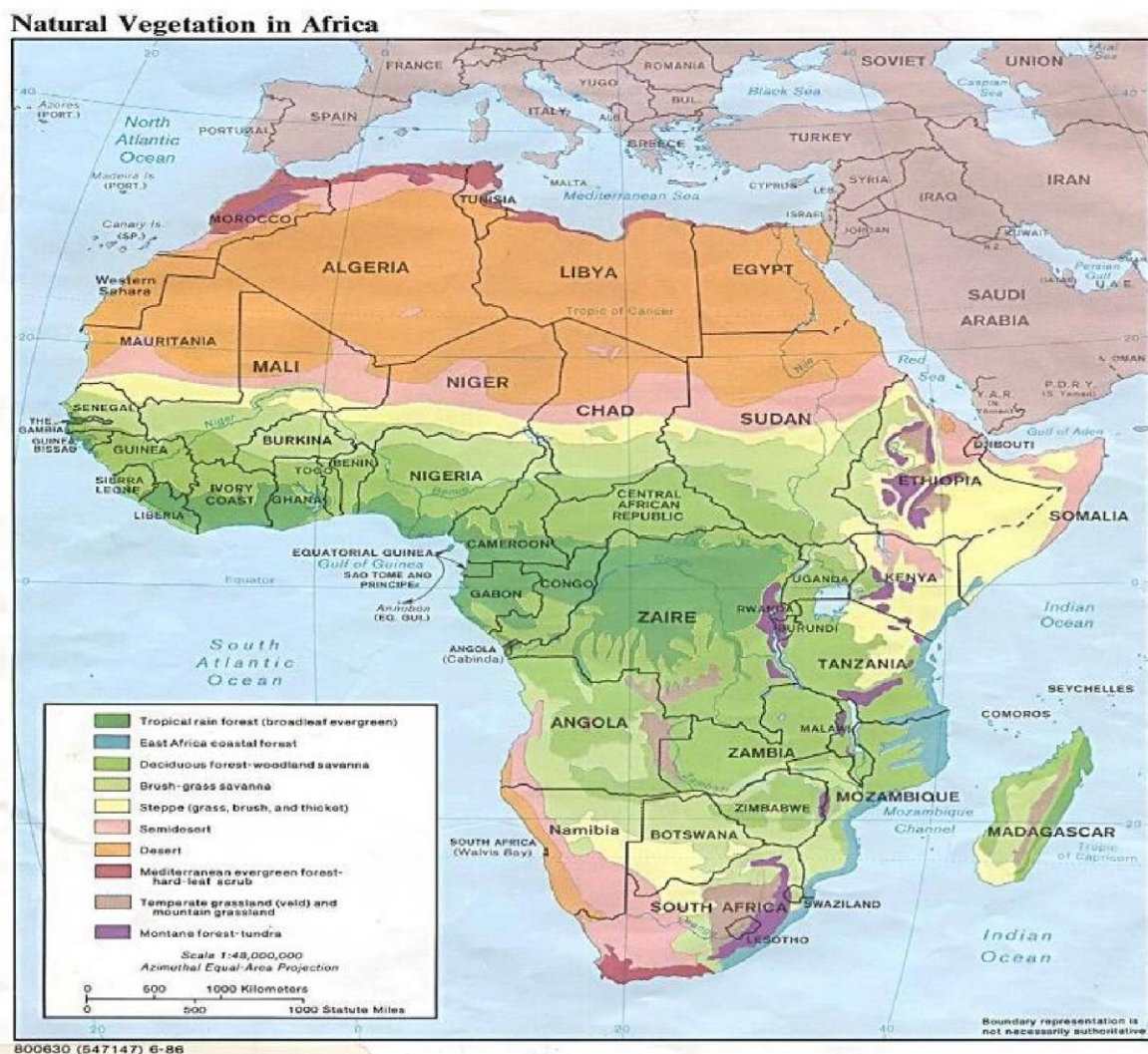


VEGETATION IN AFRICA.

Vegetation is the natural plant cover in man's visible environment either on the surface of the earth (continental crust) or under water bodies i.e. river bed, lake bed or sea bed (oceanic crust).

Africa is blessed with a variety of vegetation cover from the north to the south and from the west to the east e.g. Mediterranean, desert, savanna grassland/woodland, equatorial/tropical rain forest, mangrove/swamp, mountain/montanne, temperate, etc.

Sketch map showing vegetation distribution



Factors determining vegetation distribution

The present day man-made and natural vegetation in Africa is attributed to the following factors i.e.

altitude, relief, climate, soil texture and biotic factors

- **Altitude-** this refers to the change in atmospheric temperatures above the mean sea level. Height above sea level brings about climatic conditions that influence growth of different vegetation types, this is common in mountainous or highland areas with savanna, tropical forests, bamboo, heath and moorland plus bare rock at the peak
- **Relief-** this refers to the nature or gradient of the landscape being flat, gentle or steep. The gradient favors growth of vegetation with respect to height, size and root makeup. The relatively flat land is dominated by forests and grassland while the gentle sloping land is covered with grassland and scattered trees. As for the very steep land, it's covered with grass having very short roots. However some mountainous areas have dense vegetation like the Drakensburg, Elgon, Cameroon, etc.
- **Climate-** this concern the temperatures and rainfall received in a given region. Climate determines the dominant vegetation cover and tree species that survives in a given area. E.g. high temperatures with very little rainfall favor desert vegetation having thickets, scanty trees while hot temperatures with heavy rainfall favors tropical rain forests.
- **Soil texture-** the nature of soil in a given region influences the type of vegetation and tree species i.e. very steep areas with thin soils support very short trees and grass while gently sloping or flat lands with deep fertile soils support very tall trees with deep roots though even grass does well in loam soil.
- **Biotic factor-** this concerns the work of humans, animals, insects and bacteria e.g. man/woman, elephants, caterpillars, termites, etc. As for man he influences vegetation by either conserving the natural vegetation, planting man-made forest belts of pine trees and eucalyptus, reclaiming swamps, deforestation, bush burning, etc. On the other hand, animals can destroy vegetation by eating it or simply destroying it like monkeys and elephants; insects like caterpillars, locust/grass hoppers, termites also destroy vegetation.

Types of Vegetation

As noted, Africa has a variety of vegetation cover due to the different soil types, drainage, relief, etc as can be seen below

Equatorial/ Tropical rainforest

This is dominant in West Africa in Gabon, Cameroon, DRC and Central African republic, Congo Brazaville, Equatorial Guinea though patches exist in Uganda and Kenya mainly in areas near the equator. This vegetation cover is found in the equatorial climate belt with hot temperatures and heavy rainfall. The tree species include mahogany, ebony, okoume, 'mvule', etc

Characteristics

- Ever green due to the abundant rainfall received
- Have broad leaves for photosynthesis
- Have a great height of 30 to 50 m
- Develop a straight posture due to competition for sun light
- Do not occur in a pure stand
- Have buttress roots due to big size and great height
- Have little or no under growth due to limited sunlight for photosynthesis
- Have hard wood
- Form a thick canopy of three layers

Economic activities

- Lumbering due to abundant flora
- Tourism due to abundant fauna and flora
- Hunting due to abundant fauna
- Agriculture at the periphery or border of the forests
- Fruit and food gathering of wild fruits and tubers
- Academic research and study in zoology, botany, etc

- Wild life conservation
- Forestry and forest conservation of extinct species
- Leisure and entertainment
- Fishing since they act as water catchment areas
- Bee keeping
- Filming

Mediterranean

This is located in the northern extreme of Africa in

Algeria, Tunisia, parts of Libya and the southern extreme in South Africa particularly Cape town.

Tree species include pine, oaks, etc

Characteristics

- Trees are scattered
- Do not occur in a pure stand i.e. a mix of pine and oak
- Develop long roots
- Have a considerable height of above 15m
- Have little under growth
- Have fresh bulb roots for water storage
- Leaves are waxy and shiny to reduce water loss

Economic activities

- Tourism due to abundant fauna and flora
- Lumbering of pine trees
- Arable farming especially horticulture or viticulture
- Animal husbandry of cattle, sheep, goats

- Academic research and study
- Leisure and entertainment
- Sport hunting especially by the tourists **Savannah**

This is very extensive from the western part of Senegal through the central like Cameroon and DRC to the eastern like Uganda, Kenya towards the south like Botswana and South Africa. It is sub-divided into;

- Savannah grassland- dominating the Central, Eastern and Southern parts.
- Savannah woodland- particularly in the northern part of Tanzania called Miombo woodlands. Tree species include baobabs, spear grass, cactus, etc,

Characteristics

- Trees are scattered
- Have a relative height of 2 m
- Do not occur in a pure stand
- Leaves are green during the rain season and turn yellow-brown in the dry season
- Dominated by grassland
- Most trees shed off their leaves during the dry season to avoid water loss i.e. deciduous trees
- Trees are of hard wood
- Develop an umbrella shape as branches spread out with small stalks

Economic activities

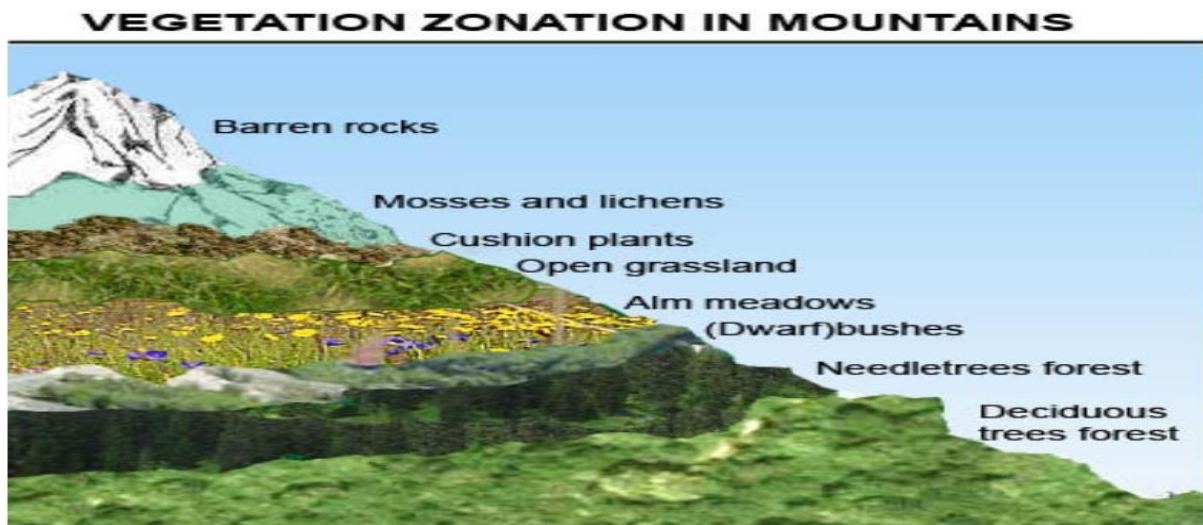
- Animal husbandry due to abundant grassland
- Crop cultivation due to extensive relatively flat land
- Tourism due to abundant fauna and flora
- Wild life conservation

- Hunting due to abundant fauna
- Academic research and study
- Industrialization due to extensive land
- Trade and commerce coupled with transportation
- Settlement

Mountain/Montanne

This is found mainly in mountainous and highland areas where altitude influences change in rainfall and temperature patterns giving rise to different vegetation types at different levels above the sea level from the foot of the mountain to the peak.

Illustration



Characteristics

- Does not have specific characteristics due to the variety of vegetation but leaf can be borrowed from Savannah, Tropical rainforest and Alpine vegetation

Economic activities

- Tourism due to abundant fauna and flora
- Crop cultivation on the gentle slopes and foothills of mountains /highlands

- Animal husbandry on the foothills due to grassland
- Hunting due to abundant fauna
- Academic research and study
- Fruit and food gathering in the forests.
- Wild life conservation
- Forestry and forest conservation
- Lumbering e.g. in the tropical forest zone
- Settlement at the foothills

Desert

This is wide spread in the northern part of Africa referred to as the Sahel region and in the southwest part called Namib/ Kalahari region. Tree species include cacti, coarse grass, etc.

Characteristics

- Very short trees made of shrubs, thickets and thorny bushes
- Have needle like leaves to reduce water loss
- Have waxy leaves to reflect sunlight and regulate transpiration
- Have thin stems with thick barks to reduce water loss
- Some trees develop thorns on their barks to reduce water loss.
- Have very deep roots to access water underneath/from underground.

Economic activities

- Tourism in terms of sun bathing and desert travel
- Animal husbandry especially nomadic pastoralism
- Leisure and recreation like desert rallying
- Mineral mining of oil, gold, etc

- Wild life conservation of desert fauna like scorpions, snakes, tortoise, etc
- Filming due to the bright environment i.e the clear blue sky.
- Agriculture especially irrigation farming in Egypt, Sudan, Senegal, etc in those areas that are located along major rivers.e.g the Nile in Sudan and Egypt,R.Senegal in Senegal.

Temperate/ Veld

This is found only in South Africa in the provinces of Natal, TransVaal and the Orange Free state partly Lesotho. It comprises of grassland, flowers and shrubs.

Characteristics

- It shares with the savannah grass land

Economic activities

- Crop cultivation e.g. sugarcane and wheat in Natal
- Fruit and flower growing/horticulture and viticulture.
- Animal husbandry of merino sheep for wool and mutton
- Tourism due to abundant fauna and flora
- Industrialization based on agriculture

POPULATION IN AFRICA

Population in the general sense refers to the total number of living and non-living phenomena in geographical space at a specific time. As for humans, it refers to the total number of people living in an area at a given period of time.

Africa has diverse population patterns i.e. dense, medium and low that is unevenly distributed throughout the continent.

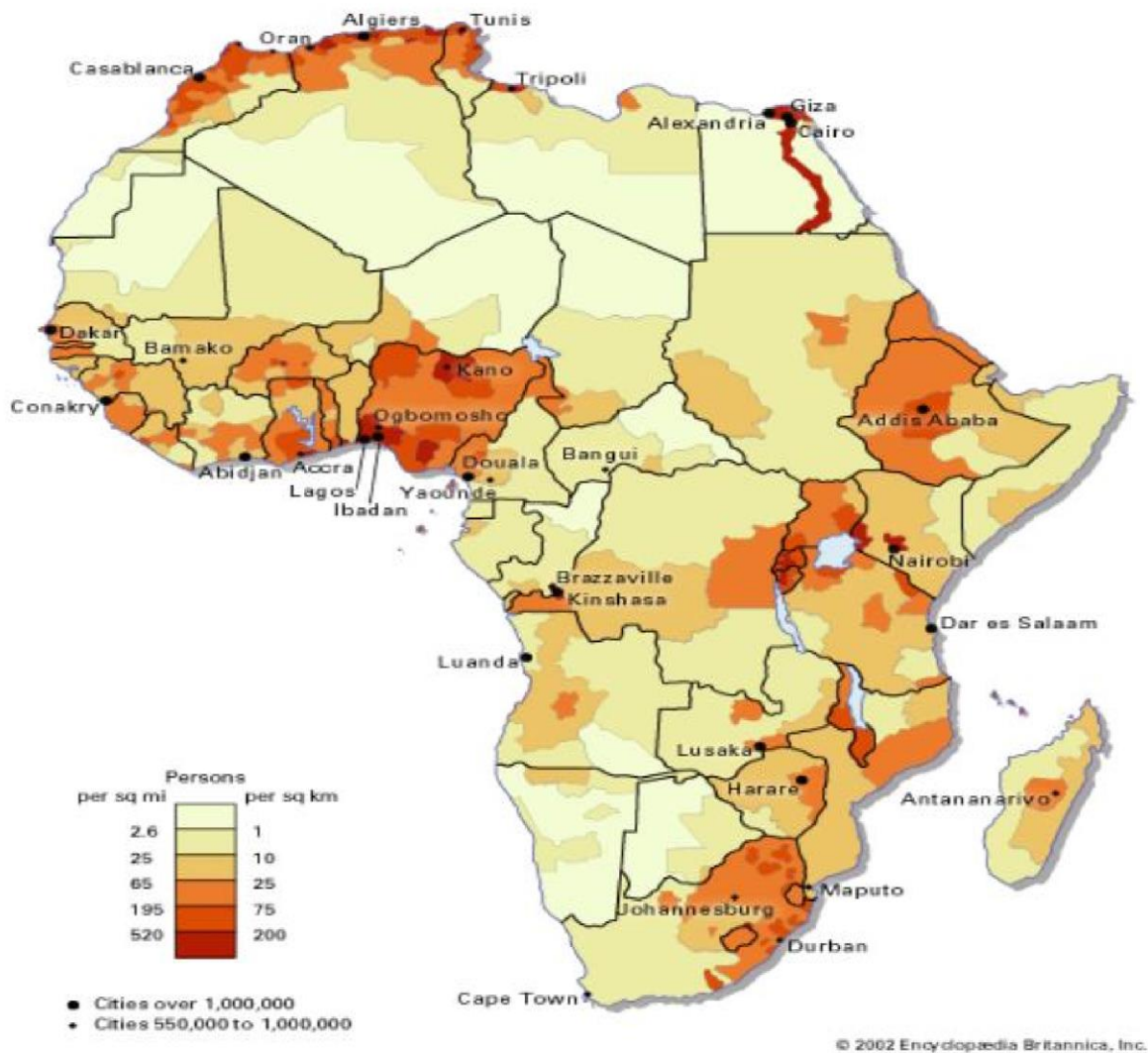
The population of Africa is estimated at 1.111,000,000 with some countries being densely populated like Nigeria, Egypt and South Africa while others are sparsely populated like Equatorial Guinea, Djibouti and Burundi.

Africa accounts for 15% of the world's population, having the growth rate of 92.293 million people per annum.

Population terms

- Population distribution- the number of people in a place at a given time.
- Population density- the number of people in a given place at a given time per square kilometer. $PD = \text{no. of people/area}$
- Birth rate- number of live births per a 1000 people in an area per year.
 $BR = \text{no. of live births/1000}$
- Death rate- the number of deaths per a 1000 people in an area per year.
 $DR = \text{no. of deaths/1000}$
- Natural increase- the difference between the death rate and the birth rate
 $NI = BR - DR$
- Growth rate- the natural increase in population size of an area in a specified period of time.
 $GR = \text{current population} - \text{previous population}$
- Dependency ratio- the ratio of the productive population (15-65) to the economically nonproductive population (0-14 and above 65)
- Migration- the transfer of persons from one geographical location to another either temporarily or permanently. E.g. RUM, URM, RRM, UUM, emigration, immigration, etc.

Sketch map showing population



Factors favoring population distribution

- Nature of vegetation- either can be easily cleared like savannah for agriculture and settlement or is hardly cut like tropical rainforest with hard wood.
- Nature of landscape- either being very steep that are rarely inhabited, gently sloping or flat attracts population thus densely inhabited
- Women fertility rate- possibility of the number of children to be born by a woman in her reproductive life time

- Climatic conditions- either being conducive for settlement like tropical, equatorial or harsh conditions like desert
- Political atmosphere- either being politically stable attracting population or war zone areas being sparsely inhabited
- Economic activities- either having viable trade and employment opportunities attracting people in an area or non-economical forcing people to seek for better standards of living
- Social service delivery- either well served with education, health, banking, transportation, recreation, etc attracting many people or having limited/none to meet the increasing demand
- Open surface water- either having diverse rivers and lakes attracting many people or having few water sources or none having sparse population
- Mortality rate- either having a low death rate implying high population due to high life expectancy and immunity against disease or having a high death rate implying low life expectancy thus low population.
- Morbidity or disease prevalence- either free from disease vectors with low sickness level attracting population or being prone to disease vectors compelling people to move to new areas leaving the former non-inhabited
- Soil fertility- either having deep fertile cultivable soils favoring agriculture and settlement or very infertile sandy soils limiting cultivation which is the basic livelihood of most people on the continent
- Extensive land- either free and not inhabited thus attracting people or already inhabited by wild animals, other humans and vegetated
- Migratory patterns- either undergoing RUM,RRM,UUM, emigration, immigration, and URM hence, causing variation in population
- Government policy- either supporting high birth rates together with RUM, URM, RRM, UUM, emigration and immigration or limiting immigration, RRM,RUM, URM, UUM and regulating number of children to be born
- Natural occurrences- either being prone to floods, earthquakes, landslides, mudflows, drought and famine hence discouraging settlement or being free from such calamities hence encouraging settlement.

- Cultural practice- either promoting polygamy and polyandry favoring increase in population or being conservative with monogamy
- Religion- either promoting polygamy and unlimited child bearing or supporting monogamy
- Accessibility- either it is very accessible with reliable transport and communication networks and social service delivery hence attracting settlement or very remote causing fear among the population.
- Historical activities- either areas engaged in slave trade, long distance trade, or any other that might have compelled people to move away or those less affected and benefited especially towns and collection centers like the East African and the West African coasts hence having dense population.
- Growth of ancient kingdoms- either inhabited by civilized and well organized centralized kingdoms like the Chwezi, Bunyoro-Kitara, Kanem-Bornu, Yoruba states or areas inhabited by primitive segmentary societies like the Khoi-San, Bamba

/Ba-Konjo/Batwa, etc

High population distribution

This is a situation where an area has a high number of people coupled with a high growth rate and population density compared to the sustainable capacity of the land. This is attributed to a number of factors as seen above, and has the following advantages as explained below;

Advantages

- Abundant labor force to engage in the production process
- Better security of the country
- Ready market for fresh and manufactured goods
- Innovation, creativity, discovery and research in science and technology
- Urban development due to increasing population demanding basic infrastructure and social service delivery
- Utilization of natural resources and land inclusive for agriculture, tourism, etc

- Encourages high food production in the area since labor is present.
- Industrial development especially of laborintensive nature
- Easy movement of ideas and mobilization of the masses
- Favors unity of the masses due to socialization
- Economic diversification of the economy dealing in a variety of potential activities
- Promotes international relations through trade and labor exchange

Disadvantages

- High crime rate due to idleness
- High levels of unemployment
- High government expenditure in providing social services
- Slum development due to congestion
- Easy spread of airborne and sexually transmitted diseases.
- High levels of poverty and poor living standards
- Over utilization of natural resources
- High cost of living due to limited survival means
- Traffic congestion in urban and industrial areas Land fragmentation in congested areas
- High rate of dependence on the working population
- Promotes rural-urban migration in search for better living standards
- Moral decadence due to a mix of people from all walks of life
- Dependence on other countries for aid
- Dumping of industrial rejects due to high levels of poverty

-
- Difficult for the government to plan and implement national programs

Low population distribution

This is where the population is far below the sustainable capacity of natural resources coupled with a low growth rate and population density.

Advantages

- Easy to monitor and govern
- Easy planning and implementation of national programs
- Less strain on social amenities and service access
Low occurrence of crime
- Low risk of disease spread
- Less government expenditure in providing social services to the people
- Low congestion in inhabited areas
- Low cost of living as people seem to have the basics of life

Disadvantages

- Shortage of labor either skilled, semi or nonskilled
- Low tax base for the government
- Limited market for agricultural and manufactured items
- Low infrastructure development due to low expected returns
- High vulnerability to insecurity since the population is low and can not stand against a strong external military force.
- Many resources remain redundant
- Low creativity, innovation, etc

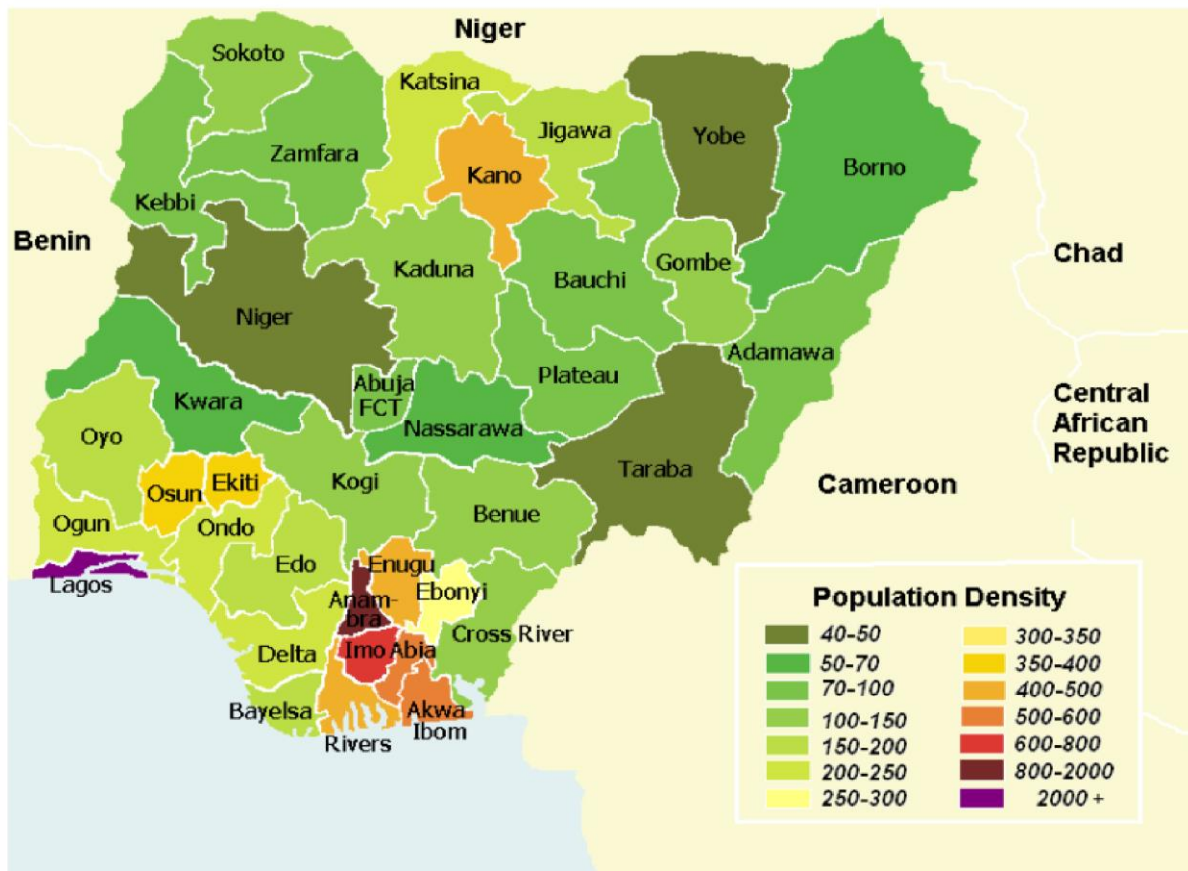
- - Low urbanization
Prevailing of primitive cultural practices due to conservatism

Population studies in Nigeria

Nigeria is the most populated country in Africa having 1/6 of Africa's population with 389 ethnic groups like Hausa-Fulani, Nupe, Tiv, and Kanuri speaking a variety of languages like Hausa, Yoruba, Igbo, Fulani, Ijaw and English.

The population of Nigeria stands at 149,229,090 with a population density of 1612 people, a growth rate of 1.999%, a birth rate of 36.65/1000, and fertility rate of 4.82/woman and a life expectancy of 46.94 years.

Sketch map showing population distribution in Nigeria



Summary table

Age group	Percentage	Male	Female
0-14	41.5	31,624,050	30,242,637
15-64	55.55	42,240,641	40,566,672
65+	3.1	2,211,840	2,343,250

Factors for population distribution

- The general relief- the most inhabited areas are the plateaux, coastal low lands, river valleys where agriculture and settlement is possible.

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- Climate- being a mix of tropical savanna in the central, equatorial in the south and desert in the north
- Soils- the sandy soils in the north, alluvial soils in the valley areas and coastal lowlands with deltas
- Vegetation- the desert vegetation in the north has discouraged settlement savannah in the east, equatorial vegetation in the west and south
- Mineral deposits especially in the south with great oil potential in the Niger delta
- Government policy- this aimed at resettling people in the west that was vegetated and the arid north sparsely occupied by the pastoral Fulani
- Industrialization- setting up of manufacturing industries in the south, east and north
- Urbanization- the increasing level of urban development in the south, west and along the Niger river valley
- Well laid transport and communication networks in the south delta area, west and central parts.
Influence of ancient kingdoms especially in central and southern parts e.g. Hausa, Yoruba, etc
- Economic activities- the early practice of slave trade along the West African coast (TransSahara and Triangular trade) greatly depopulated some coastal areas especially in the southwest and the collecting centres of slaves and trade items remained densely populated.
- Culture- the pastoral nature of the Fulani in the north makes the population projections unstable
- Religion- the dominance of Islam especially in the central and northern parts
- Natural occurrence- the southward movement of the Sahara and the consequent transhumance of livestock farming in the northern and southern parts

Effect or impact of the high population in Nigeria

- Consider advantages and disadvantages of high population

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