

Fundamentals of Human Geography

Chapter-2 The World Population (Distribution, Density and Growth)

Key Notes:

- At the beginning of 21st century world recorded the presence of over 6 billion population
- The population of the world is unevenly distributed
- According to George B. Cressey about the population of Asia that “Asia has many places where people are few and few place where people are very many”

PATTERNS OF POPULATION DISTRIBUTION IN THE WORLD

- Patterns of population distribution and density help us to understand the demographic characteristics of any area
- The term population distribution refers to the way people are spaced over the earth's surface
- 90% of the world population lives in about 10 per cent of its land area
- The 10 most populous countries of the world contribute about 60% of the world's population
- Of these 10 countries, 6 are located in Asia (China, India, Indonesia, Pakistan, Bangladesh, Japan)

DENSITY OF POPULATION

- It is necessary to understand the ratio between the numbers of people to the size of land. This ratio is the density of population.
- It is usually measured in persons per sq km
- Density of Population = $\frac{\text{Population}}{\text{Area}}$
- High density Population (more than 200 persons on every sq km)- North -Eastern part of U.S.A., North-Western part of Europe, South, South-East and East Asia
- Low density of population (less than 01 person per sq km)- North and South Poles, the



hot and the cold deserts and high rainfall zones near the Equator

- Areas of medium density(11 to 50 persons per sq km)- Western China, Southern India in Asia, Norway, Sweden in Europe

FACTORS INFLUENCING THE DISTRIBUTION OF POPULATION

1. Geographical Factors

- Availability of water:** It is the most important factor for life. People prefer to live in areas where fresh water is easily available. Water is used for drinking, bathing and cooking – and also for cattle, crops, industries and navigation. It is because of this that river valleys are among the most densely populated areas of the world
- Landforms:** People prefer living on flat plains and gentle slopes. This is because such areas are favourable for the production of crops and to build roads and industries. The mountainous and hilly areas hinder the development of transport network and hence initially do not favour agricultural and industrial development. So, these areas tend to be less populated. For eg. The Ganga plains are among the most densely populated areas of the world while the mountains zones in the Himalayas are scarcely populated.
- Climate:** An extreme climate such as very hot or cold deserts are uncomfortable for human habitation. Areas with a comfortable climate, where there is not much seasonal variation attract more people. Areas with very heavy rainfall or extreme and harsh climates have low population. For eg. Mediterranean regions were inhabited from early periods in history due to their pleasant climate.
- Soils:** Fertile soils are important for agricultural and allied activities. Therefore, areas which have fertile loamy soils have more people living on them as these can support intensive agriculture. For eg the northern plains of India.

2. Economic Factors

- Minerals:** Areas with mineral deposits attract industries. Mining and industrial activities generate employment. So, skilled and semi-skilled workers move to these areas and make them densely populated. For eg. Katanga Zambia copper belt in Africa is
- Urbanisation:** Cities offer better employment opportunities, educational and medical facilities, better means of transport and communication. Good civic amenities and the attraction of city life draw people to the cities. It leads to rural to urban migration and



cities grow in size. Mega cities of the world continue to attract large number of migrants every year.

- iii. **Industrialisation:** Industrial belts provide job opportunities and attract large numbers of people. These include not just factory workers but also transport operators, shopkeepers, bank employees, doctors, teachers and other service providers. For eg. The Kobe-Osaka region of Japan is thickly populated because of the presence of a number of industries.

3. Social and Cultural Factors

- Some places attract more people because they have religious or cultural significance. In the same way – people tend to move away from places where there is social and political unrest
- Many a times governments offer incentives to people to live in sparsely populated areas or move away from overcrowded places

POPULATION GROWTH

- The population growth or population change refers to the change in number of inhabitants of a territory during a specific period of time
- This change may be positive as well as negative
- It can be expressed either in terms of absolute numbers or in terms of percentage
- Population change in an area is an important indicator of economic development, social upliftment and historical and cultural background of the region

Components of Population Change : There are three components of population change – births, deaths and migration.

1) **Birth rate-** The birth rate is the total number of live births per 1,000 of a population in a year. The crude birth rate (CBR) is expressed as number of live births in a year per thousand of population. It is calculated as: $CBR = \frac{Bi}{P} \times 1000$

Here, CBR = Crude Birth Rate; Bi = live births during the year; P=Mid year population

2) **Death rate-** Death rate plays an active role in population change. Population growth occurs not only by increasing births rate but also due to decreasing death rate. Crude Death Rate (CDR) is a simple method of measuring mortality of any area. CDR is expressed in terms of number of deaths in a particular year per thousand of population in a particular region.



CDR is calculated as $CDR = \frac{D}{P} \times 1000$

Here, CDR=Crude Death Rate; D= Number of deaths; P=Estimated mid-year population of that year. By and large mortality rates are affected by the region's demographic structure, social advancement and levels of its economic development.

3) Migration

- Migration is the movement by people from one place to another with the intentions of settling, permanently in the new location. The movement is often over long distances and from one country to another
- When people move from one place to another, the place they move from is called the Place of Origin and the place they move to is called the Place of Destination
- The place of origin shows a decrease in population while the population increases in the place of destination
- Migration may be permanent, temporary or seasonal
- It may take place from rural to rural areas, rural to urban areas, urban to urban areas and urban to rural areas

Migrants are of two types-

- a. **Immigration:** Migrants who move into a new place are called Immigrants.
- b. **Emigration:** Migrants who move out of a place are called Emigrants.

There are two sets of factors that influence migration:

- a. The **Push factors** make the place of origin seem less attractive for reasons like unemployment, poor living conditions, political turmoil, unpleasant climate, natural disasters, epidemics and socio-economic backwardness.
- b. The **Pull factors** make the place of destination seem more attractive than the place of origin for reasons like better job opportunities and living conditions, peace and stability, security of life and property and pleasant climate.

TRENDS IN POPULATION GROWTH

- The population on the earth is more than six billion
- It has grown to this size over centuries
- In the early periods population of the world grew very slowly



- But during the last few hundred years that population has increased at an alarming rate
- After the evolution and introduction of agriculture about 8,000 to 12,000 years ago, the size of population was small – roughly 8 million
- In the 1st century A.D. it was below 300 million
- Due to expanding world trade during the 16th and 17th century, there was rapid population growth
- Around 1750, at the dawn of the Industrial Revolution the world population was 550 million
- World population exploded in the 18th century after the Industrial Revolution
- Technological advancement achieved so far helped in the reduction of birth rate and provided a stage for accelerated population growth

DOUBLING TIME OF WORLD POPULATION

- it took only 12 years for human population to rise from 5 billion to 6 billion
- There is a great variation among regions in doubling their population
- The developed countries are taking more time to double their population as compared to developing countries
- Most of the population growth is taking place in the developing world (Yemen, Liberia, Somalia, Saudi Arabia and Oman)

SPATIAL PATTERN OF POPULATION CHANGE

- The growth of population is low in developed countries as compared to developing countries
- There is negative correlation between economic development and population growth
- The annual rate of population change (1.4%) seems to be low. This is because of:
 - When a small annual rate is applied to a very large population, it will lead to a large change.
 - Even if the growth rate continues to decline, total population grows each year. The mortality rate may have increased as has the death rate during childbirth

IMPACT OF POPULATION CHANGE

Positive impact of Population change are:



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- a. Nations with higher populations are better able to raise money on a national level, and this can lead to more international clout. China, for example, has a relatively low per capita income, but its large population gives it tremendous influence.
 - b. Increasing population ensures increase in the labor force. Lack of growth in the labor force will make a country static, retarded and gets to equilibrium at less than full employment level of the economy.
 - c. Investors would like to invest in a country with a large population. As the population continues to grow so will be the growth in demand for food, shelter, clothing etc.

Negative impact of Population change

- a. As a result of overpopulation, the available resources would not be able to do round and this will result to poverty in the country.
- b. Overpopulation leads to unemployment, this is as a result of the number of people looking for job outruns available resources.
- c. Low Per capita income if production level does not increase
- d. Increase in imports, which will result to balance of payments deficit

DEMOGRAPHIC TRANSITION

- The theory tells us that population of any region changes from high births and high deaths to low births and low deaths as society progresses from rural agrarian and illiterate to urban industrial and literate society
 - Demographic transition theory can be used to describe and predict the future population of any area
 - Changes occur in stages which are collectively known as the demographic cycle
 - There are **3 stages in the demographic transition theory**:
- a. **First stage**- The first stage has high fertility and high mortality because people reproduce more to compensate for the deaths due to epidemics and variable food supply. The population growth is slow and most of the people are engaged in agriculture where large families are an asset. Life expectancy is low, people are mostly illiterate and have low levels of technology.
 - b. **Second stage**- Fertility remains high in the beginning of second stage but it declines with time. This is accompanied by reduced mortality rate. Improvements in sanitation and



health conditions lead to decline in mortality. Because of this gap the net addition to population is high.

- c. **Third stage**- In the last stage, both fertility and mortality decline considerably. The population is either stable or grows slowly. The population becomes urbanised, literate and has high technical know-how and deliberately controls the family size.

POPULATION CONTROL MEASURES

Some measures to control population are:

1. Ensuring that people have easy and cheap access to contraception tools will help avoiding cases of unwanted pregnancies and births.
2. Education forms the backbone of an individual and economy. Once educated people know and understand the harms which a high population growth rate possesses. Education, especially women education, can work wonders in controlling population. An educated man and woman can readily understand the benefits of a small family.
3. Empowering woman with a say in matters concerning them like child birth and educating them to fight against discrimination will ensure a healthy and aware society.
4. People need to be told and made to understand the consequences of having too many children. Government and non-government institutions can carry awareness campaigns informing people how they will be unable to provide good nutrition, education or medical facilities to their children if they have too many.
5. Incentives have proved to be an efficient policy measure in combating most development issues including population. Providing a health, educational or even financial incentive can be a highly effective population measure.
6. One big drawback of developing countries is that of limited and highly centric medical facilities. If provided with optimum medical facilities population rate will almost certainly decline.
7. Delayed marriages- Young age marriage devoid people of the education and awareness required to be sensitive towards and understand the consequences of raising too many children. A UN report has suggested that there would be a significant decline in world population if the legal for marriage is made 20 years.

