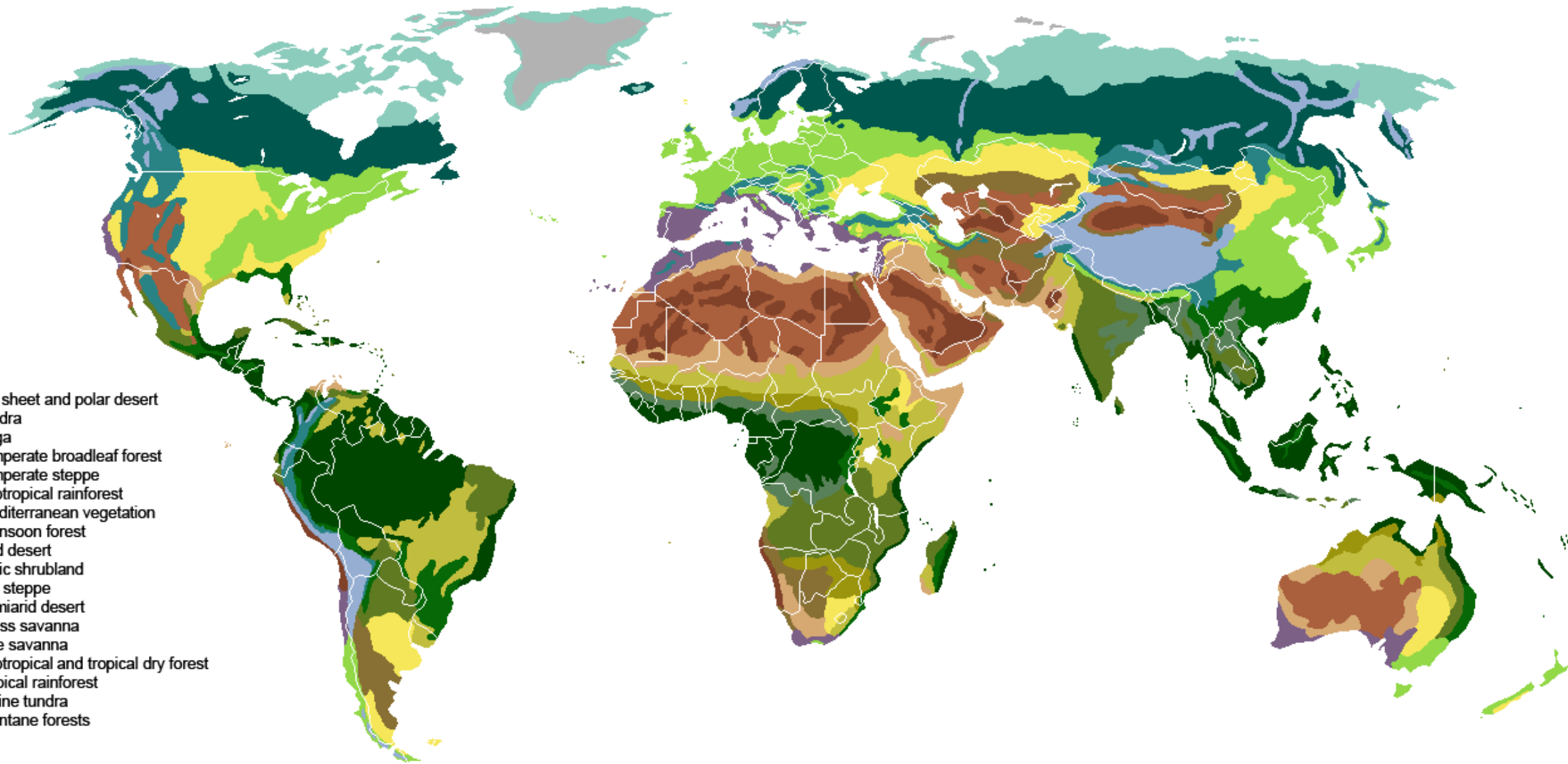# World Population Distribution & Density

UNIT-2

❑ **Introduction**

❑ **World Population Distribution**

❑ **World Population Density**

❑ **Types of Population Density**

❑ **Some Facts of World Density**

❑ **Factors Affecting World Population Distribution & Density**

❑ **Conclusion**

Dr. Jagdish Chand
Assistant Professor (Geography)
Govt. College Sangrah

ice sheet and polar desert
tundra
taiga
temperate broadleaf forest
temperate steppe
subtropical rainforest
Mediterranean vegetation
monsoon forest
arid desert
xeric shrubland
dry steppe
semiarid desert
grass savanna
tree savanna
subtropical and tropical dry forest
tropical rainforest
alpine tundra
montane forests

Living population density by country

as seen by average country citizen

Population Density [ppl/km2]

| 455 | 846 | 1322 | 2080 | 2817 | 4353 |
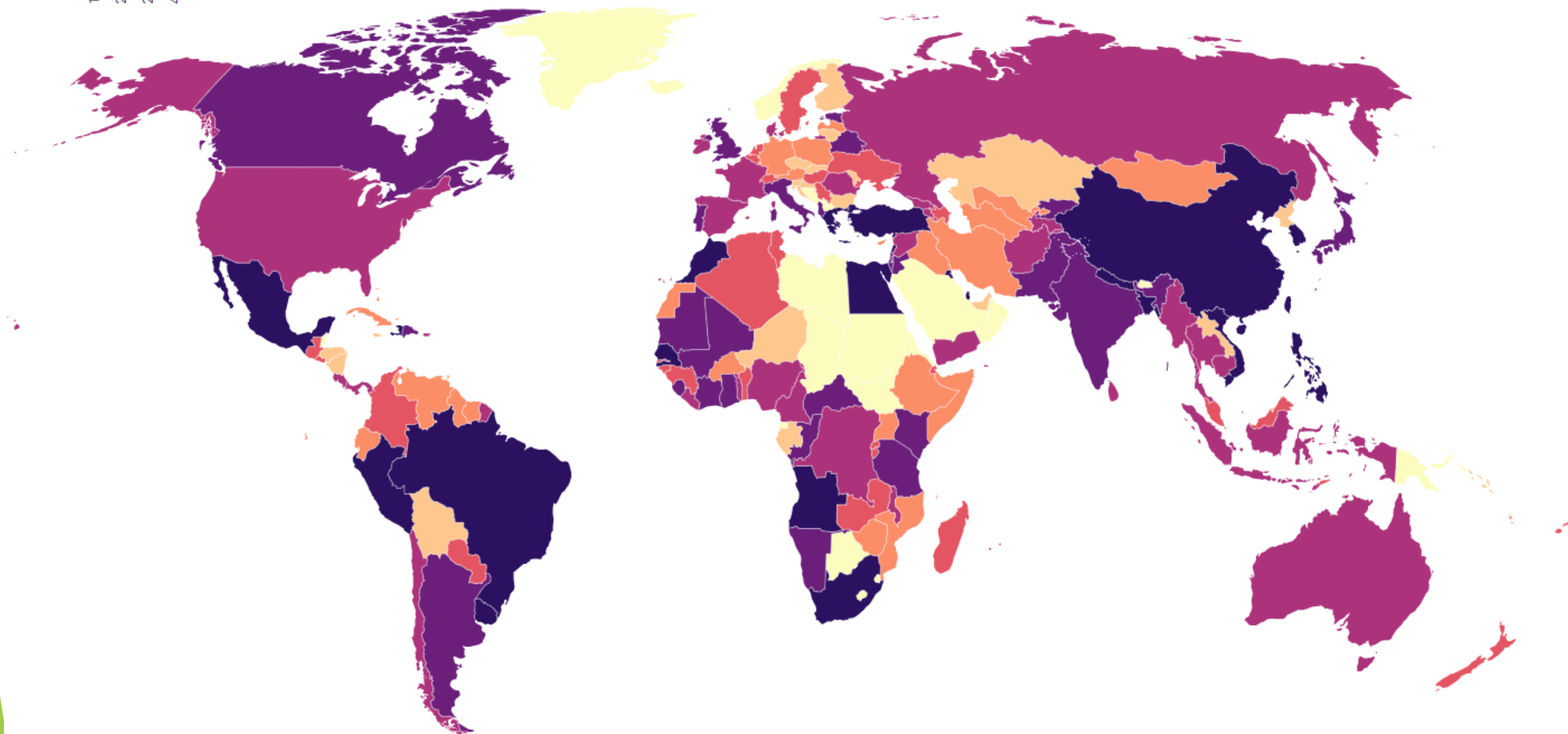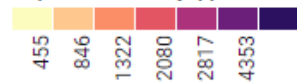
Unlike classical density (which simply divide total population by total land area), this chart shows density as seen by average country citizen.

World Population
Countries with most Population

Other Contries 41.2 %

Russian Federation 1.2%

Japan 1.9

Nigeria 2.3%

Bangladesh 2.4%

Pakistan 2.7%

Brazil 2.8%

Indonesia 3.4%

US 4.5%

India 17.5%

China 19.4%
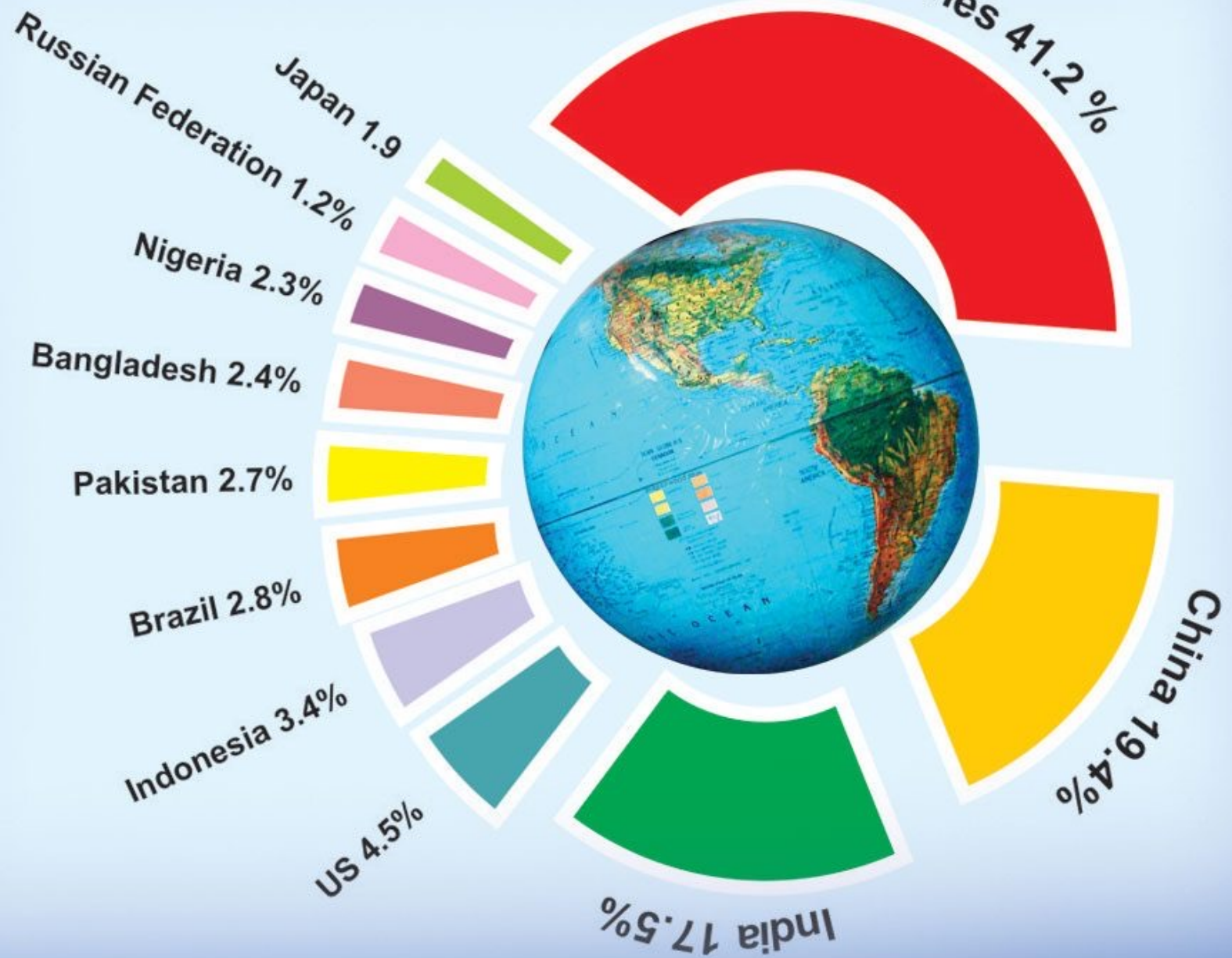
Population Distribution

❑ **Population Distribution** describes how the individuals are distributed or spread throughout a given area. It is the spatial pattern of dispersal of population.

Population Density

- **Population Density** represents the average number of individuals per unit of geographical area. In simple terms, it is the ratio between the population and area.

- The concept of population density was first used by **Henry Drury Harness** in **1837** in a series of maps prepared by him considering the railways of Ireland.

- The density is used to make an areal comparison

- It is a useful means of assessing overpopulation & underpopulation.

- It is a measure of the incidence of population concentration in terms of persons per square kilometer or per square mile.

Types of Population Density (or Indices of population distribution)

➢ **Arithmetic Density**

➢ **Agricultural Density**

➢ **Physiological Density**

Arithmetic Density

Arithmetic density is the simple ratio between total population & the total area & is expressed in terms of persons per unit of area

Arithmetic Density = Total Population/Total Area.

Agricultural Density

- Agricultural density is the ratio between only the **agricultural population & the total cultivated area.**

- It is expressed in terms of **agricultural population per unit of cultivated area.**

- A useful index of man-land relationship in a primarily agrarian context.

Agricultural Density = Agricultural Population (Total farmers)/Total Cultivated Area.

Physiological Density

The ratio between total population & total arable/cultivable land/Agricultural Land.

- It is expressed in terms of persons per square kilometer of cultivable land.

- Presents the correct picture of human pressure on land.

- A higher physiological density suggests that the available agricultural land is being used by more and may reach its output limit sooner than a country that has a lower physiological density.

Physiological Density = Total Population/Total Cultivable Land.

Some facts:

✓ World's average density=**45-50 persons/ square km**

✓ India's average density (2011 Census)=**382 persons/square km**

DENSEST POCKETS OF THE WORLD:

- DEVELOPED URBAN AND INDUSTRIAL CENTERS

- S.E. ASIA AND S.E. CHINA

- WESTERN EUROPE

- SINGAPORE (700 PERSONS/SQUARE KM)

- HONG KONG (6500 PERSONS/SQUARE KM)

- BAHRAIN AND BANGLADESH (> 1000 PERSONS/SQUARE KM)

- DELHI NCR (4000-5000 PERSONS/SQUARE KM)

- DELHI ALONE (11,000 PERSONS/SQUARE KM)
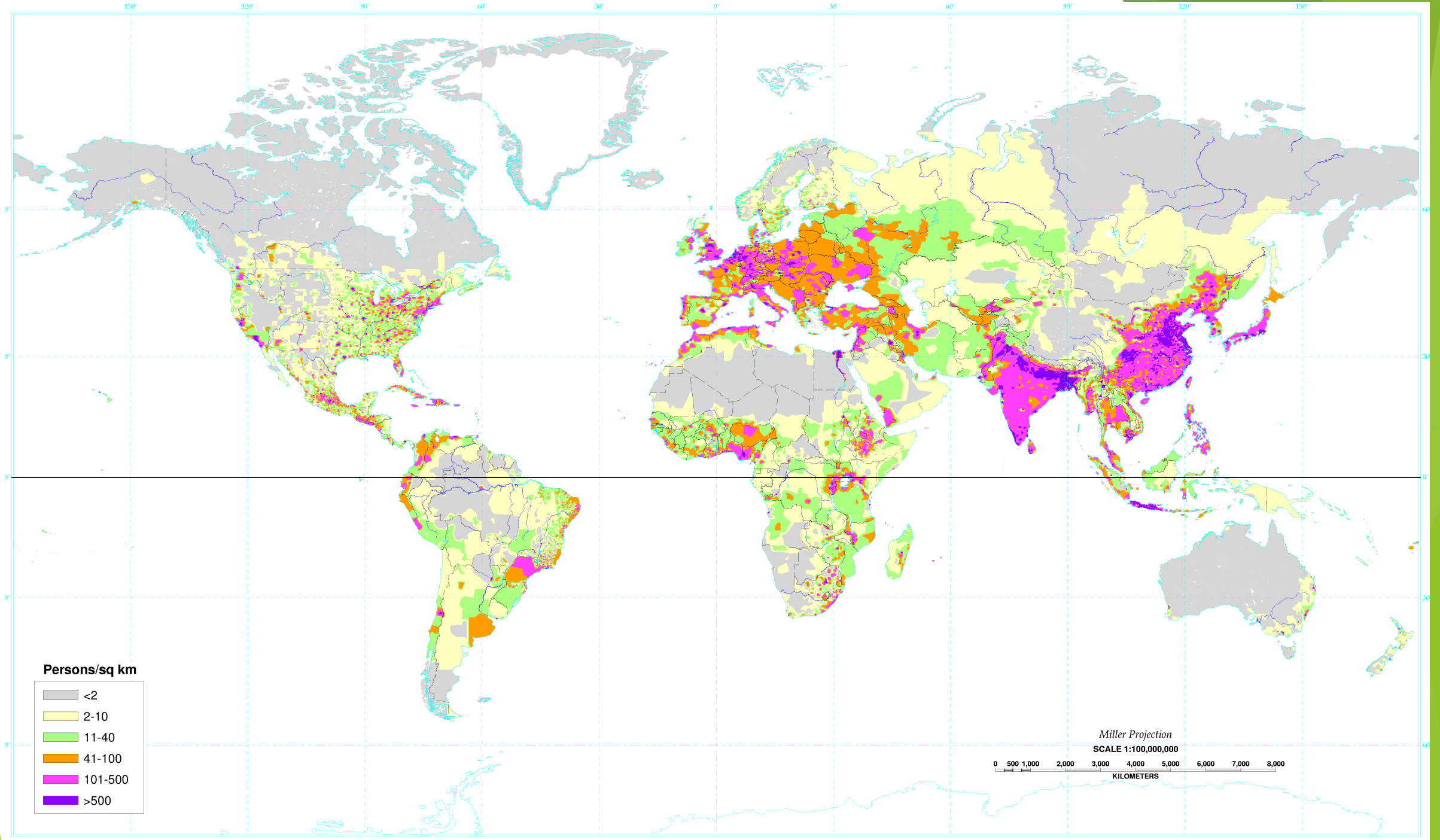
Persons/sq km

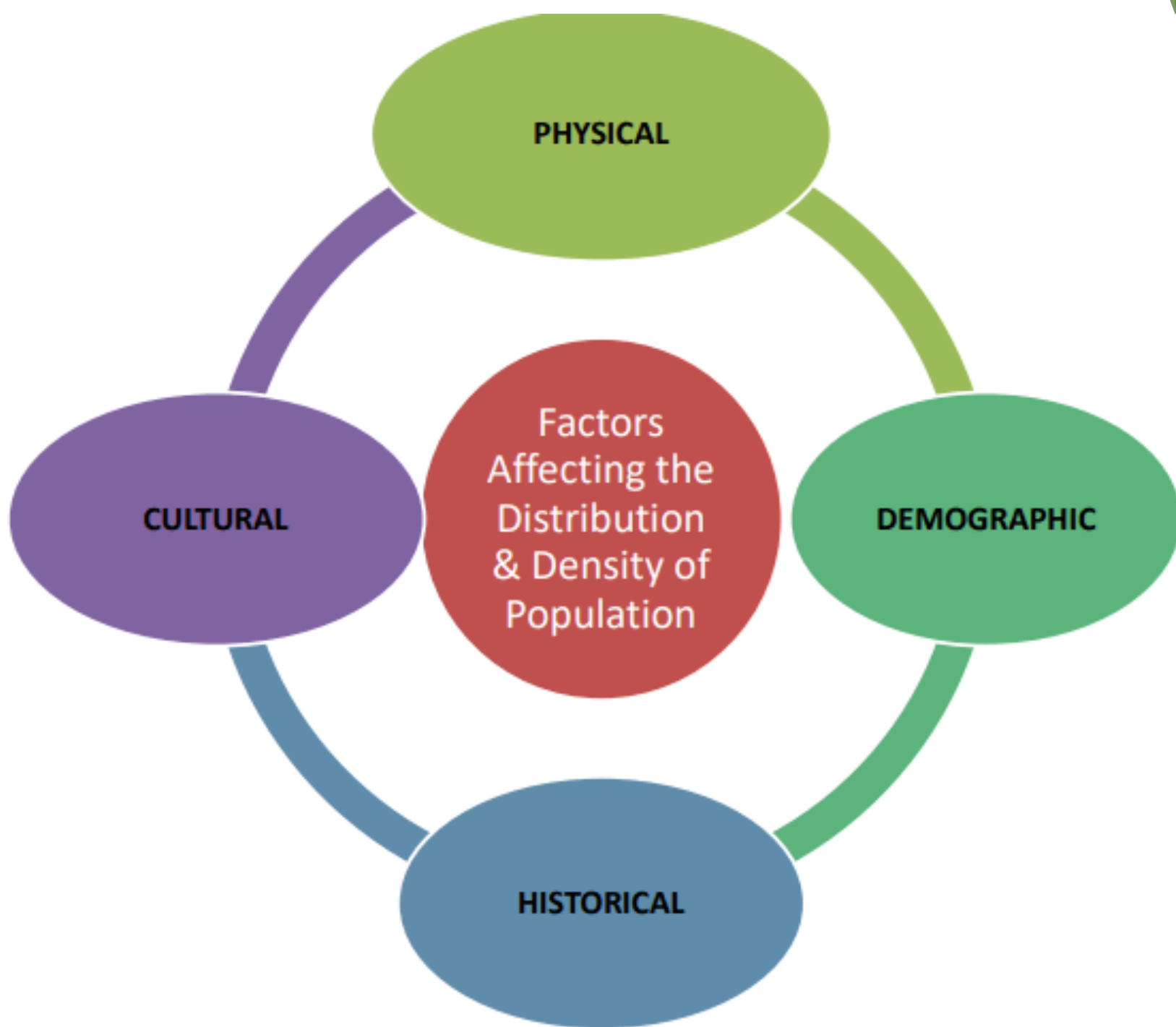|	
⬜	<2
🟨	2-10
🟩	11-40
🟧	41-100
🟪	101-500
🟣	>500

Miller Projection

SCALE 1:100,000,000

0 500 1,000   2,000   3,000   4,000   5,000   6,000   7,000   8,000

KILOMETERS

Factors influencing Population Distribution

and

Density

Physical factor:

- Vidal said "Coastal areas and river plains invite population"

❑ **Relief:** People prefer living on flat plains and gentle slopes. This is because such areas are favorable for the production of crops and to build roads and industries. The mountainous and hilly areas hinder the development of transport networks and hence initially do not favor agricultural and industrial development. So, these areas tend to be less populated. The Ganga plains are among the most densely populated areas of the world while the mountain zones in the Himalayas are scarcely populated.

❑**Resources:** 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. **Katanga Zambia copper belt** in Africa, **W. Europe with coal and good fishing reserve** are good examples, on the contrary, **Sahel region has a sparse population with less reserves.**

❑**Climate:** An extreme climate such as very hot or cold deserts is 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 populations. The British-type climate is conducive for human inhabitation.

❑Availability of arable land and water:

- Keeping in mind the possibilism approach, man has been able to use arable land and water for agriculture. Still, 60% of the world's population is dependent on agriculture. Therefore, areas for intensive agriculture have is the density of population. E.g. Eastern plains of China.

- Not just plains, but man through his efforts has also developed agriculture on terraces on mountainsides (Possibilism), Heating greenhouses in a cold climate (e.g. Netherlands, Germany, Denmark, etc.), Irrigated deserts (e.g. Nile valley, Jaisalmer and Bikaner (Indira Gandhi Canal), Irrigated parts of Syr and Amur valleys.

❑ Age of civilization:

❖ The longer a place has been continuously used by farmers, the dense and large is the population.

❖ The eastern China plains and Indo-Gangetic plains have a long history of agriculture while plains of Mississippi in the USA, Pampas of Argentina, Downs of Australia and New Zealand and veldts of South Africa, though equally productive, cultivation have been started after 17th century and thus are less populated.

Historical Factors:

❖ The duration of human settlement is an important determinant of the magnitude of population concentration in any area.

❖ Most of the densely populated areas have a very long history of human habitation, such as the river valleys.

❖ However, there may be exceptions to this as in the case of Mesopotamia.

❑ Demographic Factors:

✓ Among the demographic factors **fertility rate, mortality rate & migration** are considered

✓ The difference between fertility rate & mortality rate decides the natural increase in population. If this difference is high population grows rapidly in an area making it densely populated as is the case with states like Bihar.

✓ In-migration increases the concentration & the density of population while out-migration leads to the opposite, for eg. Urban centers are exploding with population due to in-migration.

❑ **Cultural Factors:**

✓ **Industrialization**

❖ The population has a magnetic attraction towards industrial centers & regions as they provide massive employment opportunities. Thus, such areas have a high density of population.

❖ Industries are capable of supporting more people as compared to agricultural lands

❖ The phenomenal growth of industries is one of the major causes for relatively high population density in West Bengal, Maharashtra & Gujarat

❑ Development of Transport Network

❖ Areas with good transport network are more accessible and hence have more population & higher density & vice-versa

❖ The northern plains of India have a dense transport network and is densely populated. The peninsular plateau has a moderate network of transport & hence is moderately populated. The Himalayan region lacks in transport facilities and is therefore scarcely populated with a low density of population.

❑ Urbanization

- Urban centers act like magnets for the migrant population as they offer a wide variety of employment opportunities, better educational & health facilities, security & promise a better standard of living. Thus, they have a high concentration of population & a high to very high population density

- Urban centers in India like Greater Mumbai, Delhi, Kolkata, etc. have population densities of over 6000 persons /square km.

❑Safety & Security

- ❖ Areas that offer a better sense of security & safety to the people have a higher concentration of people & a higher density & vice-versa.

- ❖ The urban centers are densely populated while the frontier areas of any countries are sparsely populated

- ❖ War-torn areas & areas of the political unrest of militant or Naxal activities tend to discourage population concentration

❑ Government Policy –

The government policies may encourage or discourage the growth as well as settlement of population in a region thereby affecting the population concentration & its density

❖ Article 370 in J & K which was in force till July 2019 was a major reason for the low population density in J & K.

Accessibility:

❖ In the agriculturally less productive but industrially advanced societies, the people are dependent on secondary and tertiary sectors and most of the industries are located at places that are easily accessible.

❖ The economic advantage of locations like Kolkata, Mumbai, Rotterdam, Chicago, Rome, etc. creates employment opportunities that attract a large population.

❖ These centres grow both by natural demographic increase and by in-migration.

❑**Restrictions of National boundaries:**

❖People of overpopulated countries may not be allowed to enter in developed countries with less density of population due to political restrictions.

❖Examples are the **H1B Visa system**, the **refugee crisis in Europe**, etc.

❑ Political factors:

❖ Countries with **stable politics have high populations** e.g. Singapore, on contrary Afghanistan has a low population.

❑ Social factors:

❖ It includes **health, education, sanitation,** etc. If better facilities are provided then population low.

❑ Economic factors:

❖ Adequate job opportunities attract **more population.** For example USA and Anglo America.

Conclusion

In fact, the distribution & density of population is affected by the combination of all the previously mentioned factors. What can be noted is that in **most of the areas of the world** both are increasing.