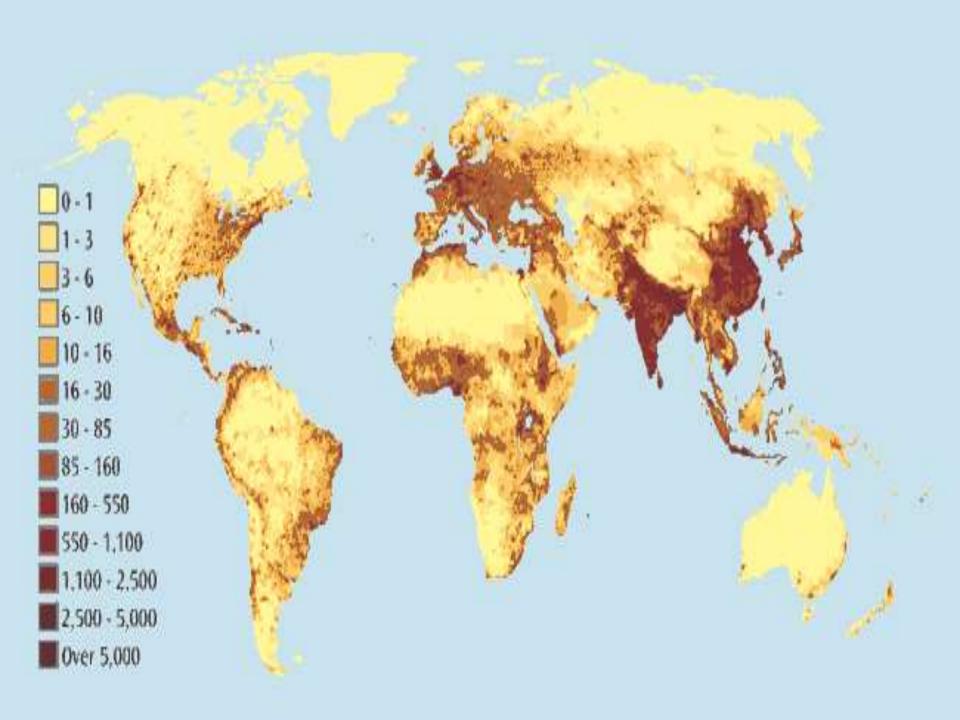
Sr. No.	Country	Population (In Millions)
1	India	1628
2	China	1369
3	United States	404
4	Indonesia	312
5	Nigeria	304
6	Pakistan	285
7	Brazil	244
8	Bangladesh	211
9	Ethiopia	188
10	Congo	182

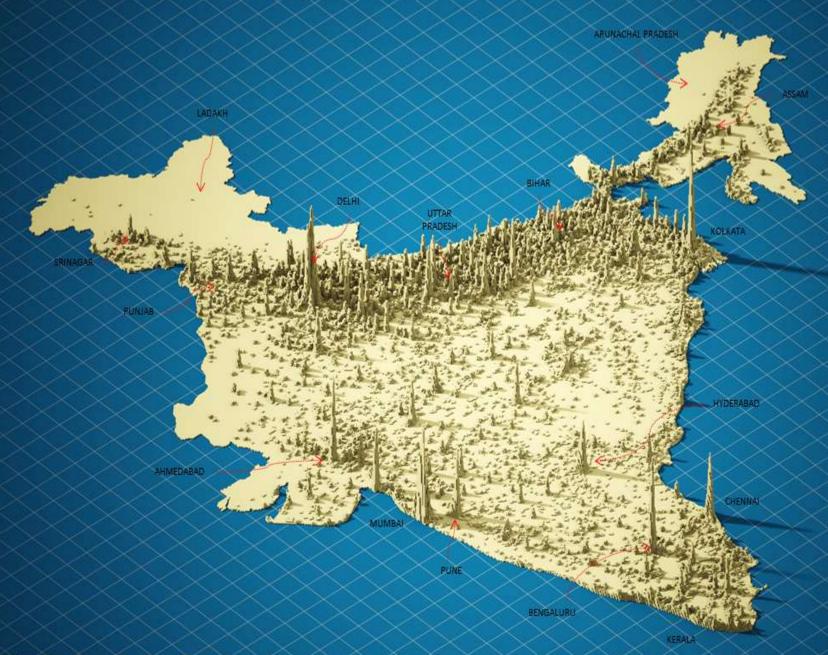


Population density

- It is a measurement of population per unit area or unit volume; it is a quantity of type number density.
- It is frequently applied to living organisms, and particularly to humans.
- It is a key geographic term.







INDIA - Population Density

Prepared by Raj Bhagat Pusing GHSL EC JRC Population Grid and Aerialod

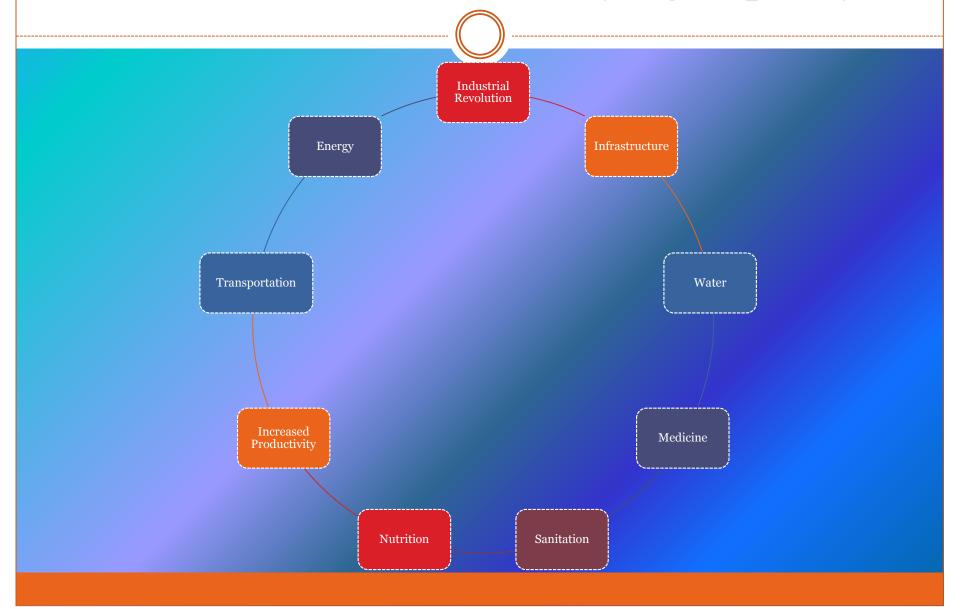
Carrying Capacity

- It is defined as the maximum population size that can be supported by environment.
- Carrying capacity increased by clever use of science and technology.
- Limit to max population size in given space and resource base.
- Population has been able to maintain Exponential Growth during past 100 years.

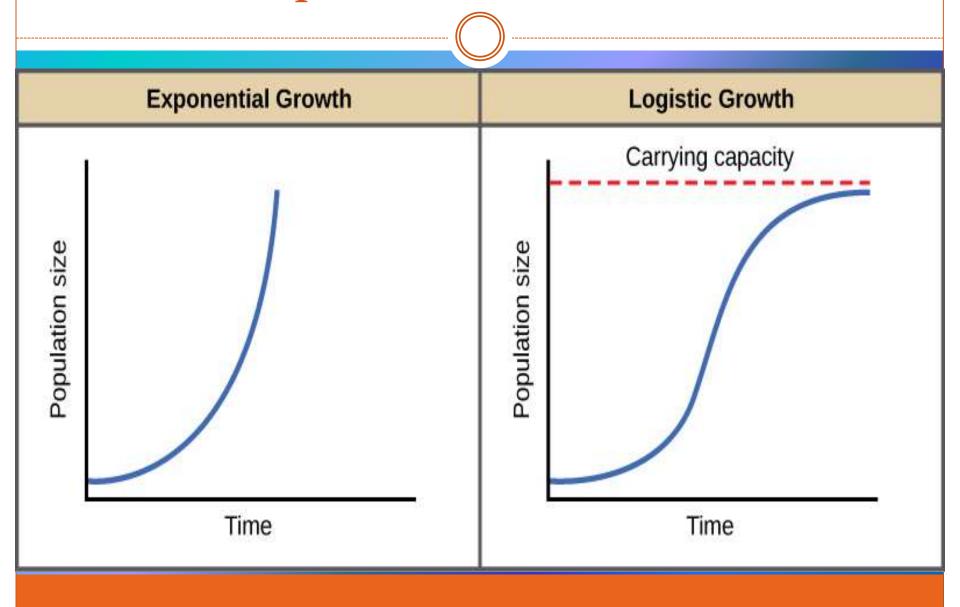




Reasons of increased Carrying Capacity



Population Growth Rate



Exponential & logistical population growth

- When resources are unlimited, populations exhibit exponential growth, resulting in a J-shaped curve.
- When resources are limited, populations exhibit logistic growth.
- In logistic growth, population expansion decreases as resources become scarce, levelling off when the carrying capacity of the environment is reached, resulting in an S-shaped curve.

- Human population growth rate is measured as annual average growth rate.
- Average annual growth rate (%)= $((P_2-P_1)/(P_1*N))*$
- Where,
 - P_1 = Population size in previous Census
 - P_2 = Population size in present Census
 - N = Number of years between two Census

Growth rate depends on several factors:

- Rate of Birth (Fertility)
- 2. Mortality
- 3. Migration
- 4. Age and sex structure

Rate of Birth (Fertility)

Countries with the Most Births Per Year

million births

India
China
Nigeria
Indonesia
Pakistan
Bangladesh
US
Brazil
DR of Congo

Ethiopia

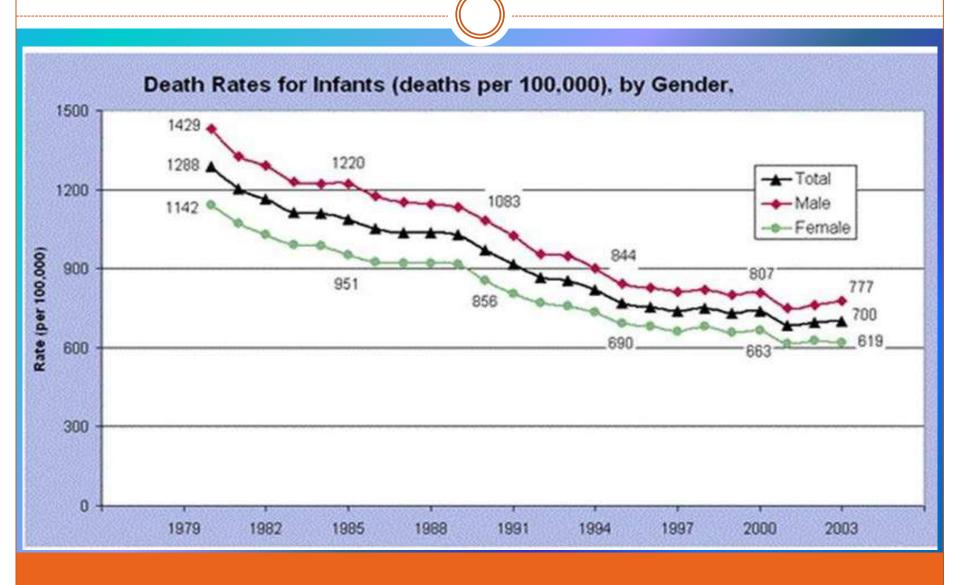


- Birth Rate: Number of babies produced per 1000 individuals.
- Total Fertility Rate: Average number of children that would be born to women in her lifetime.
- Replacement Level: Number of children a couple must produce to replace themselves. It is always higher than 2.0.
 - Since some children die before reaching reproductive age.

Mortality

- Death Rate per thousand individuals.
- Reduction in mortality rate because of industrial revolution, Improved personal Hygiene, Modern medicines etc.





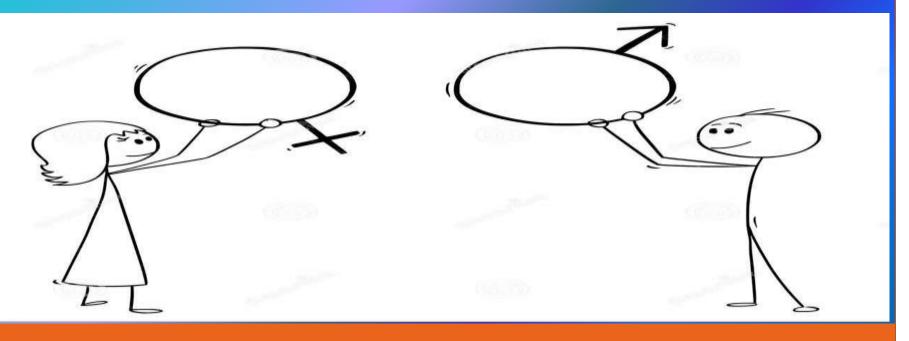
Migration

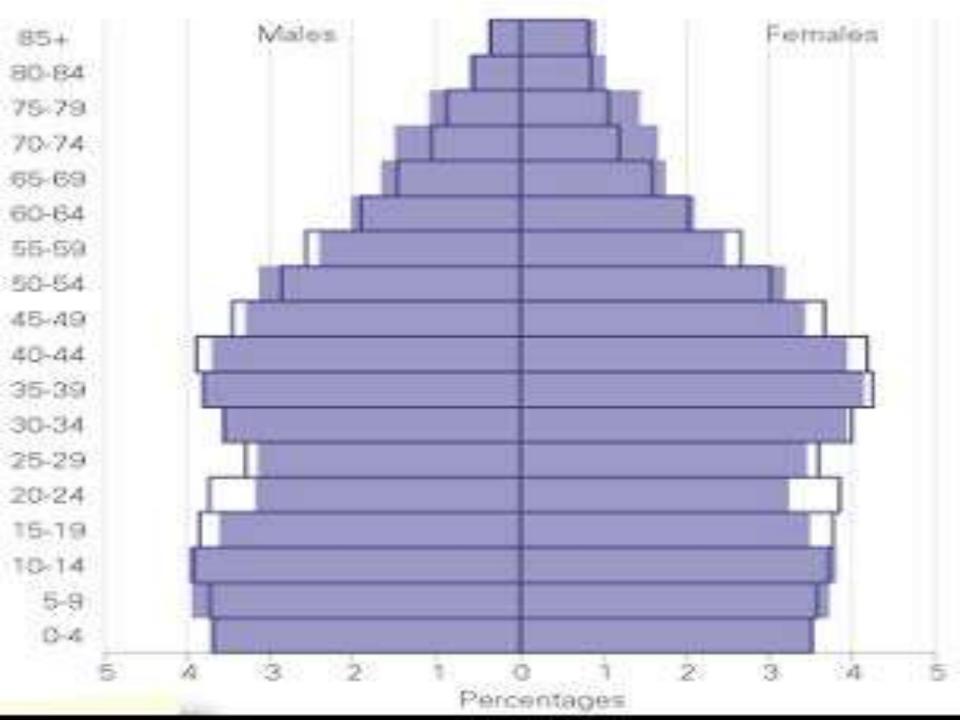
Movement of individuals into or out of place/country (within country).



Age and sex structure

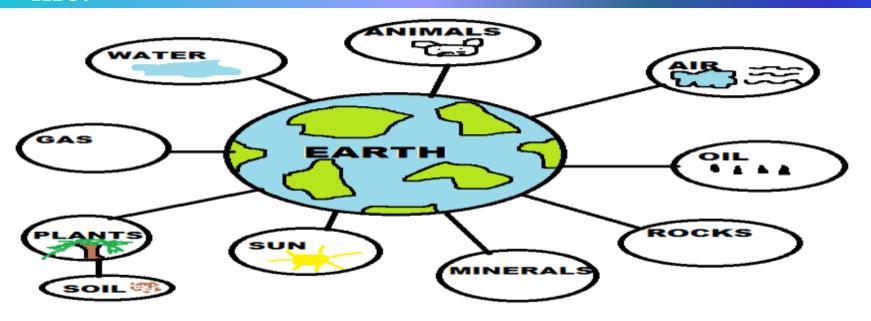
- Proportion of individuals of different ages within that population is age structure.
- Proportion of active males and females in a population influence population growth.

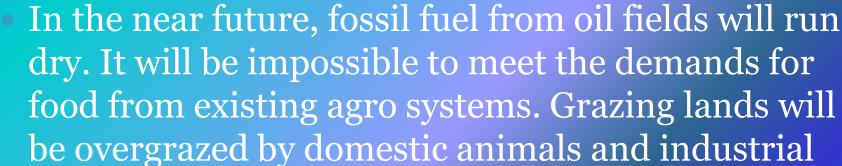




Population growth, variation among nations

The needs of this huge number of human beings cannot be supported by the Earth's natural resources, without degrading the quality of human life.







- Seas will not have enough fish.
- Larger ozone holes will develop due to the discharge of industrial chemicals into the atmosphere, which will affect human health.

Hole in the Ozone Layer?



Global warming due to industrial gases will lead to a rise in sea levels and flood all low-lying areas, submerging coastal agriculture as well as towns and cities.

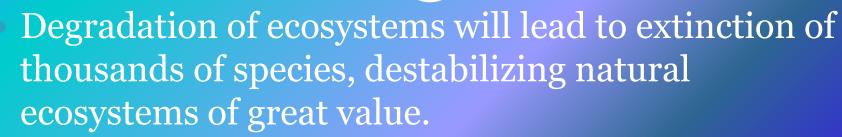


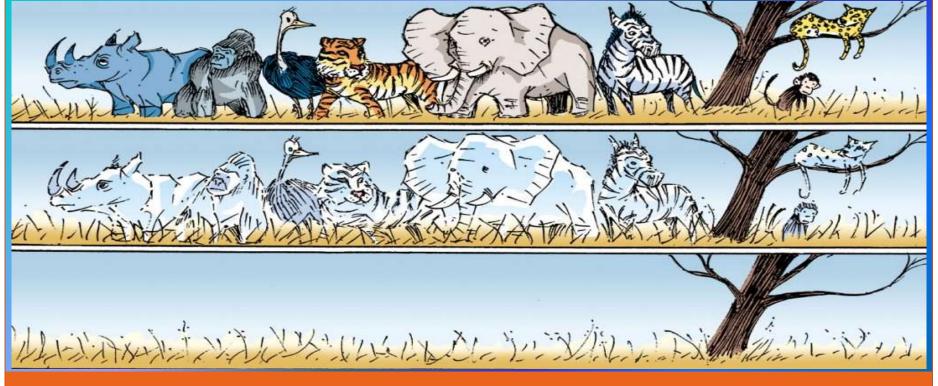
Water 'famines' due to the depletion of fresh water, will create unrest and eventually make countries go to war.

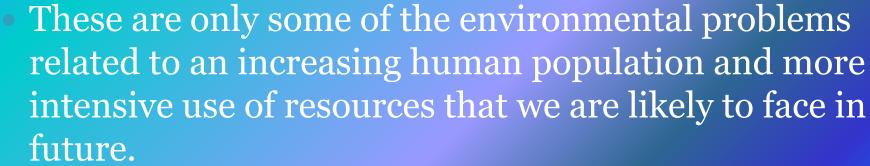


The control over regional biological diversity, which is vital for producing new medicinal and industrial products, will lead to grave economic conflicts between biotechnologically advanced nations and the bio-rich countries.











These effects can be prevented by creating a mass environmental awareness movement.

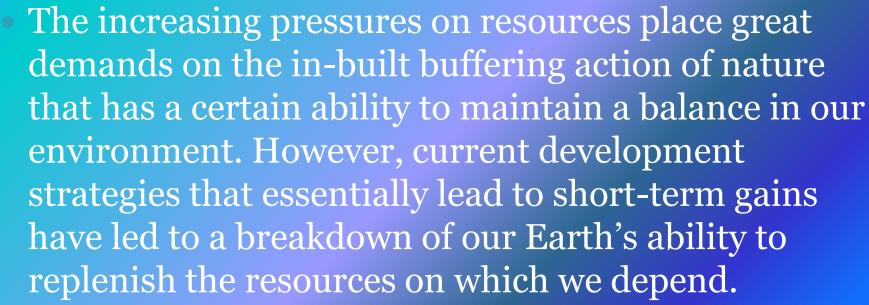






Only 15% of the world's population in the developed world is earning 79% of income! Thus the disparity in the extent of per capita resources that are used by people who live in a 'developed' country as against those who live in a 'developing' country is extremely large. Similarly, the disparity between the rich and the poor in India is also growing.

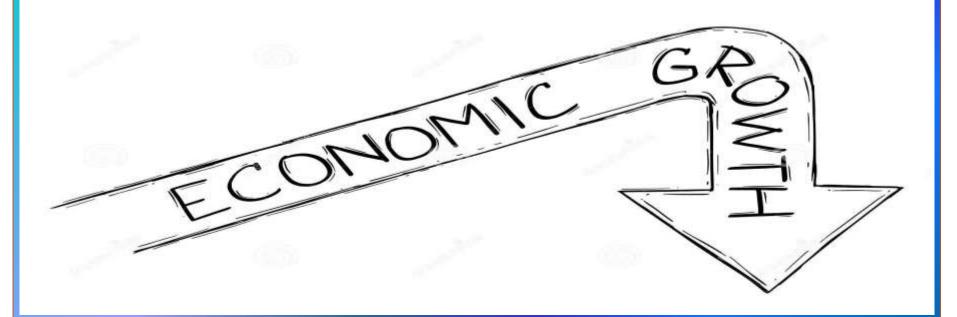






Global population growth

The world population is growing by more than 90 million per year, of which 93% is in developing countries. This will essentially prevent their further economic 'development'.

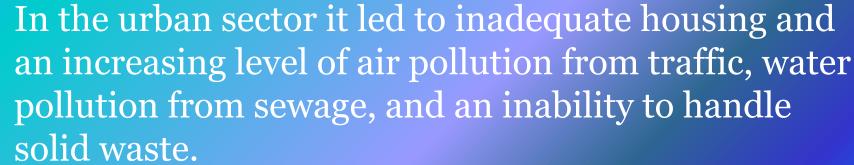


In the past, population growth was a gradual phenomenon and the Earth's ability to replenish resources was capable of adjusting to this increase. In the recent past, the escalation in growth of human numbers has become a major cause of our environmental problems.

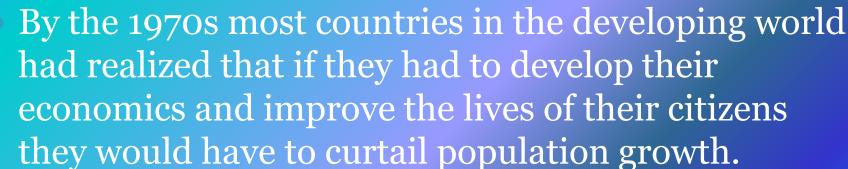


- The global growth rate was depleting the Earth's resources and was a direct impediment to human development. Several environmental ill-effects were linked with the increasing population of the developing world.
- In rural areas population growth led to increased fragmentation of farm land and unemployment.











There are cultural, economic, political and demographic reasons that explain the differences in the rate of population control in different countries. It also varies in different parts of certain countries and is linked with community and/ or religious thinking.

