

HUMAN POPULATION DYNAMICS

Population Geography: the spatial aspects of demography; the influences of demographic change on a particular place

demography: the study of population change; patterns, rates, trends, etc

** *Basic Elements:*

* population distribution: the locations where people live

* can be at various scales, county, state, country

* why important?:

can determine distribution of goods and services

boundary lines for political districts

location of transportation or communication routes

different environments have different effects on people and vice versa

* population density: # of people/unit area

** the **arithmetic population density**: total population/total land area

* gives little indication of distribution of the people, where they are located, Or how 'crowded' the country may be

* may have little practical relevance

EX: Egypt --> 172 people/sq mile, BUT 98% of the population lives on only 3% of the land area

** a more meaningful index may be the **physiologic density**: number of people per arable land

* how "crowded" is it compared to available productive land

EX: U.S. --> 367/sq mile; Egypt --> 8161/sq mile

**** Global Population Concentrations:**

- * East & Southeast Asia: contains about 25-30% of the world's population, mostly rural, with about 1.3 billion in China alone
- * South Asia: India, Pakistan, & Bangladesh; ~1.5 billion in this area, again primarily in coastal areas and along rivers
- * Europe: ~700 million people; most people live in cities
- ** these 3 areas, all in Eurasia, account for over 4 billion of the world's 6.9 billion people

- * North America: predominately urban, 60-70%
- * South America: clustered around large cities in coastal areas
- * Africa: in North Africa, highly clustered along the Nile River and western Mediterranean Sea coast
 - * in Sub-Saharan Africa ~ 600 million people primarily in West Africa along coast & east coast from Ethiopia to South Africa

- * Australia: primarily on east coast

**** Population Increases: of the past**

before 8000 B.C.:

8000 B.C. to 1750 A.D.:

- * reason for increase: 1st **Agricultural Revolution**

1750-1950:

- * **Earth's population hit the 1 billion mark about 1820**
- * brought about by the **Industrial Revolution** &
- * **the 2nd Agricultural Revolution**: the rise of farm technology led to increased farm production & less need for farm workers
- * rise of technology led to **better health standards**, which led to fewer people dying at a young age & thus living longer

1950 to present:

- * overall world growth rate jumped from .2%/yr to 2%/yr

(a few million/yr to about 70 million people/yr)

- * brought about by a number of factors:

* **medical revolution:** increased number & quality of medicines developed, more efficient & widespread delivery to those who needed it, increased health education & systems, esp. in poorer, less developed nations led to lower mortality rates

* **"Green Revolution" or 3rd Agricultural Revolution**

**** Types of Growth:**

* **Linear growth:**

EX: start with 1000 people & add 100 each year;
after year 1 = 1100, after year 2 = 1200, after year 10 = 2000

* **Exponential growth:**

EX: start with 1000 people & add 10% each year;
after year 1 = 1100, after year 2 = 1210, after year 10 = 2594

* ***Doubling Time:*** the amount of time required for a population to double in size

EX: .5% increase ----> 140 yrs, 1% increase ----> 70 yrs
4% increase ----> 17 yrs, 10% increase ----> 7 yrs

EX's of particular countries:

Ireland (.5%); China (1%), **U.S. (.6% = 115-120 yrs)**

Population Explosion: The geometric expansion of a biological population, especially the unchecked growth in human population resulting from a decrease in infant mortality and an increase in longevity

EX: ~2000 yrs ago world's population was 250 million
by 1650 doubled to 500 million (1650 years to do it),
by 1820 1 billion (170 yrs to double), by 1930 2 billion (110 yrs to double)
by 1975 4 billion (45 yrs to double)

* one of the first to be concerned by this was a British economist,
Thomas Malthus (1798)