

SETTLEMENT

Definition; - refers to a place housing units where a group of people live.

- Involves villages and towns/urban centres and the infrastructure and the human activities that take place in them
- Can be rural or urban

(a) **Rural Settlements**

- Are built in the countryside.
- Include farmsteads, villages and all the activities in them
- Are occupied with primary production activities e.g. mining, lumbering, fishing, livestock keeping, crop production, etc
- Their main function is to house agricultural & fishing population (in case sited along fishing grounds e.g. rivers, lakes, oceans)

(b) **Urban Settlements**

- Urbanization is the growth and spread of towns and town life
- Are occupied with industrial and commercial activities
- Have dense population
- Trading is the main activity

Factors influencing location and pattern of settlements

- Are physical and human

(a) **Physical Factors**

(i) Climate

- Rainfall and temperature are the major climatic elements that influence the distribution and patterns of settlement because they determine people's economic activities
- Areas with high, reliable and well distributed rainfall e.g. the Kenya Highlands/Central province have high concentrations of settlements because they support the production of a variety of food and cash crops
- Hot and dry areas e.g. northern/north eastern Kenya have low densities of settlement as they receive low and unreliable rainfall and high average temperatures that cannot support production of cash/food crops

(ii) Relief/topography

- Areas with rugged terrain i.e. steep slopes/mountain tops have low densities of settlement because they have thin soils to support growth of crops. It is also difficult and expensive to put up housing units. They are also cold/experience low temperature
- Gentle slopes e.g. plateaus and lowlands are heavily settled because they are suitable for farming and construction of housing/infrastructure
- Landforms such as mountains create a rain shadow effect. Windward sides receive high rainfall thus have more settlement compared to the leeward sides

(iii) Soil fertility

- Areas with fertile, well drained alluvial/volcanic soils attract high densities of settlement because they allow production of a variety of food and cash crops

(iv) Environmental diseases

- Regions infested with environmental diseases e.g. sleeping sickness have low concentration of settlements as they are avoided by people due to fear of contracting diseases

(v) Vegetation

- Thick vegetation e.g. forest may discourage establishment of settlements as they may not be easily accessible and can be habitats to disease causing organisms and dangerous animals

(vi) Drainage/presence of water bodies

- Rivers and springs with clean water may attract settlement as they provide water for domestic uses
- Swampy and marshy areas discourage settlement as they are hosts to disease causing organism and it's also difficult/expensive to put up housing units

(b) Human Factors

(i) Political factors

- Tribal wars/civil strife may displace people from their original homes/places of residence and be settled in other areas e.g. refugee/IDP camps

(ii) Historical factors

- In the historical times, many communities settled in areas that were safe/secure from hostile communities.
- They also lived in groups

(iii) Economic factors

- Settlement of nomadic pastoralists are temporary, scattered and at times moveable
- Permanent settlements are found in areas where people are engaged in arable farming and form specific pattern
- Concentrated settlements are found in mining and fishing areas as people settle around to provide labour
- Establishment of manufacturing/processing industries lead to growth of settlement to provide labour to the industries

(iv) Government policy

- A government of a country may create new schemes of settlements to its population for reasons such as giving land to establish a plant/scheme, ease pressure on existing social amenities, etc

Settlement Patterns

- These are layout/arrangement of dwellings/housing units in a particular place.
- Major settlement patterns include; nucleated, dispersed and linear

(a) Nucleated settlement pattern

- This consists of a cluster of dwellings, shops and other buildings in one place
- The buildings are close to one another forming a cluster/nucleus that can either be a mining centre, oasis, water pan or a water reservoir
- The buildings may be permanent or semi permanent

Drawing for a nucleated settlement pattern

Reasons for development of a nucleated settlement pattern

- Security especially in banditry/cattle rustling prone areas
- Presence of social amenities e.g. schools, health care facilities, etc
- Inadequate/insufficient land for expansion leading to clustering
- Existence of an industrial plant and/or natural resources e.g. mineral works, rich agricultural soils, etc

(b) Dispersed settlement pattern

- Consists of scattered, widely set and randomly distributed housing units especially in the countryside/rural areas
- The housing units are separated by physical features e.g. rivers, valleys and ridges
- They occur in areas with large land parcels and even or rolling landscape
- They can also be permanent or semi permanent

Drawing for a dispersed settlement pattern

Reasons for the development of a dispersed settlement pattern

- Presence of adequate land for expansion and settlement
- Good/improved security over a wide area
- Presence of evenly distributed water points/resources
- Areas with even/rolling landscape e.g. plains/plateaus experience a uniform soil fertility across the region, people will settle anywhere without being limited to relief features

(c) Linear Settlement Pattern

- Formed when people build housing units along communication lines such as roads, railway lines, water pipeline or along specific physical features e.g. a river, a canal or along a coastline
- The housing units appear to be arranged in a line along the communication infrastructure

Drawing for a linear settlement pattern

Reasons for the development of a linear settlement pattern

- Ease of means of transport
- Coastline/lake shore provide favourable fishing ground
- Water body provides water for domestic uses

Distribution of major urban centres in East Africa

Nature/Function of Urban Centre	Description	Examples
Capital Towns/Cities	<ul style="list-style-type: none"> - Main seat of the governments - Houses the national assemblies - Administrative headquarters 	<ul style="list-style-type: none"> - Nairobi – Kenya - Kampala – Uganda - Dodoma – Tanzania
Administrative Towns	<ul style="list-style-type: none"> - Headquarters of government ministries, organizations and agencies 	<ul style="list-style-type: none"> - All provincial and district headquarters in Kenya - Dodoma, Morogoro – Tanzania - Fort Portal - Uganda
Cities	<ul style="list-style-type: none"> - Have city council status - Houses diplomatic missions and international organizations, referral hospitals - Offer specific services 	<ul style="list-style-type: none"> - Nairobi - Dar es Salaam - Kampala
Sea ports	<ul style="list-style-type: none"> - Located along the Indian Ocean shores of East Africa - Assists in sea/water transport 	<ul style="list-style-type: none"> - Mombasa and Malindi – Kenya - Dar es Salaam, Tanga, Lindi, - Tanzania - Non in Uganda - landlocked
Lake Ports	<ul style="list-style-type: none"> - Located along the shores of Lake Victoria - Assist in water transport 	<ul style="list-style-type: none"> - Kisumu – Kenya - Mwanza, Kigoma, Musoma – Tanzania - Bukoba, Jinja, Masindi - Uganda
Industrial Towns	<ul style="list-style-type: none"> - Processes raw materials into finished products 	<ul style="list-style-type: none"> - Thika, Athi River – Kenya - Tororo, Jinja – Uganda - Tanga - Tanzania
Mining Towns	<ul style="list-style-type: none"> - Involved with mining activities/mineral extraction 	<ul style="list-style-type: none"> - Magadi, Kakamega – Kenya - Shinyanga – Tanzania - Kilembe, Tororo – Uganda

Factors favouring the growth of major urban centres in East Africa

- (i) Rural – urban migration: - many youth upon completion of secondary and tertiary education migrate to the major towns of East Africa in search of employment opportunities. This leads to the expansion of the facilities in the urban areas to cater for the increased population
- (ii) Industrialization: - establishment of industries in the urban centres attract people as they offer employment opportunities. As industries expand, people move closer and settle near them to provide labour
- (iii) Natural population growth: - this is due to high birth rates and relatively low death rates in most of the East African countries. This because most of the migrants are in their reproductive age
- (iv) Infrastructural development: - most urban centres in East Africa tend to grow due to development and improvement of transport and communication network i.e. most are accessible by good roads, railway lines, airports and waterways. This enables import/export trade, accelerates migration and avail social amenities and recreational facilities

- (v) Administration: - regional, district and provincial headquarters lead to the development of urban centres as government employees are posted to provide services. Also administration offices and workers' houses are built leading to expansion of the towns
- (vi) Agriculture: - makes a town to grow in the following ways:
 - Provide market for the industrial products from the urban centres
 - Provide food for the urban residents
 - Provide the raw materials for the industries established in urban areas
 As such urban centres located in rich agricultural lands grow faster
- (vii) Mining: - attracts workers who move and settle near the mineral works. The mining company takes up the responsibility of providing the workers with social facilities leading to expansion of towns e.g. Magadi Town (soda ash mining)
- (viii) Tourism: - the influx of tourists in a town may lead to its growth/expansion because of high demand for hotels, social and recreational facilities

Internal Structure of an ideal urban centre/urban zoning

- This is based on functions of the urban centre, governing urban policies, physical conditions of the site and historical background of the urban centre.
- Involves zoning i.e. classifying urban centres on the basis of land use within them.
- Urban centres are zoned into

(a) Central Business District

- Also known as the town centre/downtown
- It is centrally located in the urban centre
- Has the highest concentrations of the tallest buildings/vertically extended buildings
- Has high rental values
- Houses are mainly income generating

(b) Transition Zone

- Surround the CBD
- Has older buildings – may be replaced by expansion of the CBD
- Suitable for activities requiring proximity to the CBD
- Land values are slightly low
- Include shopping malls, government offices and wholesale outlets

(c) Industrial Zone

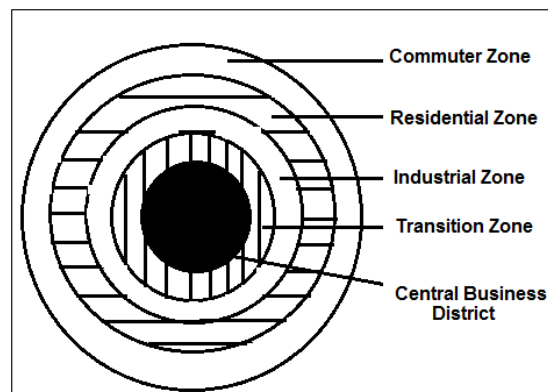
- Border transition zone
- Forms the industrial centre
- Located next to railways/ports to ease transport of raw materials and finished products

(d) Residential Zone

- Houses workers hence located close to industrial zones
- Starts with low class residential estates to middle and high class

(e) Commuter Zone

- Emerges into the surrounding rural areas



Case Studies of Sample Towns in Kenya

A. Thika

- This is an industrial town
- Has many industries e.g. processing & canning of pineapples, Fabrication of metal containers, Motor Vehicle Assembly, cooking fat making and coffee processing amongst others

Factors favouring the growth and development of Thika as an industrial town

- Excellent road network that connects Thika to Nairobi, Mombasa, Mwingi, Garissa, Murang'a, Nyeri and Nanyuki enables the movement of raw materials and finished products to and out of the industries. Thika is also linked to Nairobi by railway
- Strategic location: - Thika enjoys proximity to the capital city – Nairobi. Many investors from Nairobi find it cheaper and more convenient to invest in Thika because the land rates are low and it is also surrounded by economically rich hinterland of Kiambu, Murang'a and Maragua
- Thika is surrounded by agriculturally productive districts that supply the residents food and raw materials for some industries
- The town is sited near rivers Chania and Thika that readily supply water for irrigation, industrial and domestic uses
- Existence of expansive land for industrial growth – Thika is located in an open place that is sparsely settled giving room for expansion of industries
- Nairobi's industrial area is already congested and many investors therefore prefer to establish industries in Thika as an alternative to Nairobi
- Existence of cheap local labour as Thika is surrounded by regions of high population densities that provide a large pool of cheap local labour to the industries
- Hydro electric power from the Seven Forks Dam on River Tana provide electricity for industrial and domestic uses
- Adequate social amenities e.g. hospitals, schools, colleges etc attract people to settle there

Other functions of Thika are administrative, educational, tourism, religion, recreational and residential

B. Kisumu

- This is third largest town in Kenya
- The largest lake port in East Africa

Factors favouring the growth and development of Kisumu as a lake port

- Strategic location at the shores of Lake Victoria making it the main commercial and industrial focus of western Kenya and gateway to Uganda
- Location at the shores of Lake Victoria ensures adequate water supply for domestic and industrial uses
- Presence of many industries e.g. fish processing, textiles, breweries, soft drink making, boat making and repair etc have made people to settle around the industries to provide labour
- It is the terminus of the railroad from Indian Ocean to Lake Victoria thus supporting large volumes of trade in western Kenya and the landlocked Uganda etc
- The port is surrounded by densely populated areas providing ready labour for the industries
- It is surrounded by a rich agricultural hinterland that provide raw materials for the development of industries

Other functions of Kisumu include: - education, administration, tourism, recreation, religion, residential, and industrial

C. Eldoret

- This is an agricultural collection centre
- Located in the highlands on the western side of the rift valley
- Originally it was a centre for collecting agricultural produce from the surrounding farms in Trans Nzoia and Uasin Gishu

Factors for the development of Eldoret Town as an agricultural collection centre

- Strategic location along the Nairobi Kampala international trunk road through Malaba border and proximity to Southern Sudan & Uganda has made it a major export town
- It is located in a rich agricultural hinterland that is well served with road, railway and airport making transportation of agricultural produce faster
- Key collection and export facilities e.g. inland container depot has enhanced the capacity of Eldoret as key agricultural collection centre
- Availability of H.E.P encouraged establishment of industries-tanning, textile, milk processing, soft drinks, plywood making.
- The high population in surrounding areas provides a pool of labour and ready market.
- The presence of river Sosiani provides reliable water supply.
- Presence of educational institutions-Moi university, Eldoret polytechnic, Baraton University.
- There was plenty of land for expansion of the town and industries.
- Some industries were established as art of government's decentralization policy.
- The establishment of service industries (banks, insurance)

Other functions of Eldoret include education, recreation, tourism and industrial

Related Studies of Nairobi and New York Cities

Nairobi

- This is the capital city of Kenya and the largest urban centre in East Africa
- It grew from a railway camp established in 1899 during construction of the Mombasa Railway
- It gained city status in 1962 and today it is one of the most metropolitan cities with international reputation
- It is the headquarters of many international organizations e.g. UNEP, ILRI, ICIPE, ICRAF, HABITAT, etc

Factors that influenced the growth of Nairobi City

- Nairobi is the leading industrial city in Eastern Africa. It has many industries that attract many people for employment opportunities
- Nairobi is linked to East Africa by efficient transport and communication network e.g. JKIA that connects it to the rest of the world; Wilson Airport for domestic and regional flight. Also roads, railway lines, inland container depot and a pipeline terminus
- Administration centre: - Nairobi is the capital city and the main seat of the government of the Republic of Kenya, houses the parliament and headquarters of Nairobi County (Province)
- Internationally recognized centre: - has conference centre KICC that hosts international meetings and headquarters of many international organizations e.g. UN, ICRAF, ICIPE
- Education Centre: - hosts many educational institutions e.g. schools, universities, tertiary educational institutions and draws students from Eastern Africa and beyond
- Immigration: - Nairobi is a major destination for local and international immigrants who come into Nairobi to seek employment and invest/trade
- Tourism: - Nairobi is attractive to tourists because of its central position within East African air transport network and also has good tourist facilities e.g. hotels and recreational centres

Problems facing Nairobi City

- Traffic congestion leading to traffic jam during rush hours leading to loss of time
- Unemployment due to large number of employees against few job opportunities
- Inadequate housing due to rapid population growth results to increased rents/development of slums
- Uncontrolled disposal of liquid/solid wastes lead to water and land pollution
- Lack of/few public utilities/social amenities e.g. acute water shortage; their provision doesn't match population increase
- Criminal activities e.g. mugging, prostitution, drug trafficking, etc due to high rates of unemployment and slow economic growth

New York City

- This is the largest and most cosmopolitan (contains people of different types from different countries, and influenced by their culture) urban centre in North America
- Situated at the estuary of Hudson River on the islands in Atlantic Ocean
- Has a population of over 10million people

Factors favouring the growth of New York City

- Great Sea Port: - New York is the world's most known sea port handling about 30% of all trade in North America
- Transport & Communication: - New York is connected to all parts of the world by sea routes, canals, international airports and railways. It also handle the greatest import-export trade in North America

- International Centre: - New York is the headquarters of several international organizations e.g. UN, IMF and World Bank
- Well planned internal city structure: - New York City has a unique street pattern i.e. shorter distances between any two places in a series of right angled segments that enables fast movement of traffic and pedestrian into, out of and within the city. There are also subways and electric trains that are popular and cheapest transport means
- Industrial centre: - New York is the leading industrial centre in North America

Functions of New York City

- Finance and Trade – New York Stock Exchange
- Cultural and recreational – clubs, pubs, national park
- Transport and communication
- International centre
- Industrial centre – ship building, oil refinery, publishing, etc

Problems facing New York City

- Inadequate space for expansion because the city is mostly located on islands
- Unemployment and underemployment since most immigrants are unskilled/employment opportunities less than the available labour force
- Pollution due to heavy industrial wastes and exhumes from several motor vehicles
- Development of slums/ghettos due to inadequate housing
- Traffic congestions
- Terrorist attacks
- High crime rates especially drug trafficking/abuse due to higher rates of unemployment

Similarities between Nairobi and New York Cities

- Both are international centres
- Both are industrial centres
- Both are transport and communication centres
- Both are financial/commercial centres
- Both experience similar problems

Differences between Nairobi and New York Cities

Nairobi City	New York City
It is an inland/dry port	It is a seaport
It is a national capital.	It is a state capital.
Leading industrial town in Eastern Africa	Leading industrial centre in North America

Related Studies of the ports of Mombasa and Rotterdam

Mombasa

- This is the largest sea port in the coast of East Africa and the second largest town in Kenya.
- It is partially situated on the mainland and partially on Mombasa Island.
- It started as a small settlement during the slave trade era – as a resting place and a calling port for the long distance traders
- The growth and development of modern Mombasa was influenced by the beginning and eventual construction of the Kenya – Uganda Railway in 1896
- Today, Mombasa is one of the best ports in East Africa with modern port facilities for handling import – export trade

Factors influencing the growth of Mombasa Port

- (a) Deep and well sheltered harbour: - The deep water on Mombasa and Kilindini creeks provides a good, well-sheltered natural harbour with large berths for docking and anchoring large vessels. The berth area is also free from coral reefs
- (b) Strategic location: - Mombasa is centrally located in the Eastern Africa and connected to the major sea routes of the world. This has made it an important port of call – ships serviced/service crew rest
- (c) Large hinterland: - a hinterland is an area served by a port; from which it derives its exports and within which it distributes its imports. Mombasa's hinterland is large and rich covering Kenya, Eastern and Central Africa. The hinterland is rich in agricultural produce and mineral wealth exported through it and crude oil/finished products for imports making it an entreport
- (d) Establishment of oil refinery and other industries: - port of Mombasa handles more crude oil from Middle East due to the establishment of oil refineries at Changamwe and Kilindini
- (e) Modern Port Handling Equipment: - Kilindini Harbor and the port of Mombasa are well equipped with modern facilities for handling bulk cargo
- (f) Tourist and cultural centre: - Mombasa boasts of many features of tourist attraction ranging from historical sites, sunny and sandy beaches, warm weather, scenic beauty and rich cultural and architectural origin

Rotterdam

- Rotterdam, city in the south-west Netherlands, a port on the Maas River near The Hague, 30 km (19 mi) from the North Sea.
- Rotterdam is one of the major seaports of the world. It is directly linked to River Rhine and to the Waal and Meuse rivers, which extend inland into Belgium and Germany.
- Rotterdam is the principal centre of overseas trade for the Netherlands and for the industrial Ruhr district of Germany.
- This is the largest port in the world and the most important entreport in Europe

Factors for the growth and development of Rotterdam as an international entreport

- (a) Large and rich hinterland: - the port of Rotterdam covers a large hinterland from Luxembourg, Netherlands, Germany, Belgium, Switzerland, France and Austria. It is also connected to many parts of interior Europe through navigable rivers e.g. Rhine, Rhone. It therefore handles to and from the wide hinterland
- (b) Suitable location: - Rotterdam is centrally located at the point of sea routes to and from Europe, Asia and the Americas. This has made it an important port of call
- (c) Warm weather: - the coast of Rotterdam is washed by the warm North Atlantic Drift Current making it free from ice TOTY thus allowing port operations even during the winter
- (d) Modern port handling facilities: - new and modern port handling facilities have been put at the port of Rotterdam. These include container terminals, loading off equipment. These make it handle large cargo volumes and serve many ships at a time
- (e) Deep harbor and canals: - several canals have been constructed as early as 1872 that are deep and free from silt. Over the years, the canals have been dredged and widened to accommodate larger/wider vessels. Also a new out port – Euro port that is deep and large has been established at the Rotterdam. This improved its capacity to handle larger volumes of trade

Comparison between ports of Mombasa and Rotterdam

Port of Mombasa	Port of Rotterdam
Exists on an island	Exists on mainland
Port operations are less mechanized	Port operations are highly mechanized
Relies on road, railway, air and pipeline transport	Relies on road, railway, air and pipeline transport in addition to canals of Rhine River
Exports mainly agricultural/unprocessed goods	Exports mainly manufactured products
Imports manufactured/finished products	Imports fuels, minerals and agricultural commodities
Has limited space for expansion	Still expanding – has a Europort
Serves a developing agricultural hinterland	Serves a developing and highly industrial hinterland

Effects of Urbanization

(i) *Environmental degradation*

- Urban centres have many industries, motor vehicles and other activities that lead to pollution e.g.
 - Land pollution: - garbage from institutions, households and open markets deposited on land
 - Air pollution: - smoke emitted from motor vehicles and industries
 - Water pollution: - dumping of solid/liquid wastes into water bodies
- Solution: Recycle, treat, proper waste disposal, creation of public awareness, develop national environmental standards

(ii) *Unemployment*

- Rural – urban migration leads to the influx of job seeking youths to urban centre against fewer job opportunities leading to unemployment and increase in dependency ratio
- Solution: - decentralization of industries, develop rural areas, encourage self employment, jua kali industries

(iii) *Increased crime*

- Many of the unemployed youth end up engaging in criminal activities e.g. prostitution, thuggery, drug abuse/trafficking, impersonation to earn a living
- Solution: Increased police surveillance, encourage use of security devices e.g. CCTV camera, stiff penalty for the offenders

(iv) *Traffic congestion*

- Most urban centres in developing countries have poorly planned roads and traffic control systems. They also have many motor vehicles that lead to congestion in most of the roads especially during rains and state of emergency
- Solution: - encourage use of public transport, installation of traffic lights, control of tunnels, bypasses, flyovers, use of electric trains

(v) *Breakdown of family units*

- Most urban centres have larger concentration of males compared to females as many males migrate to the urban centres in search of job opportunities leading to separation of family units

(vi) *Strain/pressure on social amenities*

- Due to the high population growth rate in many urban centres in developing countries, there has been a strain on the existing social amenities e.g. health care facilities, schools due to overuse

(vii) Inadequate housing facilities

- Rural – urban migration has caused a shortage in housing. This has led to a sharp increase in house rents and the development and establishment of slums and squatter settlements that lack basic facilities, they are congested and prone to diseases
- Solution: - funding for high-rise, multi storey flats, building of low cost housing for the urban poor, expansion of urban boundaries into suburbs, establishment of housing finance institutions