

VEGETATION OF EAST AFRICA

Vegetation is the general term given to all living plants of various categories i.e. the trees & grass that cover the earth's surface and those that grow in water. Biologically, vegetation is known as Flora. There are four major types of vegetation in East Africa which include; Equatorial /tropical rainforest, Savannah vegetation (woodlands and grasslands), Swamp or mangrove vegetation and Semi-arid/desert vegetation.

Factors influencing vegetation distribution in East Africa

1. **Climate:** tropical forests grow in areas that experience heavy and reliable rainfall of about 1500mm and above. They also thrive well where temperatures are high throughout the year e.g. Mabira and Budongo forests. The amount of rainfall reduces as one moves away from the tropical region and this has led to Savannah vegetation consisting of Savannah Woodland and Savannah Grass Land e.g. Miombo woodlands. Desert regions receive rainfall which is very low, hence shrub and dry bush are dominant e.g. in Karamoja and Turkana land.
2. **Altitude:** Tropical rain forests, mangrove forests and savannah vegetation thrive well on the low altitude areas e.g. Masai Mara while Montane forests, heath and moorland thrive well on high altitude areas e.g. in Kabale.
3. **Drainage:** Areas with permanent and stagnant water have favoured swamp vegetation as well as mangrove forest e.g. at the East African Coast. Areas with no permanent drainage features such as lakes and rivers tend to be very dry and these have a dominance of semi-arid vegetation e.g. Karamoja. Areas that are well drained have a dominance of savannah and tropical rain forests e.g. along mountain slopes.
4. **Soils:** Areas with deep and well drained fertile soils tend to favour tropical forest vegetation. Areas with moderately fertile soils favour the growth of Savannah grasslands whereas very infertile areas will favour semi-arid vegetation and at times do not favour vegetation at all e.g. Karamoja region. The water retention capacity of the soil (soil porosity) will also influence vegetation. High water retaining soils e.g. clay soils lead to occurrence of swamp or mangrove vegetation e.g. along the coastal belts.
5. **Biotic factors:** some areas that are infested with pests tend to scare away settlement creating favourable conditions for the growth of dense vegetation or savannah wood lands e.g. Miombo Woodlands of central Tanzania. Areas without pests attract settlements and lead to savannah grass land. Areas that are infested with locusts tend to have scanty vegetation because these insects destroy the existing vegetation.
6. **Human activities:** Large areas of forested land have been cleared for timber to create room for settlement and cultivation which has resulted into forested areas turning into savannah grasslands. Large areas of savannah vegetation have been turned into shrubs and wood lands because of activities like over grazing, bush burning, charcoal burning e.t.c. Some areas have been left without vegetation because of human practices like monoculture and shifting cultivation e.t.c leading to semi-desert and desert vegetation. In areas where man has engaged in afforestation and re-afforestation activities, he has led to luxuriant tropical rain forests.

Characteristics of vegetation zones

i) Equatorial / Tropical Rain forests.

- Trees have big trunks
- They are ever green through-out the year because of high rainfall.
- They have little or no undergrowth.
- Trees are very tall above 30-40 metres.
- Trees form canopies of about 3 different layers due to varying tree heights.
- Trees have many climbing plants (lianas) because of search for sunlight e.g. passion fruits.
- The trees mainly provide hard wood e.g. Mvule, Mahogany and Ebony.

- Trees have broad leaves.
- The trees have buttress roots to hold the huge tree trunks.
- Trees appear in impure stands.
- Forests are always thick i.e. impenetrable e.g. Bwindi impenetrable forest.
- Trees have a long gestation period of over 60 years.

ii) Savannah vegetation: it's divided into two i.e. grasslands which include; Queen Elizabeth National Park, Serengeti National Park, Kidepo valley National Park and Murchison Falls National Park and Woodlands which include; Miombo woodlands in Tanzania.

- Trees are ever green because of relatively high rainfall especially during the wet season.
- During the dry season, trees have brown leaves which they shed off to prevent loss of water (deciduous trees).
- Trees have got long tap roots in order to reach underground water.
- Trees are always scattered e.g. acacia.
- Grass grows up to 2m e.g. elephant grass.

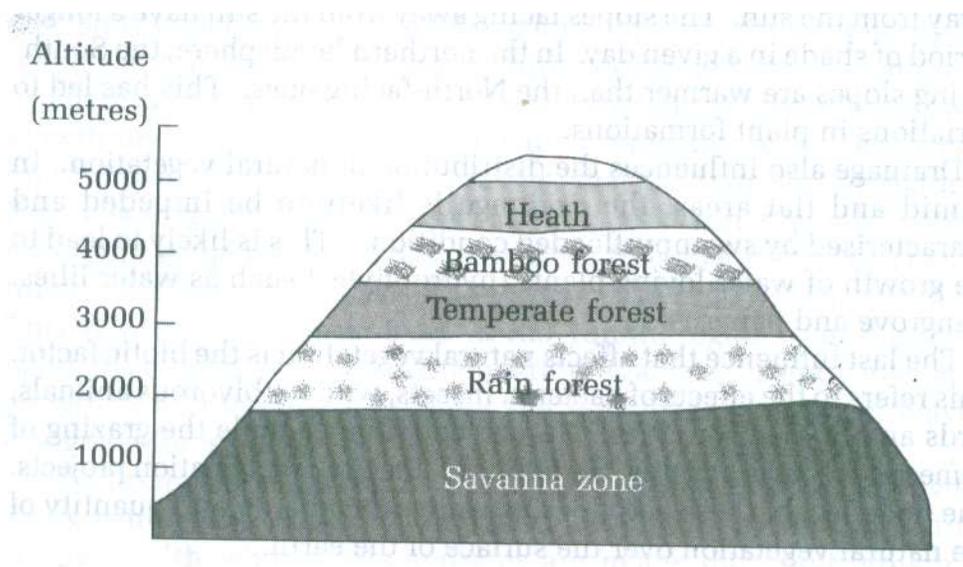
iii) Semi-desert / Desert vegetation: Mainly found in areas that receive low rainfall below 750mm per year. Areas with this type of vegetation include; Turkana land, Karamoja region and Ankole-Masaka corridor.

- Trees are very short and usually stunted.
- Trees have very long tap roots to reach to the water level which is very deep.
- They have scattered bushes and thickets.
- Trees have thorny leaves e.g. lantana camara and baobab trees to prevent the animals from eating their leaves.
- Some plants have swollen trunks in which they store water to use during the long dry season e.g. Baobab.
- The plants have seeds that can lay dormant on the ground for a long time until the rain falls to allow germination.
- Many plants complete their life cycle within a few weeks before the soils dry up e.g. shrubs.

iv) Swamp/mangrove vegetation: In East Africa, swamps are found around water bodies e.g. around Lake Victoria and Kyoga, along the coast (mangrove swamps) and around the various rivers (Riverine swamps) e.g. River Kafu, River Katonga and River Nzoia. Some swamps are also found in Dombos (broad valleys) e.g. Awoja swamp in Soroti, Olwenyi swamp in Lira.

- Swamp vegetation is found in water logged areas.
- Vegetation is a mixture of mangrove trees, palm trees, coconuts and papyrus.
- The ground has a lot of mud and it's marshy.
- Trees are evergreen throughout the year.
- Trees are medium height usually less than 10m due to high temperatures.
- Trees grow close to each other making forests thick.
- Trees have fibrous roots and straight stems.
- Trees have broad leaves and are characterized by hard wood.
- Some trees have twisted stems/trunks

v) Montane vegetation: This occurs in mountain ranges and highland regions e.g. along Mt. Kenya, Elgon and Kilimanjaro. Due to varying altitude, the vegetation changes as one moves up the mountain as shown below.



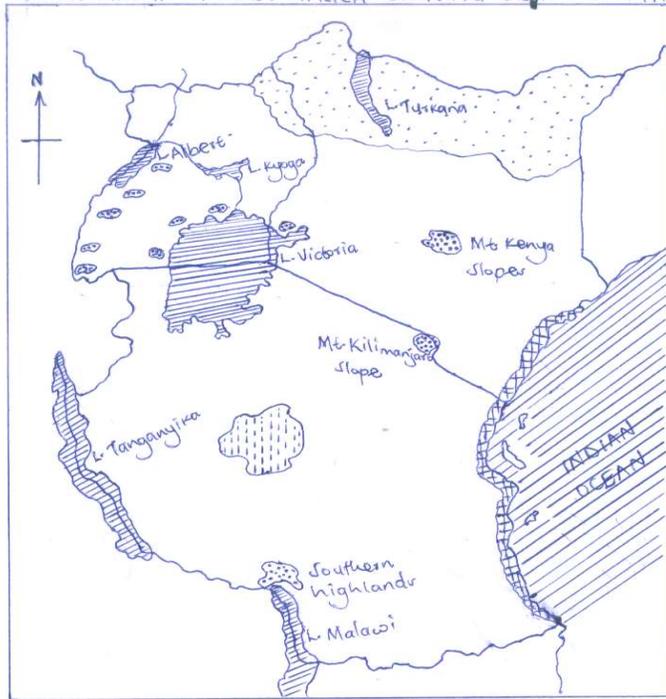
- **Savannah:** this is found at the lowest level of the mountain below 1000 meters and consists of dry grasses and shrubs. It's due to man's interference through clearance of tropical forests.
- **Tropical rain forests:** these are above savannah at an altitude between 1500 to 2500 metres. It consists of thick luxuriant and evergreen vegetation.
- **Temperate and bamboo forests:** as altitude increases, the rainfall amount reduces and this gives rise to the temperate and bamboo forest which thrive well under cold conditions.
- **Heath and moorland:** at the level between 3500 to 4500 m above sea level. The temperatures are very low as well as rainfall. Vegetation here consist of flowering plants, grasses and shrubs e.g. cedar and camphor.
- **Snow and bare rock:** above 4500 above sea level, temperatures are extremely cold thus the existence of snow and bare rocks. No vegetation grows at this level.

Characteristics of montane vegetation include;

- Altitudinal zonation of forest vegetation i.e. tropical forests at lower slopes, temperate slopes at mid-slopes, coniferous and bamboo slopes at higher slopes.
- Tropical forests (low altitude) are of mixed stand and have two layers of canopy.
- Tropical forests are of hard wood.
- Temperate, coniferous and bamboo forests are in pure stands and have single canopy.
- Temperate and coniferous forests are soft wood, have thick barks, cone shaped trees, needle shaped leaves, straight trunks and some species have hollow stems.

N.B: for the economic activities carried out, problems faced and solutions to problems faced, in a particular vegetation zone, refer to climatic zones as seen above.

A SKETCH MAP OF EAST AFRICA SHOWING VEGETATION TYPE



KEY

	Rain forests
	Miombo woodland.
	Mangrove forests
	Semi-desert grassland
	Savannah

FORESTRY IN EAST AFRICA

A forest is an extensive tract of land covered with a close stand of trees. It can be natural or planted by man with either hard wood trees or soft wood trees or both. Forestry is the science of cultivating forests and is also called tree farming.

Conditions favoring the natural growth of forests

- Availability of extensive land with sparse population where forests grow with limited interference.
- Heavy rainfall of over 1500mm per annum for proper tree growth.
- Reliable and well distributed rainfall throughout the year for proper maturity of the trees.
- Hot temperatures of about 20°C- 30°C for the proper growth of trees.
- High humidity level which is responsible for heavy rainfall that supports tree growth.
- Altitude especially at higher altitude where the population is small and temperatures do not favor human settlement hence leaving aside the land for forest growth.
- Supportive government policy of emphasizing afforestation and re-afforestation programmes.
- Deep, fertile and well drained soils which support the growing of trees.
- Control of growing population to reduce on human interference with forests through settlement and agriculture.
- Abundant sunshine for the growth of natural forests.

Tree species in East Africa

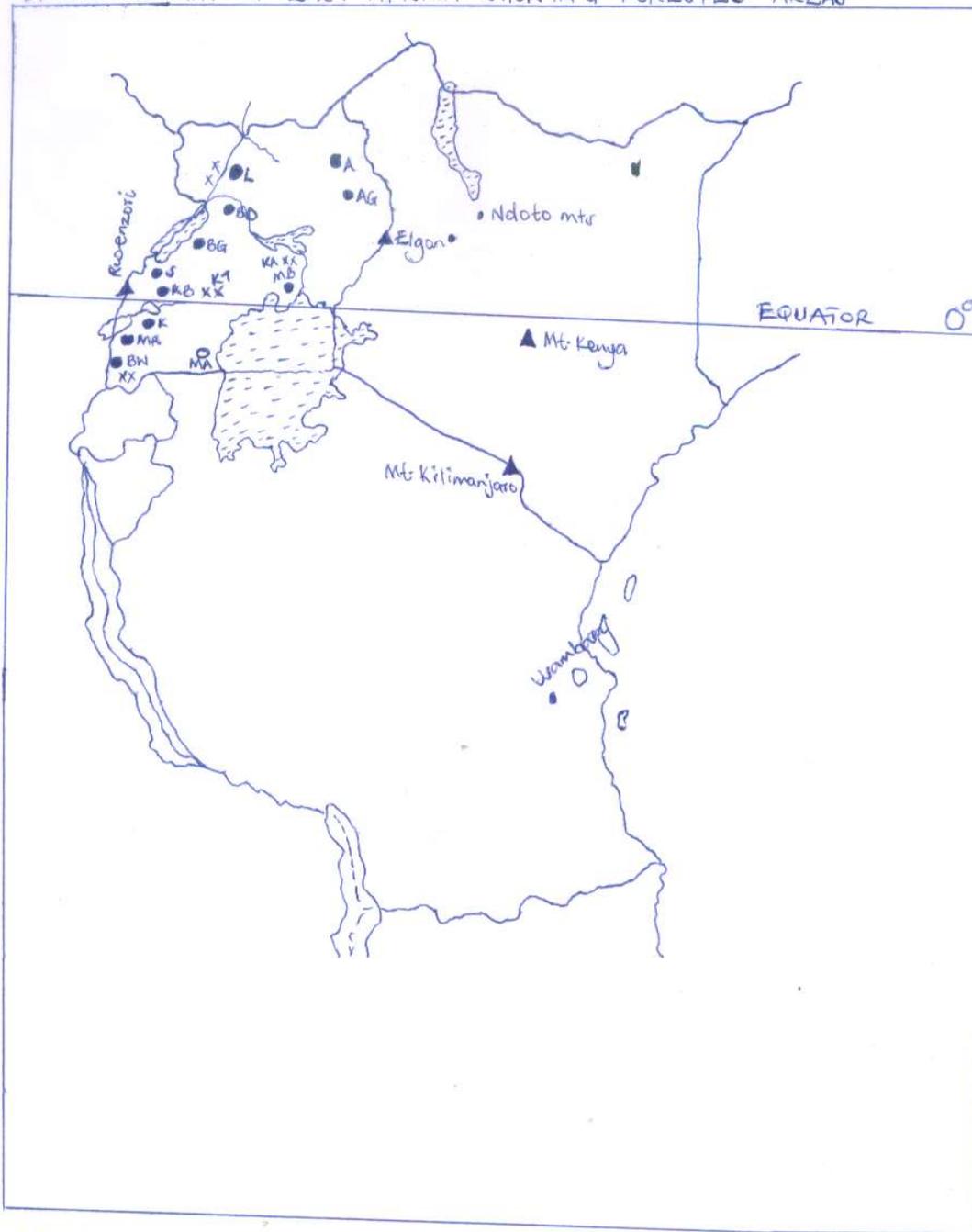
1. **Hard wood trees:** These are mainly found in tropical rain forests e.g. Mabira, Budongo, Maramagambo, Bugoma, Kalinzu, Marabigambo and Bwindi. Examples include; Red heart, Musizi, Mvule, Mahogany and Ebony.

2. **Soft wood trees:** these are mainly planted forests. They include tree species like Eucalyptus, Pine, Cyprus and red cedar. They are mainly found in low lying areas e.g. Namanve. **NB:** Montane forest also exists near the high mountains of East Africa e.g. Kilimanjaro, Kenya, Rwenzori and the vegetation appears in zones.

Other important trees in East Africa include; wattle (soft wood tree) planted because its bark contains Tannin used in leather tanning industries.

- Pines are largely used for pulp and paper making e.g. at Webuye.
- Eucalyptus trees are not indigenous trees but are important for the provision of firewood, electric and fencing poles and paper and pulp.

A SKETCH MAP OF EAST AFRICA SHOWING FORESTED AREAS



KEY

- | | |
|----------------------------|--------------|
| ▲ Montane forests | 5- Semliki |
| XX Planted forests | BG - Bugoma |
| ● Tropical lowland forests | BD - Budongo |
| MA - Malabigambo | A - Aber |
| BW - Bwindi | AG - Agwata |
| MR - Maramagambo | MB - Mabira |
| K - Kasocha Kitomi | KA - Kabogo |
| KB - Kibale | L - Lendu |
| KT - Kateera | |

Problems facing the forestry industry in East Africa

- Deforestation due to the increased need for land for agriculture and settlement.
- Wild animals graze freely in the forests leading to their destruction e.g. elephants.
- Wild fires caused by either lightening or careless farmers leading to loss of extensive forested lands.
- Scarcity of rainfall and prolonged drought due to increased desertification leading to short and stunted trees.
- Population increase hence the need to create more land for settlement leading to clearance of forested land.
- Limited alternative power sources have led to high demand for wood fuel and charcoal hence destruction of forests.
- Increased urbanization has led to destruction of forests e.g. road construction and industrialization.
- Mining and quarrying activities have also led to the destruction of forests due to the need to expose mineral bearing rocks.
- Occurrence of tree pests and disease that attack specific tree species leading to their depletion.
- Long gestation of some tree species has also led to shortage of wood fuel.
- Inadequate labour force to carry out forestry management.
- Inadequate capital for investment in forestry management.
- The bulky nature of some tree logs makes it difficult to transport them to saw mills.
- Inaccessibility of some forests has made it difficult to exploit some of them.
- Corruption and embezzlement of forest funds by some forestry officials.
- Limited valuable commercial tree species which leads to importation that is very expensive.
- Insecurity and wars due to rebel activity has led to destruction of forests that are used as hide-outs for rebels.
- Unfavorable government policies e.g. giving forested land to private investors to set up plantations hence clearance of forests.
- Low levels of technology for exploiting forests e.g. use of axes and pangas.
- Hostility of local communities towards forest staff hence creating insecurity for the forest guards.

Solutions to the above problems

- Offering licenses to lumbering companies and individuals to reduce deforestation.
- Evicting encroachers on forested land e.g. the Bakiga and Balaalo migrants in Kibaale forest reserve were evicted by government.
- Formation of a ministry to supervise forests and other aspects of the environment i.e. Ministry of Lands, water & Environment.
- Setting up Non Governmental Organisations to control environmental mismanagement e.g. National Environment Management Authority (NEMA).
- Training and equipping forest managers with modern skills on how to look after forests.
- Establishment of forest reserves where lumbering is prohibited e.g. Kibaale forestry reserve.
- Encouraging re-afforestation and afforestation programs e.g. cut one tree and plant two trees.
- Educating the masses about the dangers of deforestation.

- Practicing agro-forestry to ensure extensive tree growth by the farmers too.
- Encouraging the use of alternative sources of power e.g. solar energy to reduce forest destruction for wood fuel.
- Encouraging use of alternative building and construction materials e.g. plastics, metal and glass and reduce the demand for timber.
- Campaigning against degazetting forested land by government.
- Growing of quick and fast maturing species to ensure constant supply of forest products.

Effects of deforestation on the environment

- ❖ Reduction and lowering of water table due to reduced rainfall totals.
- ❖ Global warming and increased world temperatures due to reduced cloud cover.
- ❖ Mass wasting and soil erosion along the slopes due to absence of trees to trap the soil.
- ❖ Reduction of wildlife due to destruction of their natural which reduces foreign exchange.
- ❖ Loss of soil fertility due to severe erosion leading to low agricultural output.
- ❖ Desertification may arise leading to expansion of deserts.
- ❖ Flooding may occur due to mass wasting and soil erosion due to deposition of soil materials in the valley.
- ❖ Silting of river valleys due to increased erosion along slopes.
- ❖ Shortage of food leading to famine due to less agricultural output.

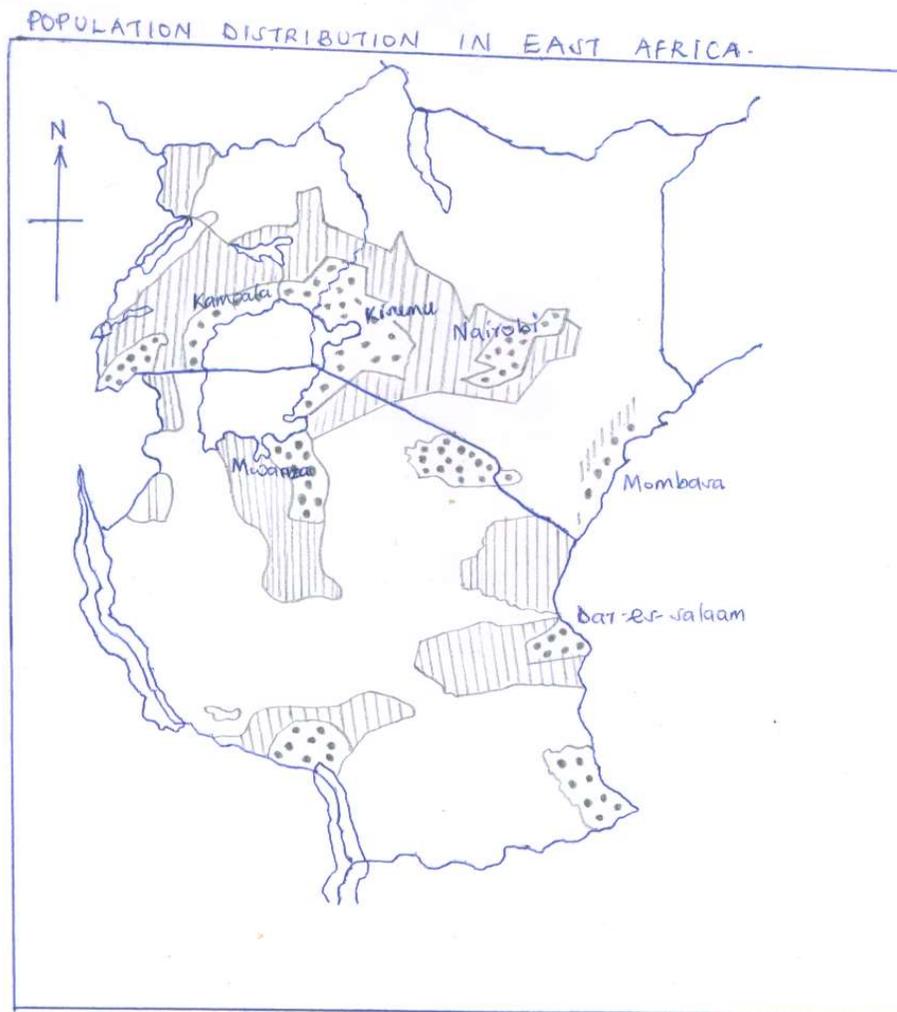
POPULATION IN EAST AFRICA

- Population refers to the number of people living in an area at a given time. Over 80% of the total population in East Africa depend on farming either directly or indirectly.
- Rainfall distribution and temperature as climatic factors play a big role in population distribution within East Africa because areas with heavy rainfall can support agriculture and therefore attract many people.
- On the other hand, areas with low and unreliable rainfall cannot support agriculture and these attract sparse population.
- Areas with **dense population** include shores of Lake Victoria, Kenya Highlands, Kigezi highlands, Slopes of Mountain Elgon and Rwenzori, Southern Tanzania highlands such as Usambara ranges and areas around Lake Malawi, islands of Zanzibar and Pemba along the East African coast. The major towns and cities like Kampala, Nairobi, Dodoma, Dar-es-salaam, Mombasa, Kilwa, Tanga, Mtwara, Mbale, Kisumu, Eldoret and Nakuru have got dense population totals.
- Areas with **moderate population** density are between Kenya highlands and Nairobi and some parts of the rift valley in Kenya and Tanzania, northern Uganda in Gulu, Acholi land and Lira, western Uganda in areas of Hoima and Mubende.
- Areas with **sparse population** include North-Eastern Uganda covering areas of Kotido, Kitgum, Moyo and other areas of game reserves and forest reserves. Northern Kenya including Turkana, southern Tanzania, West and central Tanzania i.e. Miombo woodlands.

Concepts used in population studies

- ❖ **Over population:** This is a situation where the number of people in a given area exceeds the available resources.
- ❖ **Under population:** This is a situation where the number of people in a given area/country is less than the available resources.

- ❖ **Optimum population:** This is where the available resources are equivalent to the population for maximum resource exploitation.
- ❖ **Population density:** It refers to the number of people per square kilometer.
- ❖ **Life expectancy:** This refers to the average age at which most people die in a country. In East Africa, the life expectancy is 50 years for women and 45 years for men.
- ❖ **Population distribution:** This refers to the way people are spread out on the earth surface in a given area.
- ❖ **Population census:** This is the process of counting the number of people in the country or region. It's usually done after every 10 years. The major purpose for population census is for government to plan and provide services for its people.
- ❖ **Fertility rate:** This refers to the average number of children per woman in her productive life. The fertility rate in East Africa is seven children per woman.



KEY

-  High population density
-  Moderate population density
-  Low population density

FACTORS INFLUENCING POPULATION DISTRIBUTION IN EAST AFRICA.

- **Climate:** Areas which receive heavy and reliable rainfall which support the growth of crops have attracted people in large numbers e.g. shores of Lake Victoria, Kenya highlands, slopes of Mt. Elgon and Kigezi highlands while areas which receive low and unreliable rainfall attract very few people e.g. Karamoja, Turkana land and Miombo woodlands.
- **Soils:** areas with deep and well drained fertile soils that support agriculture have attracted dense settlements e.g. Mbale, Kabale, shores of Lake Victoria while areas with infertile soils have sparse population e.g. Nyika plains, North Eastern Kenya and Masai land.
- **Altitude/relief:** areas with very high altitude e.g. top of Mt. Elgon and Rwenzori, Bundibugyo have sparse population because of the high pressure, difficulty in constructing houses and roads. However low altitude areas have attracted large settlements due to ease in constructing settlements and roads. However, areas in broad valleys occupied by swamps have sparse population due to presence of disease vectors like mosquitoes. Also, lowland areas are subjected to floods and therefore are always avoided.
- **Vegetation:** dense forests, bush lands and swamps are unfavorable areas for settlement because it's hard and expensive to clear the vegetation. They also harbour wild animals and disease carrying vectors like tsetse flies which scare away settlements. Areas with savannah vegetation are easy to clear for agriculture and settlement hence attracting dense population e.g. Masaka, Mpigi and Mukono.
- **Natural water resources:** The existence of natural water resources can attract dense population e.g. shores of Lake Kyoga and Victoria. Also, in areas of low rainfall many people are attracted near water courses or rivers e.g. along river Athi, Nile because the dense population utilizes the rivers for small scale irrigation, livestock rearing and domestic use. However, areas without surface water bodies have scared away settlements leading to sparse population e.g. in Karamoja and Turkana land.
- **Drainage:** Poorly drained areas e.g. coastal margins of Kenya and Tanzania are full of mangrove swamps which are unproductive in terms of agriculture, therefore leading to sparse population while areas which are well drained have high population densities like central Uganda, slopes of Mt. Kenya and Elgon.
- **Economic Activities:** Areas that have activities like mining, trading and manufacturing industries especially towns like Dar-es-salaam, Nairobi, Kisumu, Kampala, Jinja attract large population than areas where they are few economic activities e.g. Karamoja. This because people are more attracted to areas that have enough job opportunities than areas with less employment opportunities.
- **Government policy:** The government may determine settlement in an area e.g. the creation of national park and game reserves discourages settlement e.g. Kidepo valley game park and on other hand, the setting up of resettlement schemes and refugee camps has attracted settlement in large number e.g. in Kiryandongo and Internally Displaced Peoples' (I.D.P) camps in Gulu.
- **Political stability:** Areas that are unstable and insecure have got low population e.g. Karamoja where there is a lot of cattle rustling compared to areas which are generally politically stable and secure hence attracting dense settlements e.g. towns like Kampala and Mombasa.
- **Culture:** some areas have got low population density because of their culture of e.g. Ankole, Karamoja, Masai land areas are sparsely populated because of their practice of nomadic pastoralism which keeps them on the move always. Within central Uganda, dense settlements

exist because of the settled ways of life that encourage family development e.g. in Mukono and Wakiso districts.

N.B: Population growth: this refers to the natural increase in population. Uganda's population growth rate is 3% per annum/year. East Africa's population has been increasing over the years and this increase is due to the following factors;

(a) Natural increase/ high birth rate: in most areas of East Africa, the number of births in the year exceeds the number of deaths and such a difference has caused high population growth.

(b) Improved medical services: this has led to low infant mortality rate and death rates causing population growth.

(c) Early marriages: people tend to marry/get married at a tender age and this has led to a longer period of the child production cycle.

(d) High fertility rate: this refers to the number of children a woman can produce during her child bearing age. On average, African women give birth to 5 to 7 children and this has led to high rate of population growth.

(e) Value attached to children: many families value children especially girls as a source of wealth or boys as a source of labour and security. Others look at children as a source of insurance and help at an old age. They thus end up producing many hence leading to population growth.

(f) Polygamy: it refers to the act of marrying more than one wife. Polygamy is common because it is looked at as a sign of prestige in society and as a traditional obligation which has led to high population growth.

(g) Low levels of education: many people do not know the value of a small family. Besides, most people drop out of school early and end up into early marriages leading to production of many children.

(h) Religion: Some religions encourage polygamy which has resulted into high birth rates especially among Moslems, while others religions are opposed to family planning methods e.g. Catholics.

(i) Poverty: many families can't afford to buy pills, condoms for family planning and this has led to many families producing children without birth control measures.

(j) Improved nutrition levels: this has ensured balanced diet and steady supply of food which encourages people to have large families.

(k) Increased immigrations: many people have entered East Africa from other regions e.g. Asians, Europeans, Sudanese and Congolese and this has led to population increase.

Advantages of high/large population size

➤ High population provides enough labour force for the economic development of the country.

➤ It can be a source of a large amount of taxes that avails the country with enough revenue for development.

➤ It is easy and economical to provide social services in a situation where many people are concentrated in the same area.

➤ In case of security, a large population can easily provide enough man power for the army/defense of a country.

➤ It is a source of cheap labour since many people are willing to work at a low wage rate.

➤ A high population encourages the exploitation of idle resources.

➤ A high population also provides a large market for goods and services within a given country.

➤ It also encourages a high level of innovation and invention as people try to look for survival in a competitive environment.

- It encourages increased agricultural output as people try to produce enough food for their own survival.

Disadvantages of large population size

- Shortage of land for settlement and farming leading to land fragmentation.
- Shortage of social services e.g. schools and hospitals.
- High government expenditure to provide social services for the people.
- High dependency ratio since much of the population is made up of children hence reducing investments and future savings.
- High rates of unemployment because of the less available jobs.
- Unemployment leads to high rates of crime and social unrest especially among the youths.
- Exhaustion of resources due to over exploitation.
- It encourages rural-urban migration and its evils like high crime rate, unemployment and drug abuse.
- Shortage of accommodation leading to development of slums.
- Shortage of food which results to famine and starvation.
- Overcrowding which results into congestion and poor hygiene hence easy spread of diseases.
- High cost of living due to competition for scarce resources.
- Poverty as a result of high dependency ratio.
- Environmental degradation through pollution, soil erosion, swamp reclamation and deforestation.
- Desertification/global warming due to pollution, deforestation and industrialisation.

Steps being taken to solve such problems

- ✓ Encouraging family planning methods to reduce on the birth rates involving the use of pills, condoms and other contraceptives.
- ✓ Encouraging outward migration from the densely populated region to the sparsely populated areas.
- ✓ Setting up resettlement schemes for people from densely populated regions.
- ✓ Low enforcement policies are being emphasized to reduce the level of crime rates.
- ✓ Agriculture modernization has also been emphasized through the use of high yielding food varieties to increase food production and combat the problem of famine.
- ✓ Vertical expansion of towns and cities through building of storied buildings has been embraced to solve the problem of congestion in most African cities.
- ✓ Land reform policies like land consolidation are being emphasized to solve the problem of land fragmentation.
- ✓ Industrialization is also being encouraged in most African countries to reduce over dependence on the land and reduce the level of unemployment.
- ✓ The governments are also trying very hard to establish enough social services such as health centres, schools and transport to contain the problem of congestion over these services.
- ✓ Encouraging monogamy to reduce polygamy.
- ✓ Raising the marriage age for girls to reduce early marriages.

LOW/UNDER POPULATION: It refers to a situation where the number of people is less than the available resources within a given area.

Advantages of low/under population

- ❖ It avails enough land for agriculture and settlement.
- ❖ It minimizes the problem of congestion and overcrowding.
- ❖ Dependency ratio is low and this may encourage savings and investments.
- ❖ Less possibility of slum development since people are few.

- ❖ Less government expenditure on the provision of social services.
- ❖ Social conflicts over land are not likely to come up due to a low population.
- ❖ It avails people with enough food hence reducing the possibility of famine.

Disadvantages of low/under population

- Limited supply of labour.
- Small market size for goods and services due to low demand.
- It is expensive for the government to provide social services to a few users.
- It leads to low tax base hence low government revenue.
- It leads to under utilization of resources such as minerals and land.
- It leads to slow economic growth which leads to dependency on other countries for skilled labour and market.
- It limits the level of innovation and invention since most of the resources are not put to use.

POPULATION DENSITY: It refers to the number of people living in an area per square km. In East Africa, some places have got high population density while others have got low population density.

Causes of high population density (why some areas have high population e.g. Shores of Lake Victoria, Kabale, Mbale and along the coast)

- (a) Hot and wet climatic conditions that favour the growth of various crops to support high population e.g. shores of Lake Victoria.
- (b) Presence of deep and well drained fertile soils which support farming also attract a large number of people e.g. Kabale and Mbale.
- (c) Availability of abundant supply water for both domestic and commercial use e.g. Kampala and Nairobi.
- (d) Presence of many industries that attract a large labour force e.g. in Jinja and Dar-es-salaam.
- (e) Availability of a variety of minerals such as Diamonds in Shinyanga and limestone in Tororo.
- (f) Urbanization attracts many migrants into large cities for social amenities e.g. in Dodoma, Kampala and Mombasa.
- (g) Easy accessibility due to well developed transport and communication net work for easy movement.
- (h) Availability of a relatively flat landscape which make settlement and development of infrastructures relatively easy hence attracting large settlements.

Causes of low population density (why some areas have low population e.g. Karamoja, Ankole-Masaka corridor, Masai land and Turkana land)

1. Low and unreliable rainfall that cannot favour agriculture e.g. the desert region of Chalbi in northern Kenya.
2. Hot temperatures of 30°C and above that make it impossible for many people to live in such areas e.g. in Karamoja.
3. Absence of surface water that is essential for human life e.g. in Masai land.
4. Poor quality soils that can't support agriculture tend to scare away settlements e.g. Miombo woodlands.
5. Pests and diseases such as tsetse flies and mosquitoes in some parts of central Tanzania scare away man due to fear of loss his life.
6. Remoteness of the area that hinders accessibility due to poor transport and communication lines.
7. Limited economic activities which means that jobs are not existent.

8. Limited social services which scares away people.

TOURISM IN EAST AFRICA

- This is the practice for travelling for purposes of leisure, curiosity or study.
- Tourism is the leading invisible export of East Africa and it's one of the major foreign exchange earners for the governments.

Tourist attractions/tourism potentials in East Africa include:

1. **Wildlife:** this includes animals, vegetation and birds i.e. flora and fauna e.g. zebras, hippos, lions, flamingos, crocodiles, savannah vegetation, tropical forests e.t.c. these are conserved in national parks, game parks, game reserves like Queen Elizabeth, Serengeti, Kidepo Valley, Masai Mara, Mkomanzi and Tsavo.

N.B wild life is the most important tourist attraction for East Africa.

2. **Climate and other resources** attached to it e.g. sports, sunbathing, conducive situations of swimming e.t.c. East Africa has got a number of climate types e.g. savannah, equatorial, Semi-arid, Swamp and Montane climate.

3. **Relief features** like high mountains e.g. Kilimanjaro, Kenya, and Rwenzori with snow at the top, and the rift valley plains.

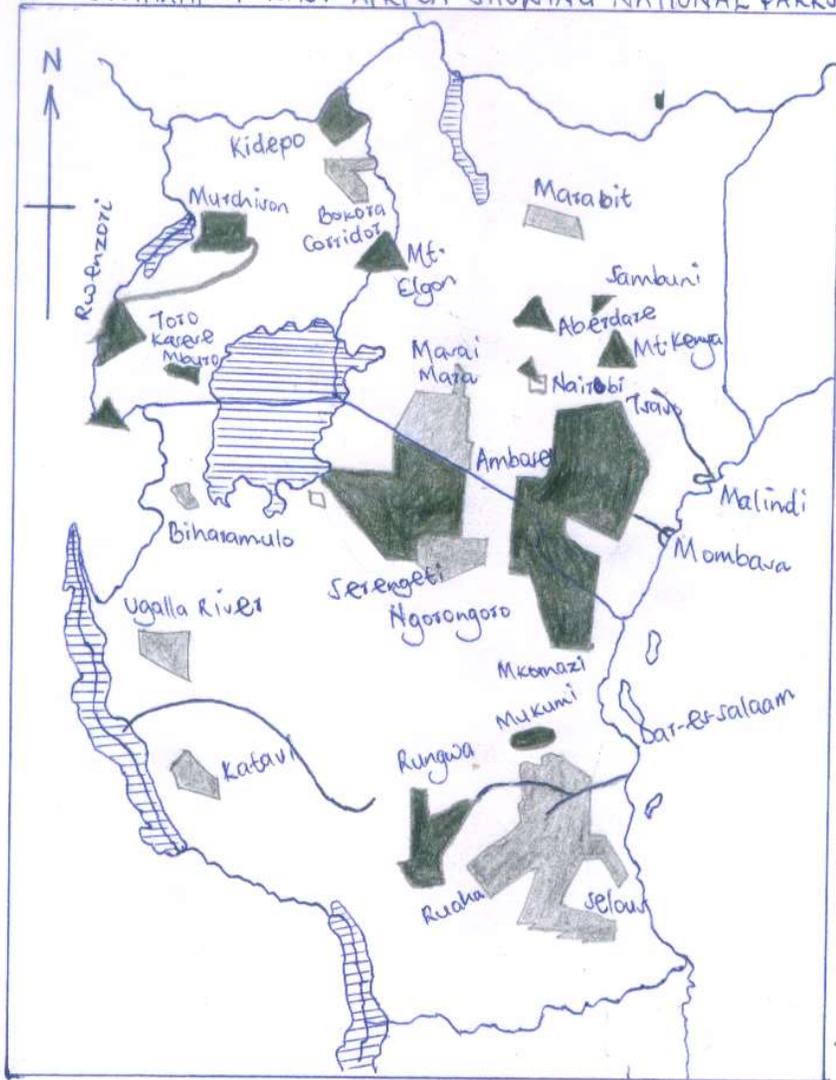
4. **Historical sites** e.g. Nyeru rock paintings in Kumi, Kasubi tombs, Olduvai Gorge, and Fort Jesus at Mombasa e.t.c.

5. **Culture** e.g. East Africa has got a number of cultures based on the different tribes e.g. the Masai, kiganda culture where people exhibit their cultures in different ways of dressing, eating.

6. **Drainage systems** e.g. East Africa has got a number of drainage systems ranging from lakes like Victoria and rivers e.g. Rufigi, Nile and Tana.

A SKETCH MAP OF EAST AFRICA SHOWING TOURIST ATTRACTION CENTRES. Factors

A SKETCH MAP OF EAST AFRICA SHOWING NATIONAL PARKS AND GAME RESERVES



KEY

-  National Park
-  Game Reserve
-  Lakes

favoring the development of tourism industry in East Africa

➤ The region is endowed with a variety of tourist attractions such as wild life, drainage features, historical sites and coastal landforms which all attract foreign tourists.

- Peace and stability especially in Kenya and Tanzania and some parts of Uganda which has ensured that the tourists are sure of their safety.
- Improvement in the transport network system especially roads, water ways and air transport has facilitated easy movement of tourists to their areas of interest.
- Increased level of advertisement to outside countries is being done through embassies abroad through international Television channels, magazines, radios which have made tourists aware of what is in East Africa.
- Local people of East Africa provide good hospitality for the tourists which also attract foreign visitors because they are assured of good care and warm welcome.
- Improvement in the accommodation facilities e.g. hotels, lodges, and guest houses which have provided residential services to tourists.
- Increased level of education given to the local people has created more awareness and appreciations for the tourism industries e.g. courses related to tourism have been introduced at different institutions within East Africa e.g. Bachelor of Leisure and Hospitality Management.
- Presence of adequate capital from local and foreign individuals to invest in the sector e.g. for construction of hotels.
- Favourable government policy which encourages investment in tourism e.g. liberalization of the tourist sector, low taxation and increased subsidization of investors in the tourism sector.
- Availability of enough skilled and unskilled labour force to work in the industry e.g. hotel managers and game rangers.

Importance of tourism in East Africa

- Tourism is an invisible export which earns the government foreign exchange used for development of infrastructures e.g. roads.
- Tourism leads to development of international relationships which help in promoting world peace and establishing world unity.
- Tourism helps to conserve environment and protect natural beauty which is important for the present and future generations.
- It has created employment opportunities to the people of East Africa leading to improved standards of living e.g. game rangers, tour guides, travel agents e.t.c.
- It has facilitated the development of infrastructures like roads which help in the movement of goods and services in East Africa.
- Government earns revenue through taxation of people who work in the tourism industry used in the development of roads.
- It has led to the development of art and craft industry because the locally made items like drums, baskets mats are sold to foreign visitors.
- It helps to diversify the economy hence reducing dependence on agriculture ensuring constant capital flow.
- It helps to put idle land to good use hence reducing resource wastage e.g. Kidepo valley national park.

REASONS WHY KENYA'S TOURISM INDUSTRY IS MORE DEVELOPED THAN THAT OF OTHER EAST AFRICAN COUNTRIES

- Kenya is endowed with a variety of beautiful scenery in form of coastal land forms, volcanic features as well as coastal towns like Mombasa which attracts many tourists.
- Kenya has had a longer period of political stability which has attracted more tourists than Uganda and Tanzania.
- Kenya has various National parks and game reserves like Tsavo National Park that are well distributed throughout the country hence attracting a large number of tourists.
- Kenya's national parks are blessed with many well trained guides who encourage more tourists to go to Kenya.
- Kenya has a well established Hotel industry that is well managed and services are of high standards than in other East African countries.
- The government of Kenya through the Kenya Tourist Development Co-operation ensures strict wild life preservation programs and laws which ensures continuity of the activity.
- Kenya has a well developed transport system in terms of roads, railways and air transport making it easy for the tourists to move within the country.
- A lot of research is carried out by the Kenya Tourism Development Co-operation in terms of checking the population of animals and birds in National parks and Game reserves as well as improving the management of the entire tourism industry.
- Kenya lies along the coast of East Africa which is easily accessible by the tourists from Europe, Asia and U.S.A.
- Kenya introduced a new system of travel known as package holiday since 1970 which ensures that tourists are given subsidized rates hence attracting many more.

PROBLEMS FACING TOURISM INDUSTRY IN EAST AFRICA

- Poaching of wildlife has reduced the number of animals in National parks and Game reserves yet they are East Africa's major attractions.
- Inadequate supply of skilled man power to handle wildlife and hotel management which therefore makes service provision very poor hence chasing away tourists.
- Inadequate capital for investment to set up roads, good accommodation facilities and to carry out research.
- Hostile tribes in East Africa e.g. the Masai and Karamojong scare away some of the tourists which limits the number of tourists that flow into East Africa.
- Low levels of advertisement which has made people unaware of the existence of tourist attractions in the countries hence reducing on the number of intending visitors and tourists.
- The high population growth rate which has resulted into increased demand for land leading to deforestation hence destruction of habitats for wildlife.
- Political instabilities in some parts of the East African countries have scared away tourists.
- Pests and diseases e.g. tsetse flies, mosquitoes which carry diseases like sleeping sickness, malaria for humans hence scaring away tourists and also reducing on the animal population.

SOLUTIONS TO THE PROBLEMS

- ✓ Eviction of encroachers and reduction of human settlement within the surroundings of the game reserves and National parks to reduce poaching.
- ✓ Setting up of anti-poaching squads to reduce on poaching to increase the animal population.
- ✓ Regular patrols and supervision should be done to protect the animals from poachers.
- ✓ Increased advertisement should be done through radio programs, TVs, News papers, magazines both within and abroad to increase on the level of awareness about tourism potentials within the region.

- ✓ The government should improve on the accessibility of tourist potentials e.g. Rehabilitation of roads for better transport.
- ✓ Educating the local people about the values of wild life and environmental conservation to reduce on the level of poaching and deforestation.
- ✓ Encouraging the local people to use family planning methods so as to control population growth and reduce the negative effects like deforestation.
- ✓ The government should fight corruption so that the resources allocated to the tourism industry are put into proper use.