

CH6 - Human Population and Its Impact

Human Population Size

- Populations grow or decline through the interplay of three factors: births, deaths, and _____.
- Population change is calculated by subtracting the number of people leaving a population (through death and emigration) from the number entering it (through birth and immigration) during a specified period of time.

Current Population

- There are currently about _____ humans on earth.
- Population growth is roughly 0.9%, adding 71 million people a year (that's adding 12 Raleighs every month!).
- India (_____ billion) and China (_____ billion) combine to make up 36% of the world's population. The United States, with _____ million people, has the world's third largest population but only 4.2% of the world's people.

Thomas Malthus

- In 1798 Thomas Robert Malthus published An Essay on the Principle of Population in which he argued that population growth will inevitably outpace food production, resulting in widespread famine. While this theory has fallen out of favor in recent decades, many see parallels with the efforts of _____ in Avengers: Infinity War.

Population Growth

- Population growth can be affected by both density-dependent and density-independent factors.
- Density-dependent factors include space and the availability of _____, clean air and clean water.
- Density-independent factors include _____, fires, heat waves and hurricanes.

Fertility

- The fertility rate is the number of children born to a woman during her lifetime.
 - _____ - _____ fertility rate is the average number of children that couples in a population must bear to replace themselves
 - Total fertility rate is the average number of children born to women in a population.

Factors Affecting Birth Rates

- average level of _____ and affluence
- importance of children as part of the labor force
- urbanization
- cost of raising and educating children
- religious beliefs, traditions, and cultural norms
- educational and employment opportunities for _____
- _____ mortality rate
- average age of marriage
- availability of legal abortions
- availability of reliable methods of _____ control

Rule of 70

- Doubling Time is the amount of time it takes to double a population.
- A quick way to calculate doubling time is to use the Rule of 70.
- $\frac{70}{\text{percentage growth rate}} = \text{doubling time (in years)}$

Age Structure Diagrams

- The age structure of a population is the proportion of the population at each age level.
- Typical age structure diagrams plot the percentages or numbers of males and females in the total population in each of three age categories: _____, reproductive, and postreproductive.

Birth Control?

- To some the planet is already overpopulated, but others claim that if everyone existed at a minimum survival level, the earth could support _____ billion people.
- Because raising the death rate is not desirable, lowering the _____ rate is the focus of most efforts to slow population growth.

India

- India had the world's first national family-planning program in 1952, though it has not been successful. India overtook China in 2022 to become the world's most populous country.
 - Even with the family-planning program, Indian women still has a _____ rate of more than 2.1 children, contributing to continued growth.
 - Population control attempts are complicated by the cultural norms of over 2,000 ethnic groups and a rapidly growing economy which has led to _____ inequality.

China

- China's population grew very rapidly in the _____, causing concerns. Since 1970, China made efforts to bring its population growth under control.
- Couples who pledged to have no more than one child were given extra food, larger pensions, better housing, free medical care, and salary bonuses, free school tuition and preferential treatment in employment. This rule was ended in 2016.
- All married couples have ready _____ to free sterilization, contraceptives, and abortion. The population has become more stable due to these policies.

Demographic Transition

- One important consideration in human population is the demographic transition, which states that as countries become industrialized, first their _____ rates and then their _____ rates decline. This occurs in four stages:
 - In the preindustrial stage, harsh living conditions lead to a high birth rate (to compensate for high infant mortality) and a high death rate. There is little population growth.
 - In the _____ stage, industrialization begins, food production rises, and health care improves. Death rates drop and birth rates remain high, so the population grows rapidly.
 - In the industrial stage, industrialization is widespread and birth rates drop. Population growth continues, but at a slower rate.
 - In the postindustrial stage, the birth rate declines further and zero population growth is reached.