

## POPULATION IN AFRICA

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Population refers to the number of people in an area in a given period of time. The African continent has a population close to 1.15 billion people, coming second to Asia in world rankings. Africa has varying population distribution as some countries are densely populated, eg Nigeria, South Africa, while other countries are moderately or sparsely populated, like Libya.

### POPULATION CONCEPT

#### 1. BIRTH RATE.

This is the annual number of live birth per 1000 of total population.

Total number of live birth/total population.

#### 2. DEATH RATE $\times 1000$

Refers to the number of death in a year per 1000 of the total population

Number of death/total population  $\times 1000$

#### 3. MORTALITY RATE.

It refers to the number of death per 1000 of the total population

Number of death/total population  $\times 1000$

#### 4. FERTILITY RATE.

It refers to the rate at which children are born to females of bearing age i.e. between 15-45 years

Total number of children/number of females of bearing age  $\times 1000$

#### 5. GROWTH RATE.

Is the rate at which population increases over a given period of time usually one year

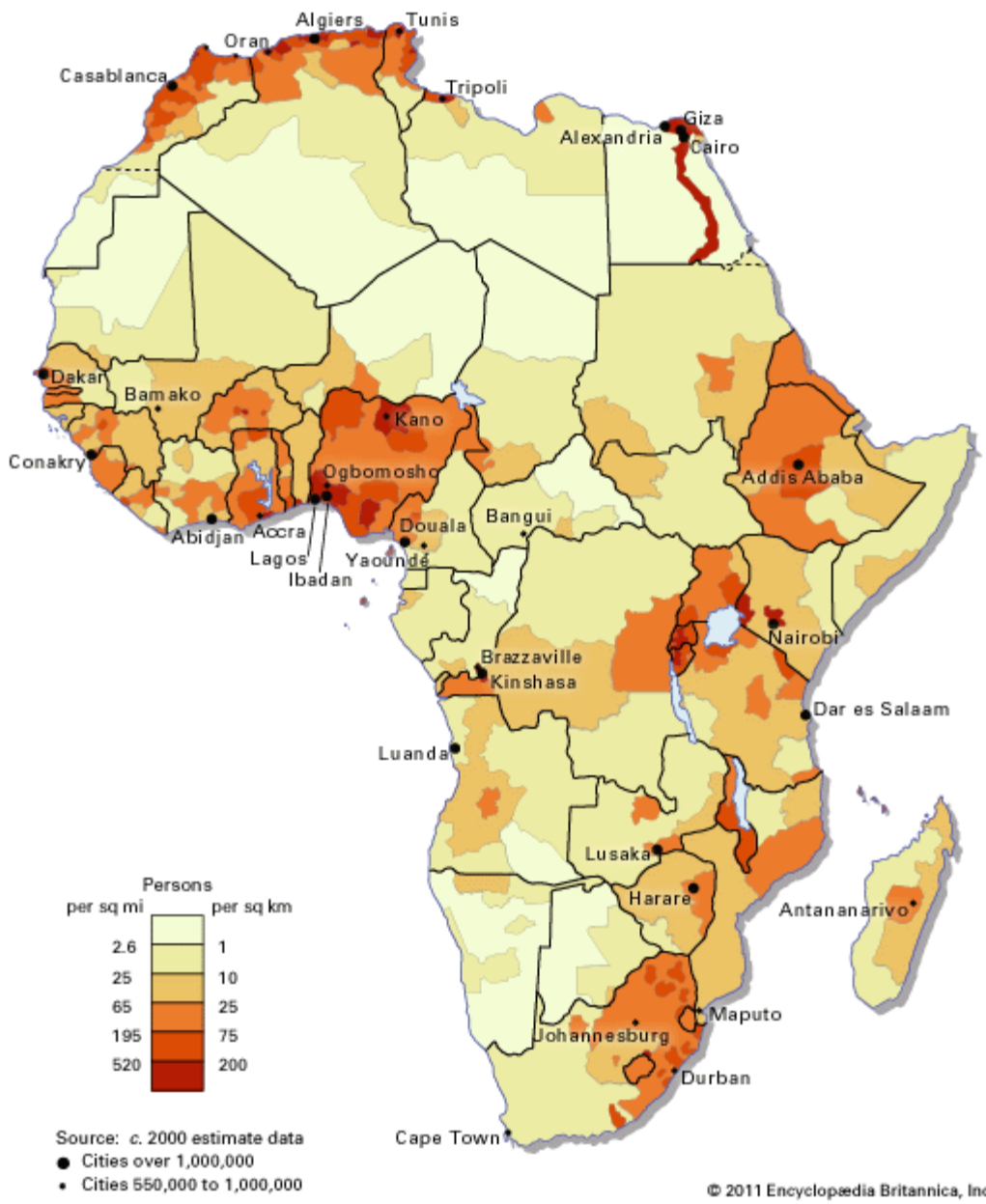
## 6. POPULATION DENSITY.

It is the average measure of the total number of people per unit area of land i.e. total popn in an area/total area.

### POPULATION DISTRIBUTION

Population in Africa is not evenly distributed. Some areas have very dense population concentrations e.g. the Nile valley in Egypt, Niger Delta region in Nigeria , Johannesburg is south Africa, Margrib region in N.West Africa etc . While other areas are sparsely populated and others lack settlement e.g. parts of Sahara desert, Kalahari and the forested region in Zaire.

### **A SKETCH MAP SHOWING POPULATON DISTRIBUTION IN AFRICA.**



### Factors influencing population distribution in Africa

Factors influencing population distribution in Africa are grouped into two;

- Physical/environmental
- Human/social/non-environmental

## **PHYSICAL FACTORS**

### **1. CLIMATE**

The amount of rainfall and its distribution account for why we have differences in population distribution. Where rainfall is low and unreliable, crop growing becomes difficult and therefore such areas have low populations e.g. in Sahara, Kalahari and semi-arid areas eg Somalia, Nyika plateau, central & southern Kenya and northern Uganda.

On other hand where rainfall is heavy, reliable and well distributed, high population densities exist. This is b'se crops can be grown e.g. in S.E Nigeria, around lake shore regions & highlands.

### **2. NATURE OF SOILS**

Areas with fertile soils normally support high population b'se farming is possible. Volcanic rich soils in the highlands of Rwanda, Burundi, Kigezi, Ethiopian highlands have dense population. Areas around river valleys also support high populations eg in the Nile valley in Egypt, the Niger Delta in Nigeria while infertile soils support low populations eg semi-arid regions and the Delta areas.

### **3. NATURE OF RELIEF**

High areas of the Rwenzori mountains, upper slopes of Kilimanjaro, Elgon etc are too steep and have thin infertile soils, the temps are too low and crop growing is very difficult. These conditions discourage human settlement. High population numbers are however attracted to highlands which offer cooler temps, receive heavy rainfall and can support crop growing.

Lowland areas on the other hand have high population densities b'se they have conducive factors for easy settlement.

### **4. DRAINAGE**

Areas with poor drainage are limited in agriculture and therefore have low population eg in the Niger Delta which is occupied with water bodies.

High population densities concentrate around water bodies as they are source of water.

In desert regions where water bodies lack, settlement is found around oasis. Other areas which are sparsely populated area; Mali, Libya, Namibia etc

#### 5. NATURE OF VEGETATION

Dense rain forests eg in Congo have hindered settlement since they are not easy to penetrate. They offer breeding places for pests and diseases; they are cold and habitats for wild animals. The grassland areas have dense settlements because they are easily cleared.

#### 6. PRESENCE OF PESTS AND DISEASES

Areas infested with pests and diseases especially tsetse flies discourage human settlement for example Miombo woodlands in Tanzania ,southern parts of Nigeria and the coastal areas of west Africa. Areas which are pest free are densely populated.

#### 7. PRESENCE OF MINERALS

The growth of most populations in Africa have a relationship with mining areas. Areas with mineral deposits have high population as people go there in search for jobs for example the copper belt of DRC is settled in due to the presence of copper hence employment opportunities.

Other areas include ;the Zambian copper belt, port Harcourt in Nigeria (oil mining) and the rand region in S.A etc

### HUMAN/SOCIAL/NON-ENVIRONMENTAL FACTORS

#### ❖ INDUSTRIALISATION

Industrial centres tend to attract people in search for jobs and end up being densely populated eg in S.A, dense communities are found in Johannesburg , Pretoria , Durban ,East London, Cape Town, Cairo in Egypt, Lagos in Nigeria.

## ❖ TRANSPORTATION AND COMMUNICATION

Population follows ease of moving people and their goods from one place to another. People tend to settle along communication lines eg along roads, railway lines and near airports. Areas poorly served with transport and communication lines are sparsely populated.

## ❖ URBANISATION

Urbanization refers to the growth of cities and towns. People are attracted to urban areas because of the social facilities that are found there.eg clean water ,modern schools ,hospitals, electricity etc.

Cities like Lagos in Nigeria, Cairo in Egypt, and Johannesburg in S.A have dense population.

## ❖ POLITICAL ATMOSPHERE

Stable countries have relatively high population densities e.g. Egypt , Nigeria, S.A etc countries which are politically unstable and insecure are sparsely populated in some areas eg Somalia, Ethiopia, Eritrea, Sudan(Darfur).

## ❖ GOVERNMENT POLICY

Some government influence population thru their policies of settlement and resettlement schemes. People are normally shifted from densely populated areas to sparsely populated areas. Some people are transferred to new areas b'se of natural calamities eg earthquakes ,landslides ,drought. Other gov't policies may include gazetting of land for other uses eg game reserves, forest reserves and national parks.

## ❖ SLAVE TRADE

Slave trade greatly depopulated some areas in Africa where the slaves were got from the middle belt of west Africa.

## ❖ ANCIENT POLITICAL KINGDOMS

In Africa population was associated with those kingdoms which could offer defense or security for its people, as such dense populations are found in Buganda

,Southern Benin, iboland, Yoruba land while areas that appeared weak have sparse populations eg Bunyuro.

### **POPULATION DISTRIBUTION IN EGYPT**

The Nile valley and the Delta and some larger oasis areas are regions of dense populations in Egypt as well as the Suez canal area. This is b'se of the presence of fertile alluvial soils from the valley which support crop growing.

The Nile river also provides water for irrigation of crops as well as water for domestic and industrial purposes. The Delta region supports the largest population of Egypt. It represents about 4% of the total area of Egypt but supports over 90% of the total population.

Great population concentrations are also found in Cairo b'se it was a meeting point for trade caravans crossing from N.africa into Asia. Cairo also had a well developed transport and communication network.

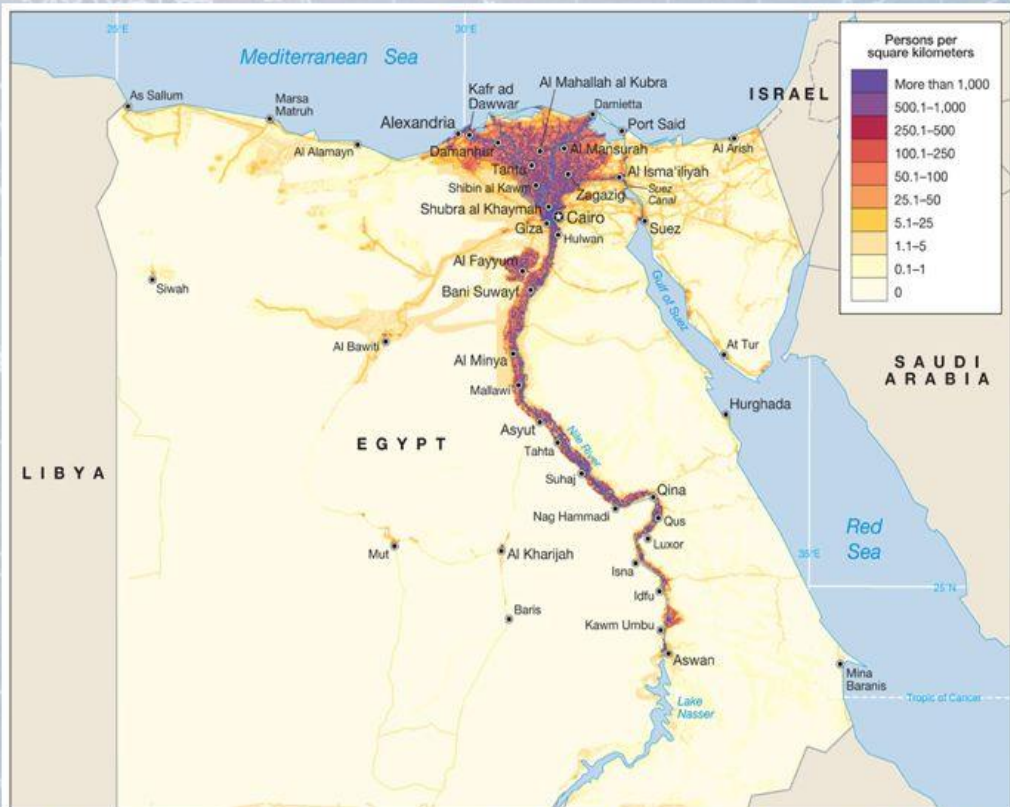
Railway lines are developed and she has several airports therefore ,she serves as the focal point for transport.

A large population concentration is also found in Alexandria and Cairo b'se of the presence of industries. People have been attracted in search for jobs. The rest of Egypt is sparsely populated as it is located in a desert where very low rainfall is received, it is unreliable and doesn't support farming.

The soils are also barren, infertile and sandy and can't support arable farming unless irrigation is carried out .B'se of the above population, Egypt faces problems of over population.

### **A sketch map of Egypt showing population distribution**

# Population Distribution in Egypt



Egypt's population distribution is closely linked to the proximity of water. In the north, the population clusters along the Mediterranean and in the interior, along the banks of the Nile River. (2004)



a type

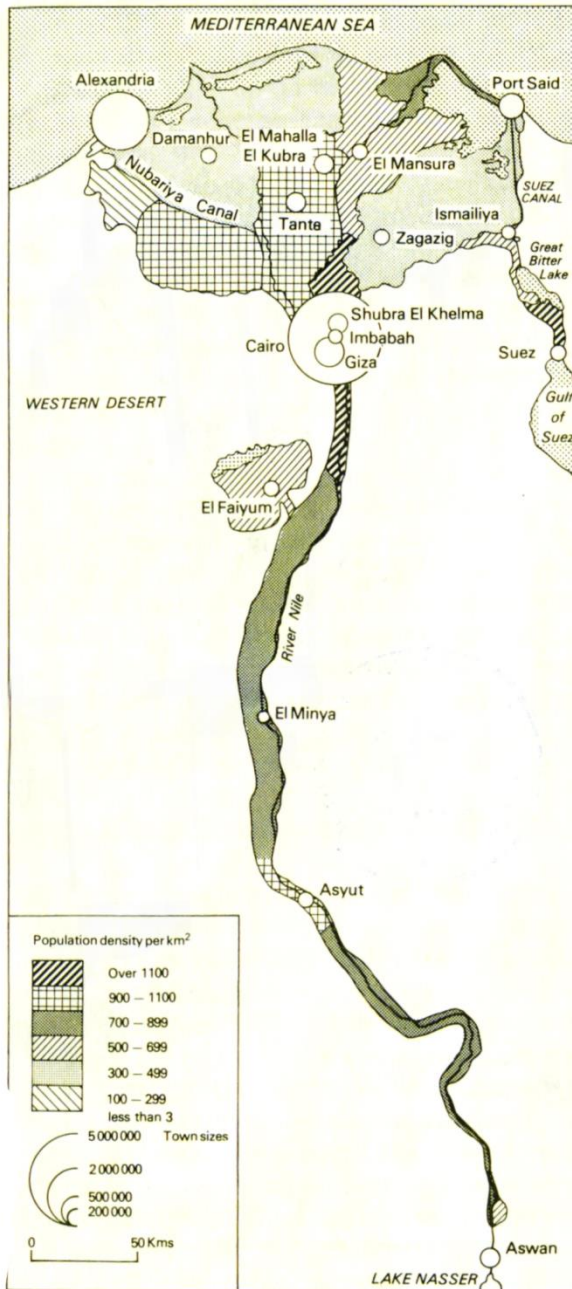


Fig. 92 Population density in Egypt

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### Reasons for high population growth rate in Egypt.

- Improved medical facilities that reduce death rates.
- Religious objections to the use of contraceptives. the Islam faith doesn't allow its believers to use contraceptives

- The fertility rates of Egyptian women are very high leading to high birth rates.
- Egypt being a Muslim community, its characterised by polygamy whereby men marry a maximum of 4 women. This has contributed to large families.
- Early marriages girls get married at tender ages b/n 12-20yrs.this is b'c they don't normally go far with education.
- The presence of river Nile which offers water for irrigation purposes to enable crops to grow has influenced high population in Egypt.
- The fertile soils in the Nile Delta and Nile valley favoring crop production on which the people are fed.

### **EFFECTS OF HIGH POPULATION GROWTH RATE IN EGYPT.**

- i. Lack of land for expansion as the largest population is concentrated on a very small areas i.e. Nile Delta and Nile valley
- ii. Food shortage due to the ever increasing number of people yet the land used for cultivation is limited
- iii. Landlessness as people concentrate on the small cultivable area and many have remained landless
- iv. Unemployment and under employed as not all people can be absorbed in industries and land for agriculture is limited
- v. Inadequate social facilities e.g. housing, education ,health centers etc
- vi. Poor conditions of living
- vii. Overcrowding and congestion leading to easy spread of diseases.
- viii. Slum dev't and its related problems like high crime rates eg robbery, prostitution, abortions, immorality etc
- ix. Gov't revenue is highly strained as it has to provide the necessary services as well as to import food for its people.

### **Solutions/steps being taken to the above problems**

- The police force is strengthened to reduce on the crime rates like robbery in Egypt.
- More industries have been constructed and this has helped to create more jobs for the people.

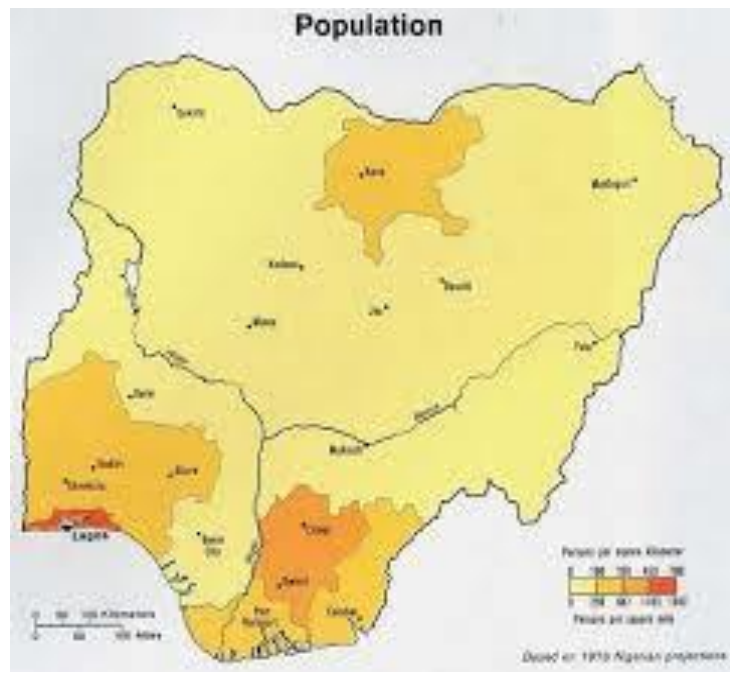
- Sky crappers are constructed in order to prevent the problem of land for expansion
- The gov't is providing fertilizers to improve on the fertility of the soil thus increasing food production
- The gov't is improving on the social facilities by providing free schools for the poor.
- The gov't is improving and developing rural areas by providing social services there thus reducing on overcrowding in urban areas.
- The gov't is restricting on the number of children to bare in order to balance the revenue and food supply.

### **POPULATION DISTRIBUTION IN NIGERIA**

Population distribution in Nigeria is not evenly distributed. Nigeria has a very complicated pattern of population distribution.

It has densely populated areas like the Niger Delta, Lagos and Kano areas and sparsely populated areas in the centre of the country e.g. Abuja areas.

### **A sketch map of Nigeria showing population distribution**



## **FACTORS THAT INFLUENCED THE PATTERN OF POPULATION DENSITY IN NIGERIA.**

### Physical factors

- ❖ The heavy rain fall totals received in the south with over 1300mm attract high population settlement while the low and unreliable rainfall of about 550mm received in the north doesn't attract settlement in the area. Also southern Nigeria has moderate temps compared to the very hot conditions in the north hence high population concentrate in the south than the north.
- ❖ Nature of soils; the equatorial region in the south has deep fertile soils which favors crop growing hence high population while the middle belt has poor infertile soils which don't favor farming therefore low population.
- ❖ Pests and diseases; parts of the southern Nigeria are infested with tsetse flies that cause sleeping sickness in man& nagana in animals. This discourages settlement hence they sparsely populated.
- ❖ Relief; the Kano plains and Niger Delta are densely populated due to having a flat terrain which favours agriculture and settlement . the hilly areas in Nigeria are sparsely populated.
- ❖ Water supply; the Niger Delta region and along the rivers of Niger and Benue have dense populations due to constant water supply for domestic and industrial uses unlike in the north where the water supply is poor.
- ❖ Presence of minerals; the Niger Delta region has mineral like oil and natural gas and these have attracted dense population in search for jobs unlike in the north which lacks minerals eg in the Niger Delta region which supplements the countries' natural resources.

### **Human factors**

- ❖ Transport; southern Nigeria and the areas of Lagos &Kano plains have attracted high population densities b'se they have good roads and railway lines. The northern part is poor served with roads and railway lines leading to low population concentrations.

- ❖ Industrial dev't; industrial towns of Lagos ,port Harcourt and Kano are densely populated as people come seeking employment. Other parts of Nigeria without industries are sparsely populated eg the northern part.
- ❖ Urban dev't; towns like Onitsha and Lagos in the southern parts of Nigeria.
- ❖ Nigeria are densely populated due to the better social services and infrastructure like hotels, electricity, water, cinemas etc whereas the north is sparsely populated b'se it lacks enough towns .
- ❖ Trade and commerce; the southern parts of Nigeria where mining ,urbanization and industrial dev't has taken place is a place where trade and commerce activities are done attracting population concentration. The northern part with no minerals, industries and a few towns are sparsely populated.
  
- ❖ Historical events; Nigeria is made up of 3 major tribesmen the Ibo in the south east, the Yoruba I the south west and the Husain the north. These were very strong kingdoms and were not affected much by wars and slave trade hence they have high populations in their areas. Slave trade greatly affected the middle belt of Nigeria which is sparsely populated.

### **POPULATION GROWTH**

Population refers to the general increase in the number of people in a given area. In Africa, population growth rate is high due to a number of reasons.

### **FACTORS FOR THE RAPID GROWTH RATE IN AFRICA**

- There has been a decline in death rate b'se of increased and improved medical services.
- Some societies in Africa take pride in large numbers of children for social and economic benefits eg boys give security in old age, they are a source of labour and girls are a source of dowry.
- Polygamy which leads to high population as women compete to produce more children which they relate with more love from the husband.
- High fertility rates and therefore high population growth rates.
- Early marriages esp. below the age of 25years and therefore a longer period in the process of child bearing

- Level of education more educated families have fewer children while in Africa most people aren't educated /semi-illiterate. In this group, they marry many women and have large families.
- Religious factors; Muslims and Catholics are against artificial methods of conception. They therefore have large families.
- Migrations these increase population numbers of areas where they go.
- Lack of family planning sensitization/ knowledge. In most rural areas of Africa, people don't have enough knowledge of family planning hence high population growth rates. Also some men don't allow their wives to use family planning.
- High infant mortality, in Africa, there is a high infant mortality and this creates the need for more birth to ensure the survival of family lineages. Therefore parents tend to have more children.
- Level of income, poor people have less ambitions and much time which is characterised by high birth rates.

## **MIGRATION**

Is the movement of people from place to place. There are 2 forms of migration i.e.

- Voluntary movement where one moves willingly for example in search for jobs and better lives
- Involuntary movement where one is forced to move for example because of war and natural calamities like drought, famine, floods, earthquakes/ landslides etc.

## **REASONS FOR MIGRATION**

1. People move in search of fertile soils to support agriculture.
2. Employment opportunities will lead to movement from esp. rural to urban areas.
3. Problems of population pressure on land will force people to new areas as they tend to search for land for settlement and agricultural activities.
4. Political atmosphere may force people to move to new areas i.e. instability which leads to civil wars may cause migration to regions of peace hence population growth.

5. People move in search for better standards of living and others hope to obtain more wealth in new areas.
6. Religious intolerance will cause death that may lead to movement of people to areas where they can express themselves freely eg Nigeria btn Muslims and Christians.
7. The nature of climate will cause movement of people from regions with harsh climatic conditions to those with better climatic conditions i.e. from very hot temps and low rainfall, from very cold areas etc
8. Others move due to natural calamities eg floods, drought, famine, earthquakes etc
9. Pests and disease will force people to migrate to pest free areas hence population growth
10. Recreational facilities, modern schools, health centers, electricity, water etc are factors that pull or force people to migrate from rural areas to urban areas
11. Some people may be forced to migrate as prisoners or they are deported.

### **HIGH POPULATION GROWTH AND IT'S ADVANTAGES**

1. It creates market for industrial and agricultural products
2. It ensues a large labour supply
3. It encourages innovations
4. It provides tax base for the gov't and therefore more revenues collected
5. It allows utilization of natural resources eg land, water, forests etc
6. It promotes security as people provide the man power
7. It encourages more productions people provide labour and market
8. It encourages the establishment of the infrastructure eg schools, roads, hospitals by the gov't hence dev't in the area.

### **DISADVANTAGES**

- It results into unemployment as the rate at which people increase is not the same rate with job creation.
- High dependence burden which also leads to poverty.



- Low standards of living resulting from inadequate housing, feeding, health facilities etc
- Strain on the available social services eg hospitals, schools etc
- Encroachment on the marginal lands to resettle the high population
- Land shortage which results into land fragmentation, food shortage, land conflicts and degradation due to over resource utilization.
- It leads to heavy strain on gov't expenditure in the provision of social and economic services
- Poor accommodation leading to evolution of slums
- It leads to over exploitation of natural resources e.g. minerals
- It leads to easy spread of diseases due to overcrowding and congestion, poor sanitation
- Reduction in the standard of living and welfare.
- It accelerates the problem of rural-urban migration and its associated problems high crime rates, over population, creation of slums etc.

### OVER POPULATION

Over population is when the number of people living in an area exceeds the available. Countries which are overpopulated in Africa include; Egypt along the Nile valley and Nile delta, Nigeria in the Niger delta region, Rwanda, Kenya highlands, Kigezi highlands and Ethiopian highlands etc.

### OVER POPULATION

1. Overcrowding which leads to problems of land fragmentation as people compete for land for various uses
2. Unemployment is a serious problem as not all people can get jobs
3. Poor standards of living are experienced as hygiene and sanitation is poor in overcrowded and congested areas
4. Poor housing is experienced and this leads to slum dev't
5. Rapid population growth is experienced and this leads to higher numbers of people
6. High dependence ratios are experienced and this affects savings and investments can't be done



7. Food shortage is experienced as there is little land for farming
8. Over exploitation of natural resources is experienced as this leads to the exhaustion esp of land, minerals and water resources.
9. The gov't over strains its resources as it has to provide the necessary social services
10. Slow growth of industries is also experienced due to lack of capitals and skilled manpower
11. There is a strain on social and economic services esp. roads, hospitals and schools etc

### **SOLUTIONS TO THE PROBLEMS**

1. Family planning can be done in order to reduce on the high birth rates
2. Dev't of natural resources by opening fresh areas eg minerals and agricultural land
3. High food yields can be obtained by increasing the productivity of the available farm land i.e. by applying fertilizers, modernize agriculture and use of improved seeds etc
4. Resettlement schemes could be carried out so that people are shifted from over populated areas to less populated areas.
5. The masses can be educated in ways of reducing high birth rates and also in better ways of utilizing the available natural resources.
6. Encourage small scale industries so that more jobs are created.
7. Increase on the number of health centers so that diseases are easily controlled.
8. To reduce on the problem of unemployment, labour could also be exported to those countries that need it most.
9. Building of skyscrapers
10. Building flyovers/tunnels
11. Improve on hygiene/ sanitation
12. Recycling of wastes

## **UNDER POPULATION**

Is a situation where the number of people is small to fully utilize the available resources. Countries in Africa which are under populated include; Sudan, Libya, Namibia, Chad, Zaire, Gabon, Niger etc

## **PROBLEMS OF UNDER POPULATION**

- Under utilization of resources esp land for agriculture
- Limited supply of labour force as the number of people is small
- Limited market for both agriculture and industrial goods
- The gov't earns little revenue b'se of a small tax base
- The countries face a lot of insecurity b'se the small population may not easily defend itself against any attacks.
- They are underdeveloped base it becomes uneconomical to develop the necessary infrastructure eg roads, schools etc
- They also experience slow growth of industries and agriculture due to shortage of labour, limited market and limited capital.
- They also face problems of dependency on other countries in order to exploit their resources
- They are faced with problems of rural-urban migration as people run away from the rural areas due to lack of necessary social services.
- They are faced with problems of low levels of urban dev't due to lack of human resource.

## **SOLUTIONS TO THE ABOVE PROBLEMS**

- Encourage immigration in order to raise the number of people in those areas
- Encourage higher birth rates and this can be done by giving incentives to people with big families e.g. by offering free education
- Attract foreign investors so that the resources can be tapped
- Improve transport network in order to encourage movements
- Discourage rural-urban migration by extending social services in rural areas
- Encourage agriculture, modernization and industrialization
- Importation of food stuffs.

## **AGRICULTURE**

This is the rearing of animals (livestock keeping) and the growing of crops (arable farming).

Agriculture can either be subsistence or commercial.

## **SUBSISTANCE FARMING**

It is a type of farming where the farmer grows crops and rears animals mainly for home consumption. If there is surplus, it's sold to buy basic necessities.

In subsistence farming, there are 3 main agricultural types;

- a) Shifting cultivation
- b) Rotational bush fallowing
- c) Nomadic pastoralism

## **SHIFTING CULTIVATION**

This is regarded as the most primitive form of farming under subsistence farming. In this type of farming, a farmer clears a piece of land by use of simple tools like pangas, hoes, burn vegetation and then grows crops after a few years usually between 2-3 years, when the fertility of the soil declines, he abandons that plot and moves (shifts) on to clear another one.

It therefore involves shifting from one place to another every time crops yields reduce. It is practiced mainly in the forested areas in Africa.

Examples of countries where it's practiced, include;

- Northern Zambia among the Bemba
- DRC among the Azande
- In Zimbabwe by chipinga
- And in the central African republic

## **CHARACTERISTICS OF SHIFTING CULTIVATION**

- It's done in forested areas of Africa

- The forest is cleared by use of simple tools e.g. hoes, pangas. etc
- Small plots of land are used for farming
- Family labour is used in clearing the land and cultivation.
- Production is entirely for home consumption and only when there is surplus production, does the farmer gain some income by selling it.
- Only food crops are grown e.g. yams, beans, maize, millet etc
- Very little attention is given to the crops during their growth.
- When the yields decline, the farmer abandons the plot for another
- Its practiced in sparsely populated areas.
- Different crops are grown on the same piece of land at a given period of time.(intercropping)

### **ADVANTAGES OF SHIFTING CULTIVATION**

- Constant movement ensures that fresh and fertile soils are obtained
- The movement also limits the risk of pests and diseases as the new plot may be disease free.
- Burning of the bush adds potash to the soils improving their fertility.
- It's cheap since it requires family labour and use of simple tools.
- The practice allows time for other activities to be done like, fishing, hunting and leisure.
- There is food security as a variety of crops grown at a time.
- Land left behind is allowed to regain its fertility for future use.
- There are less dangers of soil erosion since the land is abandoned after sometime and vegetation re-grows.
- The surplus crops can be exchanged on a barter basis for what one has not produced.
- There are less dangers of land quarrels

### **DISADVANTAGES OF SHIFTING CULTIVATION**

- There is destruction of natural vegetation which leads to desertification



- Burning destroys the organic matter and bacteria in the soil leading to its deterioration



- It doesn't encourage the growth of commercial crops since farmers stay for a short time.
- Its tiresome as farmers use simple tools to clear large forests, for space for cultivation.
- Its time consuming due to low levels of technology used and because farmers keep on shifting from one place to another
- It's not possible in densely populated areas
- It discourages establishment of infrastructure like roads, hospitals, schools etc. because people are always on the move.
- It discourages agricultural modernization e.g. the use of tractors, fertilizers, improved variety of seeds etc because of the small plots used.
- Its subjected to low crop yields due to the poor methods of farming applied.
- A lot of valuable timber is lost as the farmers keep on clearing fresh areas for cultivation. This also leads to a lot of deforestation.
- It leaves the areas subjected to agents of erosion esp. wind and water in those areas that have been abandoned.

### **WHY SHIFTING CULTIVATION IS STILL PRACTISED WHERE IT IS.**

1. The areas are sparsely populated and this avails land to constantly shift to.
2. The level of illiteracy among the people makes them unwilling to accept new innovations in farming systems.
3. Land is communally owned thus no one farmer has the right over it.
4. The equatorial type of climate favors the growth of their annual crops.
5. It's the only way of utilizing such idle land
6. The areas of operation are remote and don't attract other forms of farming systems

### **WHY SHIFTING CULTIVATION IS RAPIDLY DISAPPEARING IN AFRICA**

- Rapid population growth is putting pressure on land therefore there is less land available for them to keep shifting.
- There is increased demand for food which can only be met with improved farming systems.
- The introduction of perennial crops has necessitated farmers to have a settled life.
- The introduction of money(monetary economy) demands for surplus production hence farmers are changing from producing for home consumption but also for sale.
- More crops need to be produced to meet the demands on the world market
- The coming of the colonialists and white settlers who introduced better forms of crop cultivation eg plantation farming, intensive farming, market gardening etc which made people realize the disadvantage of shifting cultivation
- Change in land tenure systems to move away from communal land ownership to private ownership of land making shifting cultivation impossible.

### **WAYS OF IMPROVING TRADITIONAL FARMING SYSTEMS IN AFRICA**

- ❖ By providing farmers with farming skills i.e. educate and advice the farmers
- ❖ Provision of modern infrastructure e.g. roads, schools, hospitals, etc so that farmers can easily accept new innovations
- ❖ Provide the farmers with credit facilities so as to be able to purchase various farm inputs especially fertilizers, pesticides, sprays etc.

- ❖ By providing the farmers with improved seed varieties
- ❖ The local people should be encouraged to live a settled way of life
- ❖ There is need to change the land tenure system i.e. from communal land ownership to individual ownership.
- ❖ By encouraging cooperative societies for easy marketing of their produce.
- ❖ By consolidating their small plot of land.

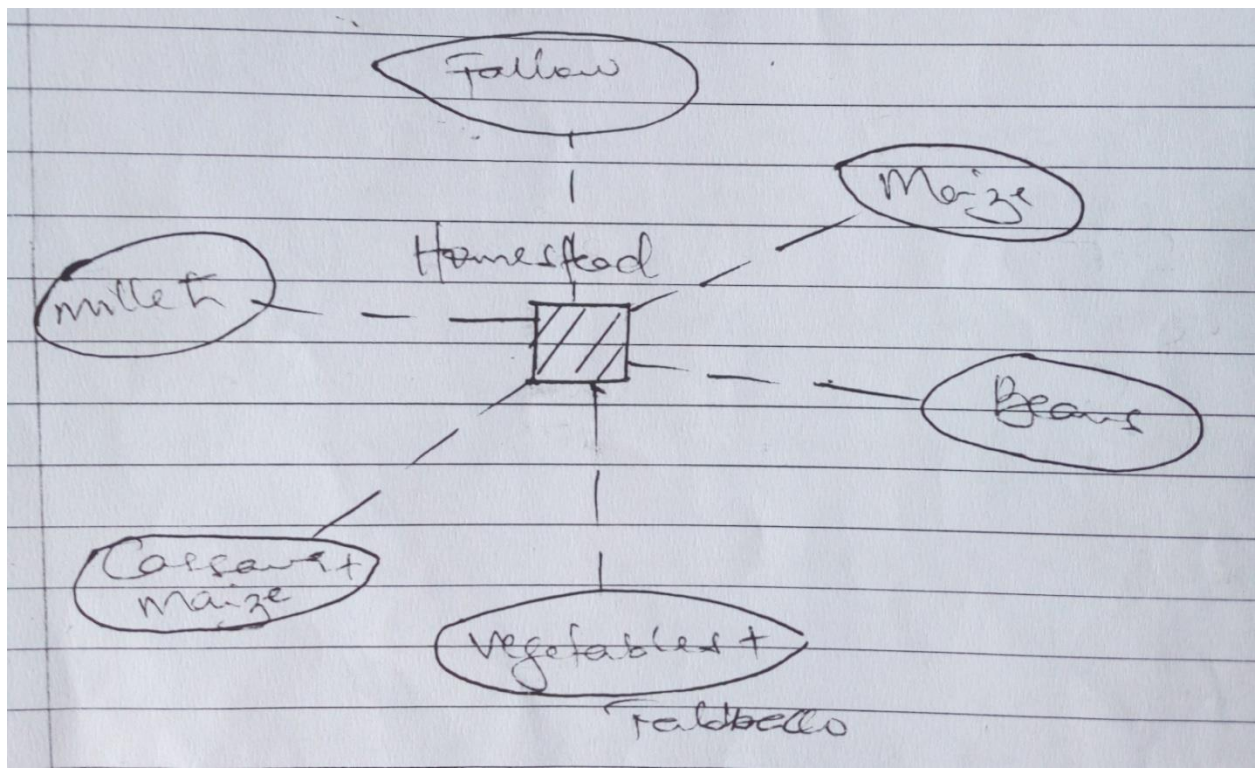
### BUSH FOLLOWING

It's also referred to as rotational bush following. It's a type of farming where the farmer's settlement remains fixed and only the cultivated fields rotate.

The farmer grows crops on a piece of plot until when crop yields decline, he then leaves the plot to fallow(rest) for between 3 to 10 years depending on the population density and then resume cultivation.

The practice is carried out in Nigeria, Ghana, Zambia, Tanzania(miombo woodlands)

### STRUCTURE OF A BUSH FALLOW





### **Characteristics of rotational bush fallowing.**

- When land loses fertility it's left to fallow and later reused after gaining its fertility.
- There is use of elementary tools like pangas hoes and digging sticks.
- There is use of family labour on the farm,
- Farming is based on permanent settlement.
- Both food crops and cash crops are grown.
- Production is mainly for home consumption.
- Less attraction is given to the crops.

### **Advantages of bush fallowing.**

- Soil fertility is maintained since land left to fallow.
- It favours high crop yields due to fertile soils.
- The farmer earns income after selling of the cash crops like tobacco.
- It requires only family labour hence it's easy to manage.
- It's cheap as it requires use of simple tools.
- There is control of soil erosion especially when land is left under fallow.
- It saves time as the farmer doesn't have to shift from one plot to another as in the case of shifting cultivation.
- It ensures food security since a variety of crops are grown.
- Less quarrels as the farmers confines himself and his piece of land.
- The farmer has time to attend to other activities like hunting, fishing, trading.

However with increase in Africa's population and the need of food and money. subsistence agriculture is being abandoned or more better commercial subsistence

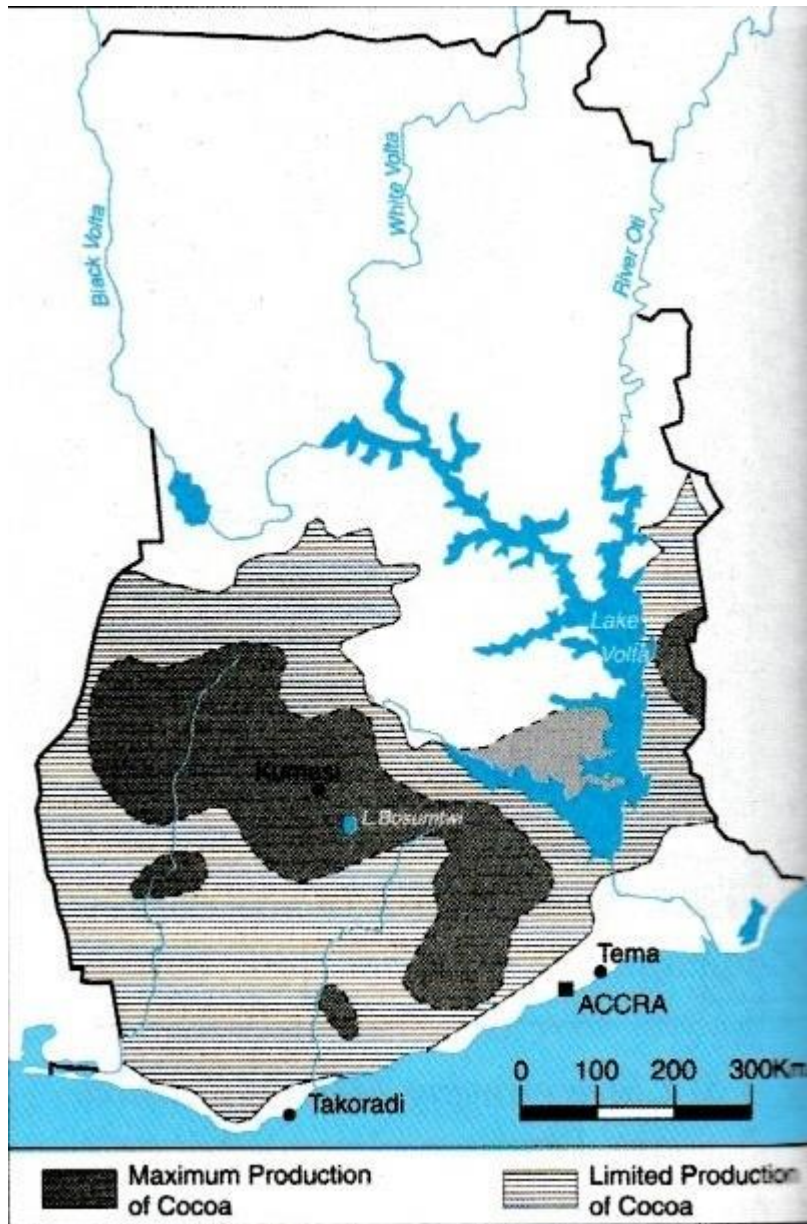
farming types of farming in many African countries like oil palm growing in Nigeria, cocoa growing in Ghana, vine growing in South Africa.

### **COCOA GROWING IN GHANA**

Ghana is one of the world's leading producers of cocoa, other cocoa producing countries in Africa include Ivory coast and Nigeria most of the country's cocoa is grown in the south.



## A SKETCH OF GHANA SHOWING COCOA GROWING REGIONS



### CONDITIONS FAVOURING COCOA IN GHANA. PHYSICAL CONDITIONS

- Availability of heavy rainfall over 1500 mm, providing water for plant growth.
- Presence of a high altitude of about 1000m above sea level, suitable for the growth of the cocoa trees.
- Presence of fertile soils providing nutrients for the growth of the crop.

- High temperatures, above 20 degrees Celsius that allows ripening of cocoa pods.
- Presence of high humidity, conducive for the growth of the cocoa trees.
- Presence of vast land space on which to grow the crops.
- Presence of natural forest cover, which trees provide to the cocoa plants.
- Presence of a small temperature range of 3-5 degrees, allowing cocoa growing throughout the year.
- Ghana's coastal location simplifies exportation of the cocoa beans via the Atlantic ocean.

### HUMAN CONDITIONS

- Presence of adequate cheap labour used during harvesting.
- Availability of large sums of capital to buy farm equipment
- Presence of a wide market in Europe, which encourages production.
- Presence of an efficient transport network, that is, cheap railway transport, to transport the cocoa beans.
- Positive policies of government, like finding foreign markets for the farmers produce.

### COCOA GROWING AND PROCESSING

Cocoa seedlings are sown during the heavy rains of March, from where they are transferred to the open field.

It takes the cocoa tree about five years for the first ripe pods to be picked.



The ripe pods are picked and taken for processing.



During processing the pods are split open using a sharp knife and the beans are scooped out by hand.





The beans are then allowed to ferment for a week in order to remove the bitter taste of the fresh beans, remove the shiny juicy pulp and also stop the beans from germinating.

Fermentation is done by piling the beans in a heap and covering them with banana leaves to generate heat.

The fermented beans are then washed and put out in the sun to dry, changing colour from white to brown.



The brown beans are then packed ready for export.

In the importing countries, further processing is done where the beans are cleaned and roasted and their husks are removed to produce cocoa nibs. The nibs are then

grinded by machines into a powder and removes the fatty cocoa butter used as an ingredient in the making of cosmetics and drugs/medicines.

### USES OF COCOA

- To make chocolate.
- To make cocoa drinks.
- To make beverages like cocoa powder.
- Making cosmetics like cocoa butter.

### IMPORTANCES OF COCOA GROWING IN GHANA

- The country earns foreign exchange after cocoa exports, using the revenue to build roads.
- The sector provides employment opportunities, giving income to famers.
- Famers standards of living have improved using income from the sector.
- Economic diversification is realised, meaning increased revenue earnings for the country.
- Infrastructural development in form of roads is realised.
- Locals are able to enjoy finished products like chocolate from cocoa.
- Industrialisation is realised, especially those processing the cocoa.
- The long gestation period of 5 years, allows the famer time to attend to food crop production.
- The government generates domestic revenue through taxes on the sector, getting money to build schools.
- Urban development is realised, like the export ports eg Accra and Axim.

### PROBLEMS FACING COCOA GROWING

- Competition from other producing countries like Cameroon, Nigeria, Ivory coast, which lowers profits.

- Price changes on the world market due to over production, lowering profits.
- Pests that cause diseases like the swollen shoot disease, affecting production.
- Climatic hazards like very heavy rains that is not good for the plant.
- Labour shortages as people resort to better paying jobs, affecting production.
- Use of simple rudementally tools like pangas, leading to low and poor quality yields.
- The long gestation period of 5 years is long for the famer without profits.
- Poor transport, like the seasonal roads that cannot be used in the rainy season, causing delays.
- Inadequate capital especially by the local famers, to buy fertilizer and farm equipment.
- Wild fires during the long droughts, affecting production.
- Soil exhaustion due to monoculture.
- Land shortages due to increased population, discouraging farm expansions.

### **SOLUTIONS/STEPS BEING TAKEN**

- Improving on the quality of the cocoa beans, to manage on world market.
- Shifting to better economic activities other than cocoa growing.
- Spraying with pesticides to control pests and diseases.
- Planting trees to provide shade for cocoa plants.
- Increasing workers pay to attract labour-force.
- Introducing modern equipments to simplify farm work.
- Investing in research to improve on quality.
- Improving on road transport to transport cocoa in all seasons.

- Extending credit facilities/loans to farmers.
- Putting in place fire patrols to control against wild fires.

### **OIL PALM GROWING IN NIGERIA.**

Nigeria is also another country that has changed from traditional subsistence farming to the growing of oil palm for sell and other crops e.g. rubber, tobacco, cotton.

Main oil palm growing areas are located in the south of the country.

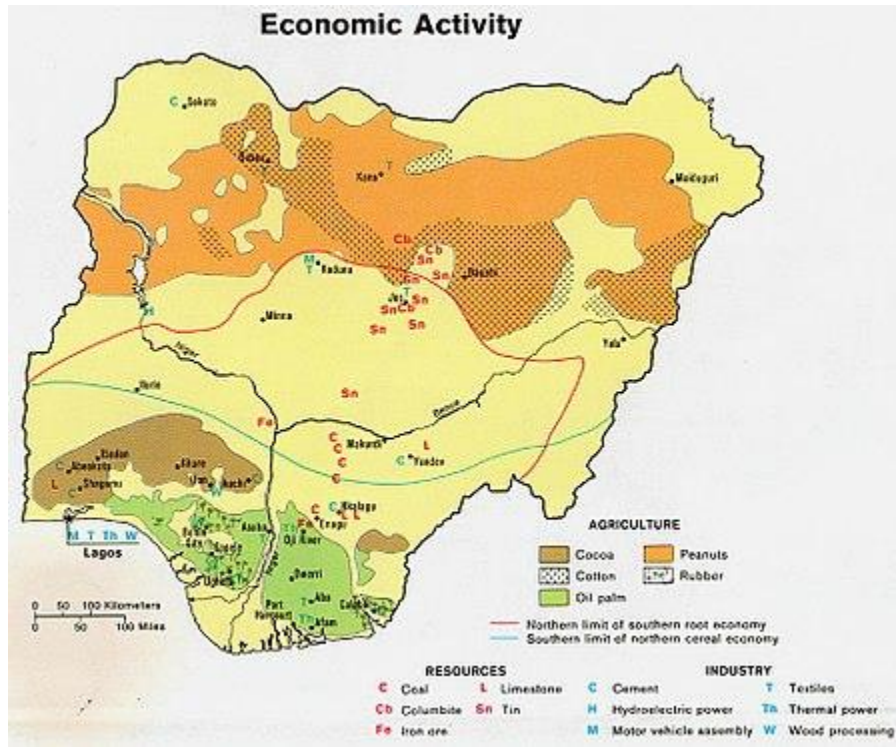
This is a tree crop where fruits grow in large bunches, each having on it up to a thousand fruits. The tree is often very tall over 5 meters, although other trees are short. The fruits are oily and are egg shaped. When ripe the fruit turns to a bright, orange-red colour.



However apart from oil palm other crops are also grown e.g. cassava , cocoa, yams, rice, rubber, etc.



## A SKETCH MAP OF NIGERIA SHOWING MAJOR CROP AREAS.



## CONDITIONS FAVOURING OIL PALM GROWTH.

### PHYSICAL CONDITIONS

- Hot temperature of over 21 degrees celcius, allowing ripening of the fruits.
- Heavy rainfall of at least 1500mm and well distributed, providing water for plant growth.
- Presence of areas with low altitude.(low lying areas), conducive for the growth of the plant.
- Presence of high humidity, good for palm tree growing.
- Availability of a small annual temp. range, below 3 degrees, allowing oil palm growing throughout the year.
- Presence of vast land space on which to grow the crop.



## HUMAN CONDITIONS

- Presence of adequate labour, to plant and harvest the crop.
- Presence of large sums capital, to buy farm equipments.
- Presence of reliable transport means like roads to transport the crop to the markets.
- Availability of adequate market in Europe, which encourages production.
- Positive government policy, like finding foreign market for oil palm.

## USES OF PALM OIL.

- To make cooking oil.
- To make cosmetics e.g. lotions, soap and others.
- To make hair oil.(shampoo)
- To make candles.
- To make margarine.
- Palm trees are used to make fences.
- The leaves are used as building materials.

## GROWING, HARVESTING AND PROCESSING.

Seedlings are planted in a nursery bed, from where they are transferred to the open field.



It takes the tree at least five years to bare the ripe fruits, ready for harvesting.



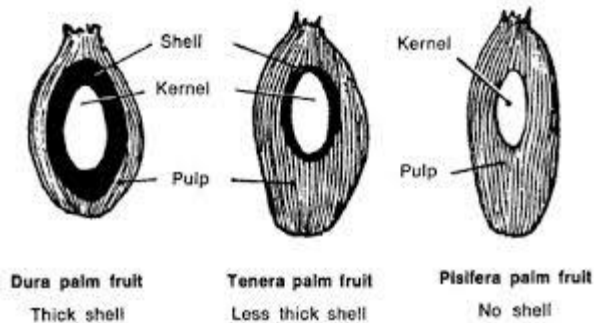
During harvesting, the farmer climbs the palm tree with the help of a rope, and then by using a panga, he cuts down the ripe bunches, taken for processing.

The fruits are picked from the bunches and then boiled until the orange coloured oil floats on the surface.

The oil is then skimmed off and put in containers for storage.

Inside the fruit, is a hard nut, that is cracked open to reveal a kernel. The kernels are crashed to produce a valuable oil called palm kernel oil.





Both palm oil and kernel oil are sold locally or exported to Europe and North America to manufacture final products like expensive toilet soaps, Margarine, e.t.c.

### **PROBLEMS FACING OIL PALM GROWING**

- Competition from alternative sources of oils like simsim, g.nuts, cotton seed, lowering profits.
- Pests that cause diseases, like Anthrose and Freekle diseases that destroy the crop.
- Labour shortages especially during harvesting and processing, affecting production.
- Long droughts that affect production and profits.
- low levels of technology, like using climbing ropes, affects quality and production levels.
- Poor transport, like roads that can't be used in the rainy season, causing delays.
- The very long gestation period of over five years without profits to the famers.
- Price fluctuations on the world market, lowering profits.

### **STEPS BEING TAKEN/SOLUTIONS**

- Spraying with pesticides to control pests and diseases.
- increase workers' pay to attract labour force.
- Improving on technology to increase production and quality.
- Improving on roads and railways to ease transport.

- Regulate production, to avoid price fluctuation.
- Creating storage facilities to store excess production.

### **IMPORTANCE OF OIL PALM GROWING IN NIGERIA.**

- Providing employment opportunities, giving income to famers.
- Nigeria earns foreign exchange after palm oil exports, getting money to build roads.
- Encourage infrastructural development like roads and railway lines.
- It favors economic diversification, meaning increased revenue earnings for the country.
- Improving famers' standards of living, using income from the sector.
- Nigeria generates domestic revenue by taxing the sector, getting money to build schools.
- Urban development is realised e.g. palm oil exporting ports like Lagos.
- Palm oil serves as a source of proteins to the locals, that use it as cooking oil.
- The long gestation period, allows famers to attend to other activities, like growing food stuffs.
- Promotes industrialisation like the palm oil processing industries.

### **PASTORALISM IN AFRICA**

Nomadic pastoralism is a subsistence form of animal rearing where nomads move with their animals in search of water and pastures.

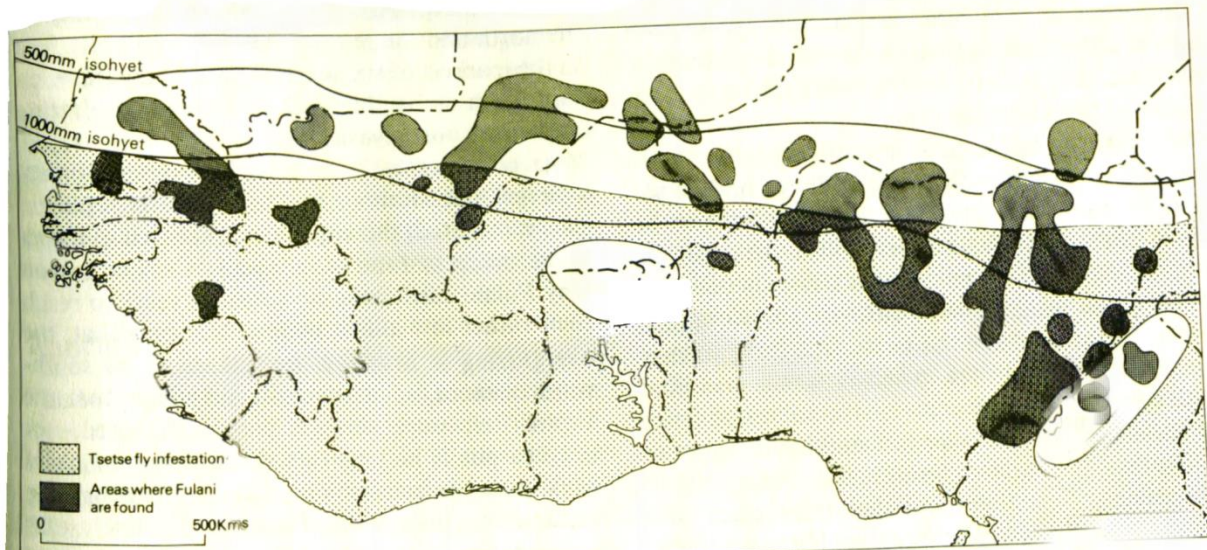
Nomads in Africa include; Fulani of west Africa, Xhosa of South Africa, Somalis of Somalia, Berbers of Sahara desert, Tuaregs of Sahara desert.

Nomads keep animals like, cattle, Sheep, Goats, donkeys, and camels.





**A SKETCH MAP OF WEST AFRICA SHOWING FULANI OCCUPIED AREAS(NIGERIA).**



*Fig. 99 The Fulani lands of West Africa*

**CHARACTERISTICS OF NOMADIC PASTORALISM (FULANI)**

- They keep large numbers of animals.
- The animals are grazed on natural pastures.
- Grazing of animals is done communally, since there is no private land ownership.
- There is permanent settlement since they are always on the move.
- They mainly operate in semi arid and arid areas.
- They operate in sparsely populated desert areas
- Their areas are remotely located far away from centers of modernity.
- They practice transhumance, seasonal movement with their animals.
- They keep indigenous breeds of animals and they don't apply modern scientific methods like spraying.
- The animals are reared only for subsistence purposes like meat, milk, hides, blood, cultural ceremonies.
- They lack permanent farmlands since they are always on the move.
- They are largely ignored by their respective government due to their conservative ways.

### **PROBLEMS FACING PASTORALISTS IN AFRICA (FULANI)**

#### **NATURE GENERATED PROBLEMS.**

- Prolonged droughts, causing very hot temperatures.
- Shortage of pastures for the animals.
- Water shortages for the animals, given the desert conditions.
- Pests like ticks, and insects like tsetse flies causing diseases like nagana in animals and sleeping sickness in humans.
- Attacks from wild animals, causing loss of lives.
- Famine leading to loss of lives.

## MAN MADE PROBLEMS

- Over stocking leading to over grazing, encouraging desertification.
- Soil erosion due to over grazing.
- Congestion at water places leading to their drying up.
- Tribal and clan conflicts with the settled communities, leading to loss of lives and property.
- Bush burning in the dry season, causing loss of vegetation cover.
- Easy spread of diseases due to communal grazing.
- Cattle rustling leading to loss of lives and property.

## SOLUTIONS/STEPS BEING TAKEN.

- Establishing demonstration farms to teach nomads modern practices.
- Encouraging private land ownership, to stop communal grazing.
- Establishing ranches to improve on quality and quantity production.
- Encouraging quality not quantity among the pastoralists.
- Establishing valley dams and bore holes to provide water.
- Introducing exotic breeds to improve quality of animals.
- Establishing cattle markets to encourage cattle trade .
- Encouraging crop growing during the short rainy seasons to avoid famine.
- Spraying with pesticides and deeping to control ticks and diseases.
- Sensitising nomads against dangers of overgrazing.
- Gazetting grazing areas to avoid conflicts.
- Constructing roads within pastoral lands to encourage cattle trade.
- Extending veterinary services to pastoral communities.



## **EFFECTS OF PASTORALISM IN THE SAHEL REGION**

### **POSITIVE EFFECTS.**

- It provides food in form of meat, milk.
- It provides employment opportunities to the cattle keepers, giving them income.
- Cow dung is used as manure and fuel in form of bio gas.
- Improved standards of living using income from the sector.
- It promotes industrialisation by providing raw materials like hides, meat and milk.
- Animals are used in cultural functions like paying dowry.
- Animals are used for ploughing, promoting food production.

### **NEGATIVE EFFECTS.**

- It encourages over grazing leading to loss of vegetation cover.
- It promotes soil erosion by over grazing.
- The practice encourages desertification resulting from over grazing.
- Tribal and clan conflicts with settled communities destroying lives and property.
- Competition for land with settled communities.
- Bush burning leads to air pollution.
- Low and poor quality produce of meat and milk, due to poor methods of farming.
- The practice encourages easy spread of pests and diseases due to communal grazing.

## **REASONS WHY THE PRACTICE HAS PERSISTED IN PARTS OF AFRICA.**

- Tsetse flies infestations in their areas cause migrations to avoid them, hence nomadism.

- The poor pastures force their movement in search of greener pastures.
- The desert climate discourages rainfall, hence they continue moving looking for water sources.
- The poor desert soils can't support crop farming, hence resorting to nomadic pastoralism.
- The remoteness of their areas keeps them away from modern animal rearing practices.
- Presence of vast land space to carry out the practice.
- Respective governments tend to neglect them, encouraging the practice.
- The practice is part of their culture, hence its past on to the next generation.
- Water shortages force them to move looking for water for their animals.
- The sparse population in the arid lands gives them adequate space for the practice.
- The communal land ownership in their areas encourage the practice since its free to move around.

### **LIVESTOCK RANCHING**

This is a form of animal husbandry where cattle are reared in large enclosed areas for commercial production of beef mainly.

Ranches in Africa are found in Botswana, Angola, Zimbabwe, Zambia.



### **CHARACTERISTICS OF RANCHING**

- Farms are divided in paddocks to control over grazing
- Permanent water is provided on the farm.
- Supplementary feeds are provided on the farm.



- Animals are kept on permanent farms.
- Selective breeding is done to get quality cattle.



- Scientific methods of farming like dipping are applied on the farm.
- The carrying capacity of the farm is strictly followed.
- Production on the farm is only for commercial purposes.
- There is record keeping on the farm.
- Ranching is common in areas where rains are light and seasonal.

## RANCHING IN BOTSWANA

Botswana is located in South Africa and relies mainly on cattle and cattle products for export to countries like Britain and neighbors like Angola.



Most of the countries ranches are found in the Kanye area.



## A SKECTH MAP OF BOTSWANA SHOWING RANCHING AREAS



## CONDITIONS FAVOURING RANCHING IN BOTSWANA.

- Positive government policies like wanting to improve beef quality and quantity.
- Presence of adequate capital to buy land , to build roads.
- The need to educate farmers on modern animal rearing methods dipping.
- Availability of vast land on which to establish the ranches.
- The need to improve on the poor local breeds through cross breeding.
- Presence of semi-arid conditions suitable for ranching.
- Presence of a wide market in Britain, Angola which encourages production.



- Presence of a flat landscape which allows easy movement of cattle.
- Availability of seasonal rivers that provide water for the cattle.
- Presence of adequate labour to work on the ranches.
- The limited economic activities in Botswana because of her desert climate, make ranching the best alternative.

### **IMPORTANCE OF RANCHING TO BOTSWANA**

- It provides food proteins in form of meat and milk.
- Local farmers have learnt and applied modern methods on their animal farms increasing production.
- There is increased beef production resulting into increased revenue.
- Farmers earn income that they use to improve standards of living.
- It has encouraged industrialization in form of meat processing factories.
- Botswana earns foreign exchange after beef exports, getting money to build roads.
- The country earns domestic revenue by taxing the beef sector, getting money to build roads.
- Infrastructural development is realized in form of roads and railway lines.
- Urbanization is realized for example meat factory centres like Kanye.
- Economic diversification is realized meaning increased revenue for the country.

### **PROBLEMS FACING RANCHES IN BOTSWANA.**

- Shortage of pastures due to the long droughts.
- Pests and diseases e.g. Rinder pest and foot and mouth disease.
- Poor local breeds leading to low productivity.
- Resistance to modern farming practices by the local farmers.

- Water shortage for the animals.
- Inadequate capital to buy modern farming equipments.
- Communal discourages establishment of ranches.
- Inadequate skilled labour due to levels of education causing low production.
- Increased population limits land for expansion of the ranches.
- Competition on the world market affecting low profits.

### **SOLUTIONS/STEPS BEING TAKEN.**

- Providing permanent water sources in form of valley dams, boreholes.
- Spraying and dipping to control pests and diseases.
- Extending loans to farmers to buy farm equipments.
- Educating the locals on the importance of animal quality rather than quantity.
- Encouraging private land ownership.
- To discourage communal grazing.
- Improving transport to ease cattle movement.
- Creating cattle markets to encourage trade in cattle.
- Encouraging farmers to join co-operatives for easy marketing of their products.