

## GEOG 101

### Notes of Population, Culture, Agriculture and Natural Resources

#### Population Geography

Population geography focuses on the number, composition and distribution of human beings in relation to variations in the condition of the earth space.

#### Population Growth:

In **1999** the world population was **6 billion** people and has become **7 billion** by the year **2011**. Between those dates the world population grew on average by about **74 million** people annually. World population increases or decreases according to three factors; birth rates, death rates and migration.

#### Birth Rate:

It is also called **crude birth rate** or **fertility rate**. It means the annual number of live births per 1000 population. It is crude because it is related to the total pop. For example, if births a year are 40,000 in an area inhabited by 2million people, what is the BR in this area?

$$\frac{40,000}{2,000,000} = 20 \text{ per } 1000$$

**30 or more per 1000** is considered a **high birth rate**. i.e. **Africa**. 18 or less per 1000 is considered low BR. This is found in the developed countries (U.S.A). In the year **2000** BR in **Mali** and **Niger** (W. Africa) was **50 per 1000**, and **8 and 9 per 1000** in the **European** countries.

#### Death Rate:

It is also called **crude death rate** or **mortality rate**. It is calculated the same way as the BR.

**20 per 1000** is **high DR**, found in the developing countries such as **Africa**.

**10 per 1000** or less is a **low DR**. This found in the developed countries (USA).

#### Population Pyramids:

It is used to compare population of different countries.

#### Natural Increase:

It is also called **annual increase**. Subtract DR from BR

For example BR – 22/1000

$$\begin{aligned} \text{DR} &= 12/1000 \\ \text{NI} &= 10/1000 = 1\% \end{aligned}$$

Natural increase is usually expressed as a **percentage**.

#### Doubling Time:

Countries with **1%** natural increase will double its pop. in **70 years**, while a country with **2%** natural increase will double its population in **35 years**.

#### Demographic Transition:

It shows the relationship between population growth and economic development. Demographic Transition is divided into **4 stages**:

#### Distribution of the World Population:

Population is not uniformly distributed over the earth. Some areas are uninhabited, others are sparsely settled, while others are densely populated. About 46 % of the world population is found in the urban areas, while about 54 % are found in the rural areas. After 25 years more than two-third of the world population will be living in urban areas.

**Two-third** of the world population is found in **alluvial** low lands and **river valleys** (areas of fertile clay soils and water).

**Cold, dry** and mountainous (**high**) areas **are not** attractive areas for human settlement.

**Densely populated areas** of the world are: 1- NE areas of USA and the eastern part of Canada; 2- Europe; 3- Nile Delta (Egypt); 4- India and 5- China. **Urbanization** has increased in recent years through **rural-urban migration**. People migrate from rural areas to urban centers in the developing countries searching for education, health services and jobs.

### Cultural Geography

Social scientists define culture **as a way of life of a group of people**. Culture is learned and transmitted to new generations through imitation, instruction and example.

#### Interaction of People & Environment:

Culture develops in a physical environment that contributes to differences among people.

To know the relationship between culture and environment, two ideas were thought of:

##### 1- **Environmental determinism:**

It means that the physical environment by itself shapes humans, their actions and their thoughts.

2- **Possibilism**, which means people, not environments, are the dynamic forces of cultural development.

People's needs, traditions and level of technology assess the choices that offered by the environment and make use of it. People are able to modify their environment. The out come is called **cultural landscape**.

Cultures are always changing. Such change is induced by **innovation** and **spatial diffusion**.

Innovation implies changes to a culture that result from adoption of new ideas. Spatial diffusion is the process by which a concept, practice or innovations spread from the point of origin to new areas.

#### Cultural Diversity:

The world is divided into a huge number of cultures. As geographers we are concerned about those aspects of culture which are different from one region to another such as **language, religion** and **ethnicity**.

**1- Language:** It is a symbol of cultural diversity. In **Africa** there are **1000 languages**. In **Europe** there are more than **100 languages** and **dialects**. These show political and social divisions of the two continents.

**2-Religion:** It is an element of cultural diversity. Geographers divide religion into 3 categories:

**A-Universalizing, Ethnic and Tribal or Tradition.** Christianity, Islam and Buddhism are the major universalizing religions. Their membership is open with certain conditions.

**B- Ethnic religions** have strong territorial and cultural identification (i.e. India ----- Hinduism).

**C- Tribal or Traditional religions**, have strong ties with nature. The number of followers is small. **Judaism, Christianity, Islam, Hinduism and Buddhism** are the principal religions of the world.

**3- Ethnicity:** It means a minority status within a country dominated by a different majority cultural group.

### Agriculture

Agriculture is the most widespread type of human activity. In the developing countries where we find **subsistence economies**, at least **three-fourths** of the **labor force** is directly involved in agriculture.

In contrast, in the commercial economies of the developed countries only **2% to 10%** of the labor force are involved in agriculture (**2% only in the U.S.A**). Agriculture is divided into two main categories: **1-Subsistence Agriculture** and **2- Commercial Agriculture**. In **subsistence** agri. farmers produce their crops for **family consumption**. Farmers of commercial agriculture are producing their crops to be sold in the market. In between these two types of agriculture there is the **traditional agriculture**. Here, part of the production is produced for family consumption and the surplus will be sold in the market.

#### 1- Subsistence Agriculture:

It is practiced in the developing countries and it is divided into two:

**A- Extensive Subsistence Agriculture**

**B- Intensive Subsistence Agriculture**

**A- Extensive Sub. Agri.** is practiced in large areas of land with a minimum labor input. It is basically herders or nomads keep a large number of animals. They move with their animals from one place to another searching for **water** and **grass**. **B- Intensive Subsistence Agri.** involves cultivation of small farms. Crop production and population density are both high. Because of crop failure and population pressure, new technology (**Green**

**Revolution**) is used to increase productivity since **mid 1960s** in Asia. The **Green Revolution** means the use of **chemical fertilizer** instead of animal manure, **irrigation, pesticides, herbicides** and **improved seeds** such as new varieties of **rice** and **wheat**. The **Green Revolution** has increased crop productivity by **25% to 50%**.

**2- Commercial Agriculture:** It is characterized by:

**A- Specialization** of crop production within farms, areas or country. **B- Off-farm Sale** which means all production will be taken to the market. **C- Interdependence** of producers and buyers who linked through markets (**supply and demand**). **Comm. Agri.** is divided into two: These are **1- Intensive Comm. Agri.**, and **2- Extensive Comm. Agri.**

**1- Intensive Commercial Agri.** is divided into **2. A- Truck and Fruit Farming B- Livestock-grain Farming**

**A- Truck and Fruit Farming:** Farmers apply large amount of capital to buy machinery and fertilizers. This type of farming gives high crop yield and high market return. Examples include fruits, vegetables and dairy products. All of these products are highly perishable. For this reason this type of farming is found closer to the markets.

**B- Livestock-grain Farming:**

This type of farming involves the growing of grain to be fed to livestock. For example, in **Denmark 90%** of all grains are fed to livestock. The livestock products such as meat, butter, cheese and milk constitute the farmer's cash products. Another form of this farming is called **mixed farming**. Again grains are fed to animals and **both** grains and animals are sold in the market.

**2- Extensive Commercial Agriculture:**

This is typical of the large wheat farms and livestock ranching of the mid-west.

Large-scale wheat farming requires large capital for planting, harvesting and machinery.

Also, it needs a large capital for management of livestock ranching.

**Plantation:**

It is a **special commercial tree crop**.

It implies introduction of a **foreign element** into an **indigenous culture and economy**.

Foreign element includes **investment, management, introduction of alien labor force** and **marketing**.

Plantation crops are found near coastal areas for **easy shipment**.

It should be noted that all production goes to the international market and **not to the local markets** for local consumption.

**Examples of plantation:**

Bananas \_\_\_ Central America

Coffee \_\_\_ Colombia and Brazil

Cotton \_\_\_ Egypt

Sugar cane \_\_\_ Cuba

Tea \_\_\_\_\_ India

### **Natural Resources (Chap. 5)**

Natural resources are divided into two divisions. These are

**1- Renewable resources.**

**2- Nonrenewable resources.**

**1- Renewable resources:**

These are materials that can be regenerated in nature as fast as or **faster** than they are exploited by society.

Examples of renewable resources are solar radiation, wind, water, soils, plants and animals.

If a rate of exploitation exceeds that of regeneration, even a renewable resource can be depleted.

## **2- Nonrenewable resources:**

They are generated in nature very **slowly** and they exist in finite amounts.

They include the **fossil fuels** (coal, crude oil and natural gas), **nuclear fuel** (i.e. uranium) and a variety of **nonfuel minerals** both metallic and nonmetallic.

Resources **are not evenly distributed** over the world. Some regions contain many resources, others relatively few.

Renewable resources are more widely and evenly distributed than the nonrenewable ones.

**Woods** and other forms of **Biomass** (plant material and animal waste) are the primary source of energy for over **half** of the world population.

**Hydropower** is a major source of electricity in many countries.

### **Energy** (Example of a natural resource):

Energy is one of the most important resources. Without energy other natural resources would remain in place, unable to be mined, processed and distributed.

Energy can be extracted from a number of different sources.

These include: **humans** (food and the sun), **wind, water, fossil fuel, fuel wood** (**50%** of the world population depend on it for **cooking** and **heating**).

Energy consumption goes hand in hand with the volume of industrial production.

Energy consumption increases in countries with **high per capita income** and decreases in countries with **low** per capita income.

Crude oil, natural gas and coal have formed the basis for industrialization.

The advanced countries depend for about 40% of their commercial energy on crude oil. This has raised some fear that oil reserves may be exhausted before the mid of the 21<sup>st</sup> century.

**In conclusion**, for better future we have to maintain a **balance** between exploitation of **natural resources**, rapid world **population growth** and conservation of our **natural environment**.