

Human Population Notes

HISTORY OF HUMAN POPULATION

- Human populations were kept in check by diseases, famines and wars until the middle ages
 - ex: Infanticide, Bubonic Plagues
- Populations began to increase rapidly after A.D. 1600 (Increased sailing and navigating skills, agricultural developments, better sources of power, better health care and hygiene)

We are now in a J-curve, population is increasing at an exponential rate. Our present population is 6.8 billion people and growing by 100 million people per year. Most of the population growth is occurring in urban, developing countries.

DEMOGRAPHICS- vital statistics about people (births, deaths, where people live, total population size)

1. Crude Birth rate- the number of births in a year per thousand persons
 2. Crude Death rate- the number of deaths per thousand persons in any given year
 3. Life Expectancy- the average age that a newborn infant can expect to attain in any given society
- To calculate the annual rate of population growth subtract the crude death rate from the crude birth rate and divide by 10. If there is an immigration the number is added to your total, any emigration numbers are subtracted (before you divide by ten)
 - The replacement fertility rate is the number of children a couple must have to keep the population stable. In the third world it is 2.7, in the US it is 2.1.
 - Developing countries have seen the greatest progress
 - Discrepancies in how benefits are distributed within a country are shown by varying life expectancies at different areas in a country
 - Annual income has a strong correlation to life expectancy
 - Developing Countries- residents live for about twice as long as they used to
 - Developed Countries- increase not as great because it was higher to begin with

The total fertility rate is the number of children a woman can have throughout her entire life.

Don't forget the Rule of 70. To determine the number of years for a population to double divide the percent annual growth rate into 70.

AGE STRUCTURE/ HISTOGRAM DIAGRAMS

- If the population diagram is wide based the population is increasing.
- If the diagram is columnar, the population is staying the same.
- If it is an upside down pyramid, the population is getting smaller.

IMPACT ON RESOURCES

The more people there are, the more resources are used.

Especially in developed countries like the U.S.

Carrying Capacity- local, regional and global

- The maximum carrying capacity for humans on the Earth is 13-15 billion (some resources say 8 billion).
- The average ecological footprint an American makes is approximately 12 acres/person.
- Our footprint is the number of acres required to meet the resource needs of an individual.

POPULATION PROJECTIONS AND SOLUTIONS

There could be a population overshoot past the carrying capacity and then a dieback or we could adjust our population growth to an S-curve

Estimated Demographic Transitions- from high birth and death rates to lower birth and death rates are due to improved living conditions and economic development. It has had the greatest impact in reducing population growth in the US

- As a nation first develops, death rates drop but birth rates don't. This is due to better sanitation and medical care.
- It takes a while for societies to catch on culturally that they don't need as many children.
- Eventually as a society develops and women get more education, the birth rate decreases.

Cairo Conference- 179 countries met in 1994 to develop an action plan to deal with population growth and included issues such as poverty and health care

5 Basic Components

1. Provides family-planning services
2. Promotes free trade, private investment, and assistance to countries that need help.

3. Addresses issues of gender equity.
4. Addresses issues of equal access to educational opportunity.
5. Educates men.

FEMALE EDUCATION AND ECONOMIC STATUS

Worldwide, females are having less kids. Why?

- If females are educated about birth control, and made aware that they do not need to have many children to replace them, they will not have as many babies.
- Also, if their economic status and education level is improved, many women will get jobs instead of having children

FAMILY PLANNING

Fertility Decline in Rich Countries

Ways to limit number of children/family

1. Abortion-RU486, methotrexate, misoprostol, surgical abortion
2. Avoidance- Body temperature technique, celibacy/abstinence
3. Barrier-Condom, diaphragm, cervical cap, vaginal sponge, spermicide, IUD
4. Chemical-"The Pill"
5. Surgical-Tubal ligation, vasectomy