UNIT I
BASES

MEANING, NATURE AND SCOPE OF URBAN GEOGRAPHY:

Urban geography is the study of urban places with reference to their geographical environment. Broadly speaking, the subject matter includes origin of towns, their growth and development, their functions in and around their surroundings.

The subject of urban geography has gradually taken a special place among the various branches of geography in the period after the Second World War in various foreign and Indian universities and colleges. With the increase of population globally, towns and cities have become magnets of economic, social and political processes.

The Scope of Urban Geography

Urban geography deals with the analysis, explanation, and prognosis of urban forms, urban social fabric, and economic structures and functions. Questions encompass economic, political, social, and ecosystem geography in their urban contexts at various scales, from the macroscale of the urban system to the meso-scale of metropolitan functional urban areas to the micro-scale of urban neighborhoods, streets, and even individual households. The scientific results of urban research increasingly serve as a basis for decisions on public investment, allocation of resources, and urban development planning. Urban research can be broken down into interurban (system of cities) and intraurban analyses that address the processes going on in cities (see
Cities: Internal Structure). Conceptual approaches pertain to urban form and urban morphology, the urban social fabric and economic structures, and urban development and urban policy. Commonly, it includes in the very beginning, consideration about the origin of an urban place. The genesis about a town is invariably related to its history. Who is behind its origin? What is that which makes a town to take its root where it is, and why it is there? Town site or the ground on which it is sited has some specific and geographic attributes. These need explanation to bring forth personality of a town.

Another point which has been emphasized by D. Stamp to cover the scope of urban geography is the study of the actual town itself, i.e., town as an entity. He further has added that influence of the town on its surrounding area too forms a significant aspect of the study. This means that ‘townscape’ and also hinterland including ‘umland’ are vital issues for studying urban geography.

One of the pioneer scholars in urban studies in India, R.L. Singh has stressed on three broad categories under the scope, viz.

(a) The physical structure of the city,
(b) The stage of its historical development, and
(c) The process influencing the structure.

Dickinson defines urban geography as the study of a city commanding the surrounding region. He describes the city as a king among the surrounding towns. His trait for cities of all ages has been institutional supremacy for their surrounding territory.
Their existence depends upon the resources of the surrounding areas, and also, by virtue of their interaction through their physical, social and economic infrastructure. Their interdependence with their surrounding regions is the spatial reality.

Raymond E. Murphy points out the dual role of urban geographer, i.e.,
(i) To analyze cities as entities in terms of locations, characters, growth, and relations to the surrounding countryside, as well as,

(ii) To discuss patterns of the city’s interior – land use, social and cultural patterns, patterns of circulation, and above all, natural patterns of environment – all as they exist in interrelation and interaction in the urban area.

Harold Carter opined that since the geographer is concerned with the analysis of the variable character of the earth’s surface, and thus, “the populations and the buildings agglomerated together to make up towns constitute the special interest of the urban geographer”. Since considerable population of the world live in towns, and the problems of the urban environment are paramount, the study of urban geography is important and its relevance to applied geography needs no further stress.

Towns and cities have their wide impact on human life and activities. Overall growth rate of city population has been faster during the last two-three decades. It is only after Second World War that the study of urban geography got due recognition in the universities in India and abroad. Prior to that period, it was taught as a theme within human geography where its scope was restricted to the description of site-situation of towns including their description as a part of settlements.

Since the publication of the major work of Doxiadis, urban geography has made much headway in and outside India. Brian J.L. Berry also encouraged the urban studies by introducing urban systems as consequences of economic development. In the present circumstances the scope of urban studies has reached far-flung areas and is not restricted to its site-situation structural approach.

The ICSSR Report of the Fourth Survey of Research in Geography, covering the period 1976-82 in India has pointed out various themes of urban phenomena bringing into light the scope of the subject. These
include trends and patterns of urbanization; rural-urban migration; urban systems and hierarchical orders; morphology; economic base; land use; functional housing classification; slums and squatter settlements; rural-urban fringe, surrounding areas of influence, umland and interaction between a city and surrounding settlements; urban environment; pollution; poverty; crime and quality of life; urban services and amenities; urban politics and administration; tourism; urban planning and problems including urban metropolises.

N. Baransky, the founder of Soviet economic geography, has pointed out that study of cities has a wide scope in the sense that it has now become the subject matter of historians, geographers, statisticians, economists and sociologists. Similarly, planners and plan designers are interacted in cities, each in their own way, as well as architects, financial specialists and representatives of a number of special fields.

He further advocates that the studies of cities may vary in terms of their territorial scope and can be studied in a global context, in the context of a country, or in the context of an individual region. One may carry out comparative studies of cities belonging to a particular category.

Finally, one may engage in a geographical study of a particular city constituting the subject of a monograph. Baransky stresses that from an economic-geographic point of view a city together with its network of roads constitutes the skeleton on which everything else hangs that defines the relevant territory, and endows it with a specific configuration. About planning, Baransky has opined that cities may be viewed as applied urban micro-geography.

Urban Geography tries to provide logical study of urban settlements of a region in terms of areal variations including interrelationships with other areal units-urban or nonurban. It considers both inductively and also
deductively the intra-urban framework and the inter urban framework in an area or the whole world. The basic approach of urban geography in studying town is to analyse them more as human settlements or habitations existent on the earth’s surface as individual whole units, as made up of various ingredient parts, as physical and functional entities, as parts of a larger regional system and as evolving units of changing levels and magnitude. The principal aim of Urban Geography is to provide – generalizations in patterns and trends about towns and their interiors and their interrelationships more in totality than in separation or fraction. Its main interest lies in the general rather than specific or individual about urban centres and areas. It is also at the same time chief concerned with the actual and rather less with the desired for which separate disciplines of town planning and regional planning have come into being correspondingly for planning specific towns and regions. Urban Geography is a social science to a large extent and it is boldly concerned with both theoretical as well as applied aspects: but its main objective is the search of generalizations in the form of laws, principles, theories, concepts, regions, categories, models and predictions

**Methodology in urban studies**

An urban study is based on the study of the urban development of cities. This includes studying the history of city development from an architectural point of view, to the impact of urban design on community development efforts. The core theoretical and methodological concerns of the urban studies field come from the social science disciplines of history, economics, sociology, geography, political science, anthropology, and the professional fields of urban planning, architecture, landscape architecture, and urban design. Urban studies helps with the understanding of human values, development, and the
interactions they have with their physical environment. The field originated primarily from the United Kingdom and the United States, and has spread to research how international cities apply this research.

Urban Studies Research Methodology

Urban studies scholars employ both quantitative and qualitative research methods, primarily from the social sciences. Scholarly writing about how to do urban studies research is sometimes explicit; often implicit in the methodologies urban studies scholars have actually employed in their research.

Training in applied statistics is a regular part of most urban studies curricula. Urban studies students are trained to use computerized statistical packages to do quantitative analysis. Because many urban phenomena have a spatial dimension geographical information systems (GIS) software is increasingly important in urban studies education and practice.

Urban studies scholars also employ qualitative methods. William Whyte's study of how people use urban parks and plazas is a notable example of observation. Urban anthropologist Oscar Lewis conducted exhaustive field research. Sam Bass Warner did archival research on the records of ordinary developers of ordinary Boston streetcar suburbs. Planner John Forester conducted interviews of dozens of urban planners to understand planning in the face of conflict. Urban studies research often employs both quantitative and qualitative research methods to triangulate on the object of study.
UNIT II
CHARACTERISTICS

Evolution of towns during Ancient, Medieval and Modern periods

Cities in ancient times

The emergence of settlements was the result of the first social division of labor, i.e. the allocation of the first farmers. Later, the separation of crafts and their concentration in certain settlements took place - the first cities arose (the so-called second social division of labor). The emergence of the cities was the result of third social division of labor, i.e. the separation of the exchange of goods from crafts.

Pre-industrial city became the center of an agricultural area and concentrated trade and crafts.

The foundation of the city from the earliest times until the industrial revolution consists of:

1. crafts,
2. trade,
3. defensive function,
4. administrative functions.

The oldest towns originated in the 5th to 2nd millennium BC in the Middle East (Mesopotamia, Iran and Egypt),

Urban civilization gradually expanded into other areas of the Mediterranean (Greece, Rome, the "Roman" new towns that were created as military camps / e.g. Cologne, Strasbourg, Vienna, Budapest, Barcelona, Marseille, Paris, London /).

The oldest settlements originated on the hills, especially for security and defense reasons:

1. Jericho,
2. Babylon,
3. Mennofer (Memphis)
4. Carthage,
5. Troy, Mycenae, Olympia, Delphi, Sparta and Athens, Miletos, ...

There is evidence of early city growth in four areas of the Old World and one area of the New World:

1. Mesopotamia. The first cities are thought to have begun around 3500 BC in lower Mesopotamia (Sumer) around the Tigris and Euphrates rivers. One of the earliest cities was Ur, which from 2300 BC to 2180 BC was the capital city of the Sumerian Empire, which extended north along the Fertile Crescent, possibly as far as the Mediterranean. In 1885 BC Ur and the other southern cities were conquered by the Babylonians (Box 3.3).

2. Egypt. There is a long-standing debate in archaeology over theories of urban diffusion or independent invention but it is most probable that agricultural and other technologies, possibly including city-building, spread along the Fertile Crescent, then south-west into the Nile valley. By 3500 BC a number of the Neolithic farm hamlets along the lower Nile had risen to ‘overgrown village’ status and were clustered into several politically independent units, each containing large co-operative irrigation projects. The transition from settled agricultural communities to cities occurred around 3300 BC when the lower Nile was unified under the first pharaoh, Menes. The early Egyptian cities were not as large or as densely settled as those of Mesopotamia because:

- The early dynastic practice of changing the site of the capital, normally the largest settlement, with the ascendancy of a new pharaoh limited the growth opportunity of any single city.

- The security provided by extensive desert on both sides of the Nile meant that once the valley was unified politically, Egyptian cities, unlike those of Mesopotamia, did not require elaborate fortifications and garrisoned troops for protection.
3. The Indus valley. The Harappa civilization appeared around 2500 BC in the Indus valley in what is now Pakistan. It was distinguished by twin capital cities, a northern one of Harappa in the Punjab and Mohenjo-daro, 350 miles downriver.

**Figure: Early urban hearths**

Ancient cities were characterized by regular layout and showed common features of the city:

1. The landmark was the palace of the ruler, temples and palaces of the courtiers,
2. Cities were very extensive,
3. Various neighborhoods were formed,
4. Often showed a large population.

The main building material in the Antiquity and in the Middle Ages was wood, stone was used only for the foundations of houses, larger buildings and religious objects.
The layout of the city of Miletos

Since Roman times (and then subsequently up to the 19th century) bricks are used in construction.

CITIES IN THE MIDDLE AGES

After the collapse of the Western Roman Empire the Rhineland followed the ancient tradition - the "idea" of a city spread further into eastern, northeastern and southeastern Europe.

From the 3rd century, due to Migration Period, the structure of population in cities was altered - the rich part of the population was suppressed, primarily artisans and traders remain. Breakthrough in the evolution of the city is significant in 8th-9th century when princes and
bishops begin to establish their castles and monasteries. Royal and ecclesiastical seats then often become the core of the settlement, around which the city life evolves. Each period of the Middle Ages was associated with a particular architectural style, which was also connected with a function or meaning of the cities:

1. Romanesque,
2. Gothic style
3. Renaissance,

**Cities of the industrial era**

In the modern era the nature of economic activity is qualitatively changing - agriculture is more mechanized and released labor force is heading to the cities. In the 18th-19th century a new town function is created - the industrial production.

Industrial development would not be possible without significant social and economic changes, which we call the Industrial Revolution.

With the industrial revolution a large number of people is beginning to be employed in large-scale production in cities (at the beginning manufactures, later factories), and significant population movements from rural to urban areas occurs.

The localization factor for urban development or industrial period is mineral fuel (coal). Therefore; most of these cities develop in mining areas.

Industrial development retrospectively influenced the development of other urban functions:

1. Trade;
2. Finance;
3. Administration;
4. Education and culture.
A very important factor then becomes transportation, because sufficient water resources were required in addition to the fuel. For this reason, the settlement also develops around rivers and in the lowlands.

Due to population growth in cities and urban sprawl the original medieval fortifications (walls) are vanishing and in its place industrial buildings or warehouses are built.

Formerly farming villages near the city merge with large cities and become their suburbs.

**The main feature of urban-industrial period is:**

The rapid growth of urban population:

1. In 1800 in the whole world there were about 750 cities over 5 thousand inhabitants, 200 cities over 20 thousand inhabitants and 45 cities over 100 thousand inhabitants and no city had more than 1 mil. inhabitants;

2. In 1950, in the same categories there were 27600, 5500, 880 and 50 cities.

The proportion of urban residents to the world's population also significantly increased:

Urban phenomenon affected all regions of the world:

1. Old network of medieval towns, but also new cities in the coalfields and around railways,

2. the area where cities were absent (North America, Australia). In Asia and Africa among the indigenous towns new colonial cities were created(eg. Shanghai, Hanoi, New Delhi, most cities in sub-Saharan Africa).

Areal expansion of cities into surrounding communities;

With the growth of cities differentiation of urban design occurs, which subsequently leads to social differentiation.
Cities of the postindustrial epoch

In the postindustrial era, the economic transformation is reflected in the transition from an economy based on secondary sector (manufacturing) to an economy based on the tertiary sector (services).

The national and global capital (which reflects, among other things demand a new standard of living = emphasis on mental work, reducing working time, leisure, individualization, informatics development) is extending.

Changes in production technology and modern way of buying goods put greater demands as far as area is concerned.

New productions (e.g. car assembly) and superstores are built on previously undeveloped areas close to the city limits. The condition is a good communication network allowing easy and especially fast access (see AMAZON - Brno).

Urbanization of postindustrial period affects still larger areas. Cities are expanding into rural areas and are changing the economic and cultural character of the village.
URBAN TRANSPORTATION

There is a close relationship between the nature of urban transportation and urban structure (Table 13.1). When most people had to walk to engage in essential daily tasks, cities were necessarily compact. Citizens lived at or close to their workplaces, circumstances that favoured high-density living environments in small, functionally integrated cities that rarely achieved populations of 50,000.1 Only during the industrial revolution did vehicles of relatively high capacity and speed allow greater distances to be travelled and larger quantities of goods to be exchanged. This relaxed restrictions on city size and established the interdependence between transport technology and urban form. During the nineteenth century the development of railways and trams (streetcars) was critical in separating home and workplace, encouraging functional specialization of land uses in the city, and in promoting the penetration of the surrounding countryside along the more accessible transport corridors. In London between 1860 and 1914 the Underground system and suburban railway lines were formative influences in urban development that permitted extensive suburbanization and growth of commuter settlements well beyond the urban core. Similar patterns were evident around major cities in the North-Eastern USA. In the post Second World War era widespread car-ownership led to a significant increase in personal mobility and a massive expansion in the built-up areas of cities (Box 13.1).

In this chapter we shall examine the increasing volume and complexity of urban travel, and the problems posed for urban transportation. We shall analyses the major strategic responses to the urban transport problem, examining a range of both transport and non-transport-based options. Finally, the essential relationship between transport and urban form will be elaborated and the links between transport and sustainable urban development considered.
UNIT III
SPATIALITY AND MODELS

Rank size Rule
Meaning- A rule describing the distribution of town or city sizes in area. It states that if a set of towns in areas ranked in descending
Rank Size Rule- In a region, we can see difference in size among difference cities that is the characteristic of theirs urbanization.
Rank size Rule presents the correct image of distribution of settlement according to their size.
There is a definite relationship between size and rank.
In this regard suitable steps were taken in 1913 by F. Auerback.
Meaning-
Rank size rule is hypothesis. It is a theoretical model. It shows the settlements size and its relation with quantitative aspects.
This rule present the image of urban system of urban settlement according to this, cities have relation according to their size. This is in systematic form.
So between the shape and rank of cities have definite relation.
Rank size rule by George K. Jipt- He is the first scholar to give the Rank size rule. According to him the cities of a region arranged in decreasing order, acc. to their population like0 the population of II city will be half of I city and III city will have 1/3 population of I city in this way IV have ¼ population.
Rank size rule = Pn = P₁ (n¹)
Pn = Rank of town
\[ P_1 = \text{Population of the biggest town.} \]

Eg. – If the population of the biggest town is 2000 the population of II & X rank town

II \( P_2 = 20000 \) \((2^1)\)

\( P_2 = 10000 \)

X \( P_{10} = 20000 \) \((10^1)\)

\( P_{10} = 2000 \)

**The Law of the Primate City**

Geographer Mark Jefferson developed the law of the primate city to explain the phenomenon of huge cities that capture such a large proportion of a country's population as well as its economic activity. These primate cities are often, but not always, the capital cities of a country. An excellent example of a primate city is Paris, which truly represents and serves as the focus of France.

The concept of primate city was initiated by Mark Jefferson, he studied over fifty one countries and found primacy in 46 countries of major city, on the premise of empirical observations he initiated the concept of Primate City in 1939 in his paper entitled “Law of the primate city” his speculation was “A country's leading city is always disproportionately large and exceptionally expressive of national capacity and feeling. The primate city is commonly at least twice as large as the next largest city and more than twice as significant.”. For example London is seven times larger than size of Liverpool, Copenhagen nine times larger than Aarhus, and Mexico City five times the size of guadalhara. he observed that such primate cities not merely super eminent in size but also dominated in cultural, social and political scenario of the entire region .This was direct contract to the rank size rule suggested only 2 year later by G.K Zipfs. In Jefferson’s view Migration to cities is partially liable for the growth of cities. The variation in employment opportunities in time and in space that causes migration results in irregularity in city sizes. "But once a city is larger than any other in its country, this mere
fact gives it an impetus to grow that cannot affect any other cities ... it becomes the primate city". Since migrants from different parts of the country contribute to the growth of the primate city, it "expresses the national disposition more completely than any other city". The migrants do not typically lose connection entirely with their native places. So as Jefferson says "the primate city contributes much to the unification of the country". A high level of education and easy communication make contributions to the development of a strong feeling of nationality which, in flip, is conducive to the development of a primate.

"A country's leading city is always disproportionately large and exceptionally expressive of national capacity and feeling. The primate city is commonly at least twice as large as the next largest city and more than twice as significant." - Mark Jefferson, 1939

Characteristics of Primary Cities

They dominate the country in influence and are the national focal point. Their sheer size and activity become a strong pull factor, bringing additional residents to the city and causing the primate city to become even larger and more disproportional to smaller cities in the country. However, not every country has a primate city, as you'll see from the list below.

Some scholars define a primate city as one that is larger than the combined populations of the second and third-ranked cities in a country. This definition does not represent true primacy, however, as the size of the first ranked city is not disproportionate to the second.

The law can be applied to smaller regions as well. For example, California's primate city is Los Angeles, with a metropolitan area population of 16 million, which is more than double the San Francisco metropolitan area of 7 million. Even counties can be examined with regard to the Law of the Primate City.
Examples of Countries with Primate Cities

- Paris (9.6 million) is definitely the focus of France while Marseilles has a population of 1.3 million.

- Similarly, the United Kingdom has London as its primate city (7 million) while the second-largest city, Birmingham, is home to a mere one million people.

- Mexico City, Mexico (8.6 million) outshines Guadalajara (1.6 million).

- A huge dichotomy exists between Bangkok (7.5 million) and Thailand's second city, Nonthaburi (481,000).
URBAN HIERARCHIES
The Urban hierarchy ranks each city based on the size of population residing within the nationally defined statistical urban area. Because urban population depends on how governments define their metropolitan areas, urban hierarchies are conventionally ranked at the national level; however, the ranking can be extended globally to include all cities. Urban hierarchies tell us about the general organization of cities and yield some important insights. First, it tells us that within a system of cities, some cities will grow to be very large, but that number will be small relative to the universe of cities. Second, it refutes the expectation of an optimally sized city. Lastly, it establishes cities as belonging to an inter-related network where one city's growth affects others.

Population
The most obvious way of deciding where a settlement ranks on the urban hierarchy is by using the population of that settlement. The larger the population, the higher the settlement is placed on the hierarchy.

In the UK, the largest city in terms of population is London, which most people would agree is the most important settlement in the country and so deserves to be placed on the top of the urban hierarchy for the UK.

After that the divisions between what is classified in each layer is a bit vaguer. Different sources will have different numbers for how many people are needed for a place to be called a city rather than a town for instance.

However the most important thing to notice on the diagram is that as you go up the hierarchy, there becomes a lot less of that type of settlement. So, the diagram shows us that there are huge numbers of isolated farmhouses and hamlets. There are less villages and small towns and so on.

In the UK, many people would argue that only London should be placed in the highest rung of the triangle. However some other large cities, such as Birmingham, Manchester and Leeds are growing fast, and may be considered to have reached the top level as well.

THEORETICAL DISTRIBUTION
The hierarchy is usually related to the empirical regularity with which cities are distributed. The pattern has been formulated in a number of ways, but usually as a variation of the power law. Formally, it is a frequency distribution of rank data where the frequency is inversely proportional to rank such that cities with population larger than $S$ are approximately proportional to $S^{-a}$, where $a$ is normally close to 1. There are no good explanations for the exponent consistently being close to 1. This is problematic because an exponent of 1 in the power law implies an infinite population. Paul Krugman proposes that, in the case of cities, the power law operates according to the percolation theory. This relaxes the condition on the exponent approaching the value of 1 and breaking down the model. Importantly, the application of a percolation model leads to one of the key insights regarding city sizes: geography and economic conditions give cities advantages that allow them to grow more than cities with a relative scarcity of these benefits. A simpler formulation of the relationship between rank and frequency is expressed with reference to Zipf's Law. The law applied to cities states that "if cities are ranked in decreasing population size, then the rank of a given city will be inversely proportional to its population." According to this intuitive formulation, in a country where the largest city has a population of 10 million, the second largest will have population size of 5 million, the third largest 3.33 million, etc.
The population of each type of settlement increases as the number of settlements of that type decreases.
CENTRAL PLACE THEORY

WALTER CHRISTALLER AND LOSCH`S MODEL OF CENTRAL PLACE.

Central place theory is a spatial theory in urban geography that attempts to explain the rationale behind the distribution, pattern, size and number of cities and towns around the world. It also attempts to provide a framework by which these areas can be studied both for historic reasons and for the locational patterns of areas today. The following models are discussed.

CHRISTALLER`S MODEL.

Walter Christaller, a German geographer was the first to develop the concept of central place model in (1930). The model is seen to constitute the most powerful theoretical base for the study of the factors of location, size and number and the geometrical arrangement of cities in space. Christaller asserted that settlements simply functioned as central places providing services to surrounding areas. The following are the assumptions of the model.

ASSUMPTIONS OF THE MODEL.

1. That there is a boundless and homogenous plain on which transportation is equally easy in all direction; transportation costs are only a function of distance.
2. This plain is evenly settled and the population in uniformly distributed.
3. That income is evenly distributed and the same demand for goods and services.

4. Individuals are rational seeking to minimize their cost and so they would travel to closest settlement (central place) to obtain the goods or services that meets their demand.

5. Suppliers are rational and will only provide goods and services for profit to be realized. This follows that a settled plain is equally served as suppliers will position themselves farthest from each other.

Christaller termed these central functions and the surrounding region a central place which he stated would be located at the centre of minimum aggregate travel. Not only did he focus on the location and function of a settlement but also on the study of the network and organization of many settlement over a particular area. He also assumed identical consumers distributed with uniform densities over an unbounded plain with equal accessibility from all points of the surrounding region and uniform purchasing power.

Christaller determined that a hexagonal market area would require the least average distance for movement to the centres by consumers. He then assumed a hierarchy of settlement with a distinct order of size. Each order contains a fixed number of K of the settlement. In Christaller's model, K is assumed to be seven (7) i.e., for each city, there will be six surrounding villages. The resulting distribution of this hierarchy of central place is a hexagonal pattern of high order cities with low order cities nested to these larger market. To assign different activities to these central places, he introduced the concept of threshold and range of goods. The threshold concept establishes the level below which an insufficient number of consumers exist to support a specified type of activity. The threshold refers to the minimum numbers of buyers or consumers that is required to make a commodity worthwhile. The concept of range of goods is the maximum distance which a buyer or a consumer will be willing to travel to obtain a particular commodity from the closest central place that provides that commodity.
CRITICISMS OF THE MODEL

The Christaller`s model has been criticized on the following grounds:
1. The model does not reflect the true spatial organization of settlements as can be observed in real life.
2. Christaller assumed an equal population distribution in his actual models and diagrams show contrary.
3. The model has been criticized as being static and not dynamic that nothing in place that allows for the development of central place over time.

However, these criticisms do not render the contribution of Christaller to central place useless. Despite not being comprehensively applicable to actual cities, central place theory was a significant advancement in explaining hierarchical development of settlement which has been foundational for the body of work on systems of cities.

LOSCH`S MODEL

The concept of central place was originally developed by a German geographer called Walter Christaller in (1933). However, the theory was thereafter modified by a German economist August Losch in 1954. Losch based his argument on the fact that Christallers model was too rigid. Christaller`s model delineates patterns where distribution of goods and accumulation of profit was entirely a function of transportation and location.

Losch`s modification however focused on creating an ideal milieu for consumers and maximizing consumers welfare so that the need to travel to receive goods was minimized and profits held at a constant level.
rather than being inflated. The model emphasizes profit maximization in its locational analysis. According to Losch, the best location of a firm lies where net profit is greater. (Net profit is the difference between sales income and production cost). Firms look to identify a zone of profitability. Losch`s model itself consist of superimposed hexagons in a pattern around a capital or central city. These hexagons show the land around industries in order to determine at which location the population will have the lowest cost. At the place of intersection of these hexagons, smaller locations could be built so as to maximize the profit earned by each company.

The major reason why Losch chose hexagon instead of a circle is because hexagons can tile a plain but circles cannot. Losch asserted that from any capital or large city, a cone emanates from it. The point where two cones meet forms the boundary where the population is divided and the plain is then tiled according to these intersections to show the region in which a central city can create profit. This model as described above would represent only one product or demand. Where there are multiple demands, more hexagonal fields can be created in similar way to illustrate the varying demands for a product.

ASSUMPTIONS OF THE MODEL

The model has the following assumptions:
1. There is an isotropic plain of flat land throughout the plain so no barrier would exist to hinder people’s movement across it.
2. There is a homogenous preference among people since people will always purchase goods from the nearest place possible.
3. That there is a hexagonal hinterland but reject even spread of population.
4. Consumers bear the burden of shipping in terms of cost.
5. That people act economically rationally.
6. That new production plants could enter market if profitable.

**CRITICISMS OF THE MODEL.**

The model has been criticized on the following grounds:

1. The hierarchical system would be distorted by the location of primary or manufacturing industry.
2. It has been criticized as being static and not dynamic.
3. The assumption that consumers will act rationally and patronize the nearest centre is not correct.
4. The model determines one superior center as most profitable; it may have been the same over a larger area.

From the above, one can say that August Losch postulated that there is one superior centre where all goods are produced. The size of the small centers increases with distance from the central place and those small centers tend to be located about half way in between larger ones. Losch opined that the size of the hexagon is not only related to a geographical center but also related to the goods produced. Thus, a particular center may have several hexagonal markets for its different products as transport cost is a function of distance, a particular industry X with lower cost transport will have a bigger hexagonal market area than Y given the same economics of scale.

**CONCLUSION.**

Both Christaller and Losch`s model agree that the triangular arrangement of production site or retail stores and hexagonal market areas represent an optimum for a single good under the assumption of
uniform densities on an unbounded plain with equal access in all direction.
Morphology and Functional Classifications of Towns

The morphology and functional classifications of towns

Morphology of Towns:
The internal structure and arrangement of towns differs widely from place to place. The differences arise because of differences in site, function, history of development as well as age of the town. The causes for development of towns are socio-cultural, economic and historical. In modern times, villages may develop into towns as a result of residential or sub-urban development but in past town and countryside were quite separate.

Morphology
The morphology can be studied from two viewpoints, arrangement of roads and buildings and arrangement of different population or functional zones within the town. These include “Trade Routes, Navigable Rivers, places of Transshipment, Mountain Crossing, River Estuary, Resource Site, Religious and Cultural Factors and the last is Defensive Sites.

Functional Classification of Towns:
The towns are classified based on their function they perform which varies across the disciplines, like in political science it refers to duties, so in geography it is synonymous with occupation. Functional classification of towns attempt to categories towns and cities according to their economic functions, identifying their roles within urban systems.

Administrative Towns: These towns are headquarters of administrative departments of central or state governments such as Moscow, Washington D.C. and Beijing. The main function is to administer the state, country or specific territory.

Defensive Towns: They are centres of military activities like city of Meerut and its cantonment.
**Cultural Towns:** These are divided into religious towns like Ayodhya, Mecca, educational towns like Oxford, Allahabad and towns performing entertainment functions like Stratford-on-Avon (birth place of William Shakespeare, England).

**Towns Based on Economic Activities:** They developed as trade centres and industrial agglomerations, like Winnipeg of Canada, Lahore, Agra, etc.

Resorts: They are known as recreational towns catering to recreation needs of people like Dehradun, Shimla, Aberdeen (Scotland) Guler (Uganda).
Concentric Zone theory- This is the I theory of structural generalization which is given by Chicago geographer in 1920. And it is published in 1923. In 1925 his I Book (Bergis) “The city” and II book “The growth of city” is having this theory. In 1929 he again published in book “urban areas.”

The main box of his book is agriculture concerned theory given by Vonthencen in 1926. His theory is applicable in the surrounding areas of the town. While of Bergis theory is applicable on the town only.

Acc to Bergis if -ine and + ine aspects remain salient then the urban development will be in the form of concentric ring. Acc to him the urban development is in radial form. As the radial development takes places there zone shifts towards outsides.

The internal structure of town is developed in 5 concentric zones.

1. C.B.D.- Central Business District, Bergis has shown 2 parts of C.B.D.
   a. Core region or down town or retail business district.
   b. Quter part or wholesale business district.
   c. It is also called as loop in Chicago.

2. Zone of Transition- This is the area of residential degradation slums are found here. This is area of vice. Here characteristics of two zones are connected.

3. Zones of Independent working men Houses- The pupils of second zones shifted from their place to 3rd zones. These are the residence of those people who are the labours so that they can easily go to their working place and so that there is no more expenditure spend in conveyance. In the two stories building the House owners and land lords resides upwards and the resides down wards.

4. Zones of better Residence- Middle class people lines here; single familiar mostly resides in these areas. All the persons doing middle work resides here. Conventional shops are developed in this zone. This is also called the „sub-commercial center”.
5. The commuter’s Zones- This is the high class residences in the outer part of the city. Industrialist lived in their areas.

Highly administrative persons lived here. These people tolerate the expenditure of conveyance due to healthy environment and open area.
These colony develop in the outer town in the form of suburban and satellite zones.

These are called as commuters because they cover a large distance to reach C.B.D. and again come from there to sleep.

**Characteristics**-
1. This is the trial of Bergis to give the structural development theory.
2. Generally it can be applied on all the towns.

**Criticism**-
1. Main criticizer is M.R. Dev who had made the land use map of New Heaven city. He studies the distribution pattern of social class. Acc to theory is neither applicable on new Heaven nor it is applicable at other places.
2. This theory had not considered the historical development of the town.
3. Main criticism is due to their hypothesis.
4. C.B.D. is in irregular shape instead of circular.
5. C.B.D. can be established at the main social sides and highways.
6. Industries are also established near H2O ways and railways.
7. Low class residence is found in industrial and transport areas.
8. First and second class residence is found in all type of residential area.
9. He had not considered the heavy industrialization.
10. Ideal radial pattern is not found.

**Conclusion**-
1. Generally there is not important of the criticism of geographers as they take it word to word.
2. He had given the theory at that time positive and negative factors silent.

3. The theories have important because it has 5 pioneers step.

Concentric Zone Model Ernest Burgess propounded the concentric zone theory in order to explain the structure and growth of city. The hypothesis of this theory is that cities grow and develop outwardly in concentric zones. In other words, the essence of the model is that as a city grows, it expands radically from its centre to different concentric circles or zones. Burgess offers a descriptive framework in which both aspects of human ecology - physical land use pattern and human relationships are implicit. Using Chicago as an example, Burgess viewed that as cities expand outwards, the interaction among people and their economic, social and political organisations also create radical expansion outward and form a series of concentric zones. The concentric model is based upon a process of invasion and succession about which you learnt in the previous unit. Invasion is a process which necessitates continual expansion of inner zones into outer zones, due to the natural 'aggression' of the migrant into the city. While succession occurs when an area becomes dominated by the activity invading that zone. There is competition in city among people for limited space. Only those can succeed who can afford best to pay and get the desirable location for their business and homes. Therefore, concentric zone theory reflects on going conflict between city dwellers and periphery villages. It also describes the process of concentration and segregation of social groups with the growth of city structure. According to this theoretical model there are five major concentric zones. These are as following:

1. Commercial centre
2. Zone of transition
3. Working class residence
4. Middle higher class residence
5. Commuter zone

![Burgess' concentric zone model](image)

**Figure 2.1** Burgess’ concentric zone model
Sectors Model
Following Burgess, Homer Hoyt, an economist, propounded an alternative, proposition of urban structure and its growth pattern in 1939. Through sectors model, Hoyt tried to overcome the weaknesses of the earlier theory. It was mainly based on residential rent pattern and impacts of transportation development. This theory is the result of an empirical study of 34 American cities, in which he observed that high rent areas are located in one or more sectors of the city. He prepared a map showing how rent changed by sectors irrespective of concentric circle. Generating from the maps of housing features and land uses pattern of cities, he analysed the impact of transportation recreation areas and other changes. Hoyt further provided factual evidence through his survey of Washington DC metropolitan area in 1954. Apart from North American cites the evidence from Latin American cities showed that the finest single family homes and apartments were located on one side of the city only, such as Guatemala city, Bogota, Lima La Paz, Quito, Santiago, Buenos Aires, Montevideo, Rio de Janerio, Sau Paulo, and Caracas. Further the main concentration of high-income group
families was found in the form of scattered clusters. He also illustrated similar observations from New York metropolitan area and Latin American cities as well.

**Figure 2.2 Hoyt’s sector model**
Multiple Nuclei Model

The third classical theory of internal structure of city is multiple nuclei model developed by Chauncy Harris and Edward L. Ullaman in 1954. The basic assumption of this theory is that "cities are not homocentric" but they rather have many minicentres which play a significant role in the development of a city. These minicentres originally developed independently with the specialised advantages that they offered or similar activities clustering in these areas. Multiple nuclei theory differs from the earlier theories, like sectors and concentric zone theories. It believes that city has not developed around a single centre or CBD but it has a group of many minicentres. However, the phases of development may be simultaneous or in different periods. The multiple nuclei type is further divided into ten major areas—central business, wholesale or light manufacturing, low income residential, medium income—residential, high income residential, heavy industry, outlying business, residential suburb, industrial suburb, commuters area. While these various parts of city are fairly clear when analyses of the social organisation of the city is made. It has developed through a natural process rather than a planned process.
Mann in 1965 tried to apply Burgess' concentric zone and Hoyt's sector model to three industrial towns in England Huddersfield, Nottingham and Sheffield. He assumed that because the prevailing wind direction from the southwest, the higher-class housing - would be in the southwestern part of the city, while industries would be located in the north east of the CBD. Some significant conclusion of his study are a as follows: The higher-class residences are not concentric of CBD but are located on one side of a few pockets of the city. Like Sector model, he observed that industries are found in sectors along main lines of communication. Further he called the lower class housings area 'the zone of older housing' whereas area of higher-class housings are relatively modern houses and situated away from industries and smoke. Unlike Burgess and Hoyt, he also describes the role of local governance in slum clearance and gentrification. As a result of this the emergences of large council estates protect the interest of working class1 Low income group in the city. Manns' study is different from the existing models, as his observation is based on European city which has its own historicity and social structure which is different from American cities. Secondly, he suggests that even - through a small sample we can generalize the fact. His model shows that variety of approaches is possible to the study of urban structures
Figure 2.3 Mann's model of a British city

- A Middle-class sector
- B Lower middle-class sector
- C Working-class sector (and main sector of council estates)
- D Industry and lowest working-class sector

1. CBD
2. Transitional zone
3. Zone of small terraced houses in Sectors C and D; larger by-law housing in Sector B; large old houses in Sector A
4. Post-1918 residential areas, with post-1945 housing on the periphery
5. Commuting-distance 'dormitory' towns
UNIT IV
ISSUES AND PLANNING

URBAN PROBLEMS:
ENVIRONMENTAL EFFECTS

The existence of urban heat islands has become a growing concern over the years. An urban heat island is formed when industrial and urban areas produce and retain heat. Much of the solar energy that reaches rural areas is consumed by evaporation of water from vegetation and soil. In cities, where there are less vegetation and exposed soil, most of the sun's energy is instead absorbed by buildings and asphalt; leading to higher surface temperatures. Vehicles, factories, and industrial and domestic heating and cooling units release even more heat. As a result, cities are often 1 to 3 °C (1.8 to 5.4 °F) warmer than surrounding landscapes. Impacts also include reducing soil moisture and a reduction in reabsorption of carbon dioxide emissions.

In his book Whole Earth Discipline, Stewart Brand argues that the effects of urbanization are primarily positive for the environment. First, the birth rate of new urban dwellers falls immediately to replacement rate and keeps falling, reducing environmental stresses caused by population growth. Secondly, emigration from rural areas reduces destructive subsistence farming techniques, such as improperly implemented slash and burn agriculture.

Urbanization may improve environmental quality as a result of numerous reasons. For instance, urbanization upsurges income levels which instigates the eco-friendly services sector and increases demand for green and environmentally compliant products. Furthermore, urbanization improves environmental eminence through superior
facilities and better-quality living standards in urban areas as compared to rural areas. Lastly, urbanization curbs pollution emissions by increasing R&D and innovations.

In the book "Carbon Zero: Imagining Cities that can save the planet", Alex Steffen also speaks of the environmental benefits of increasing the urbanization level.

In July 2013 a report issued by the United Nations Department of Economic and Social Affairs warned that with 2.4 billion more people by 2050, the amount of food produced will have to increase by 70%, straining food resources, especially in countries already facing food insecurity due to changing environmental conditions. The mix of changing environmental conditions and the growing population of urban regions, according to UN experts, will strain basic sanitation systems and health care, and potentially cause a humanitarian and environmental disaster.

**Water quality**

The occurrence of eutrophication in bodies of water is another effect large urban populations have on the environment. When rain occurs in these large cities, the rain filters down the pollutants such as CO2 and other greenhouse gases in the air onto the ground below. Then, those chemicals are washed directly into rivers, streams, and oceans, causing a decline in water quality and damaging marine ecosystems.

Eutrophication is a process which causes hypoxic water conditions and algal blooms that may be detrimental to the survival of aquatic life. Harmful algal blooms, which produce dangerous toxins, thrive in eutrophic environments that are also rich in nitrogen and phosphorus.[48] In these ideal conditions, they overtake surface water, making it difficult for other organisms to receive sunlight and nutrients. Overgrowth of algal blooms causes a decrease in overall water quality
and disrupts the natural balance of aquatic ecosystems. Furthermore, as algal blooms die, CO2 is produced, causing a more acidic environment, a process known as acidification.

The ocean's surface also has the ability to absorb CO2 from the earth's atmosphere as emissions increase with the rise in urbanization. In fact, it is reported that the ocean absorbs a quarter of the CO2 produced by humans. This has been useful to the environment by decreasing the harmful effects of greenhouse gases, but also further perpetuates acidification. Changes in pH inhibit the proper formation of calcium carbonate, a crucial component for many marine organisms to maintain shells or skeletons. This is especially true for many species of mollusks and coral. Regardless, some species have been able to instead adapt or thrive in a more acidic environment.

**Food waste**

Rapid growth of communities create new challenges in the developed world and one such challenge is an increase in food waste also known as urban food waste. Food waste is the disposal of food products that can no longer be used due to unused products, expiration, or spoilage. The increase of food waste can raise environmental concerns such as increase production of methane gases and attraction of disease vectors. Landfills are the third leading cause of the release of methane, causing a concern on its impact to our ozone and on the health of individuals. Accumulation of food waste causes increased fermentation, which increases the risk of rodent and bug migration. An increase in migration of disease vectors creates greater potential of disease spreading to humans.

**Habitat fragmentation**

Urbanization can have a large effect on biodiversity by causing a division of habitats and thereby alienation of species, a process known
Habitat fragmentation does not destroy the habitat, as seen in habitat loss, but rather breaks it apart with things like roads and railways. This change may affect a species' ability to sustain life by separating it from the environment in which it is able to easily access food, and find areas that they may hide from predation. With proper planning and management, fragmentation can be avoided by adding corridors that aid in the connection of areas and allow for easier movement around urbanized regions.

Depending on the various factors, such as level of urbanization, both increases and decreases in "species richness" can be seen. This means that urbanization may be detrimental to one species but also help facilitate the growth of others. In instances of housing and building development, many times vegetation is completely removed immediately in order to make it easier and less expensive for construction to occur, thereby obliterating any native species in that area. Other times, such as with birds, urbanization may allow for an increase in richness when organisms are able to adapt to the new environment. This can be seen in species that may find food while scavenging developed areas or vegetation that has been added after urbanization has occurred i.e. planted trees in city areas.

**URBAN POVERTY**

Urban poverty is, in a sense, an overflow of rural poverty. Because rural people in the low-income group find themselves 'unemployable' in the urban environment as a result of their deficient education and training, they continue to be poor. According to the Urban Management Programme of the UN Centre for Human Settlements (Habitat), urban poverty encompasses three main issues: lack of adequate employment, lack of appropriate urban services and insufficient social integration.
HEALTH AND SOCIAL EFFECTS

When cities don’t plan for increases in population it drives up house and land prices, creating rich (ghettos) and poor ghettos. "You get a very unequal society and that inequality is manifested where people live, in our neighborhoods, and it means there can be less capacity for empathy and less development for all society." — Jack Finegan, Urban Programme Specialist at UN-Habitat

In the developing world, urbanization does not translate into a significant increase in life expectancy. Rapid urbanization has led to increased mortality from non-communicable diseases associated with lifestyle, including cancer and heart disease. Differences in mortality from contagious diseases vary depending on the particular disease and location.

Urban health levels are on average better in comparison to rural areas. However, residents in poor urban areas such as slums and informal settlements suffer "disproportionately from disease, injury, premature death, and the combination of ill-health and poverty entrenches disadvantage over time." Many of the urban poor have difficulty accessing health services due to their inability to pay for them; so they resort to less qualified and unregulated providers.

While urbanization is associated with improvements in public hygiene, sanitation and access to health care, it also entails changes in occupational, dietary, and exercise patterns. It can have mixed effects on health patterns, alleviating some problems, and accentuating others.
THE URBAN TRANSPORT PROBLEM

The major facets of the urban transport problem are as follows:

1. Traffic movement and congestion. The primary function of urban transport is to provide mobility for people and goods within the city, but the efficiency with which this is achieved is reduced by congestion. The major cause of urban traffic congestion is the increasing number and use of vehicles on the roads. More specifically, it stems from the concentration of travel flows at certain times during the day, with the principal reason for the typical double-peak distribution of daily trips being the journey to and from work. Different parts of the city may experience traffic congestion at different times of the day, depending on the mix of traffic, but most large cities experience serious congestion in their central areas during peak hours. In central London average traffic speed fell from 12.9 mph (20.7 km/hr) in 1972 to 10.9 mph (17.6 km/hr) in 1990. This is close to the postulated equilibrium speed of 10 mph (16 km/hr) for peak-hour traffic in the city centre. According to Thomson (1977), motorists will tolerate speeds as low as this before they begin to avoid the area in large enough numbers to create equilibrium at that critical speed.

2. Crowding on public transport. In nearly every city the use of public transport is concentrated in the morning and evening rush hours. Whatever the volume of demand, there is invariably insufficient capacity to provide comfortable travel conditions at these times. During conditions of peak-hour loading, passengers are often subjected to lengthy queues at stops, crowding at termini, and excessively long periods of hot and claustrophobic travel in overcrowded vehicles. In Tokyo the metro rail system employs ‘pushers’ to ensure that passengers are forced into trains to allow the automatic doors to close.

3. Off-peak inadequacy of public transport. The difference between peak volume and offpeak usage of public transport means that operators face the financial problem of maintaining sufficient vehicles, plant and labour
necessary to provide a peak-hour service which is underused for the rest of the time. A usual response has been to reduce off-peak services, leading to inadequate, unreliable and often non-existent provision of public transport at certain times of the day.

4. **Difficulties for pedestrians.** Paradoxically, although a large number of trips in cities are made on foot, pedestrians are not often included in urban transportation studies. Pedestrians (and pedal cyclists) encounter two kinds of problem. The first is the problem of accessibility to facilities. The replacement of local outlets (e.g. shops, hospitals, etc.) by larger units serving wider catchment areas puts many urban activities beyond reach of the pedestrian. The second refers to the quality of the pedestrian environment, with footbridges and underpasses often inadequately cleaned and policed, and traffic noise and fumes affecting foot travellers most directly.

5. **Environmental impact.** Transport is a major source of air pollution in cities, with exhaust gases (carbon dioxide, carbon monoxide, nitrogen oxides, hydrocarbons) and Urban transportation other pollutants, such as lead and particulates, contributing to a range of health and environmental problems. Other traffic-induced environmental impacts include noise pollution, visual intrusion, the destruction of natural habitats and segregation of communities by transport routes.

6. **Accidents.** Road traffic accidents constitute a significant social problem, and the majority occur in urban and suburban areas. A minority of the victims is car occupants and a high proportion are pedestrians, cyclists and motor cyclists. Most transportation studies, however, regard road traffic accidents as an unfortunate offshoot of an urban transport system.

7. **Parking difficulties.** In most city centres, finding a place to park a car is difficult. In many cities parking is often seen, by drivers at least, as the major problem of urban transport. As we shall see later, since it is physically impossible for a large city to provide car parking space for all
who wish to enter the centre, restrictions apply. These may lead to illegal parking, which can impede the flow of traffic. Parking difficulties are different from other aspects of the urban transport problem, however, as they are often maintained deliberately by local authorities in an attempt to reduce other problems.

**HOUSING PROBLEMS**

Urbanization attracts people to cities and towns which lead to high population increase. With the increase in the number of people living in urban centers, there is continued scarcity of houses. This is due to insufficient expansion space for housing and public utilities, poverty, unemployment, and costly building materials which can only be afforded by few individuals.

**CRIME**

Historically, crime and urbanization have gone hand in hand. The simplest explanation is that areas with a higher population density are surrounded by greater availability of goods. Committing crimes in urbanized areas is also more feasible. Modernization has led to more crime as well, as the modern media has raised greater awareness of the income gap between the rich and the poor. This leads to feelings of deprivation, which in turn can lead to crime. In some regions where urbanization happens in wealthier areas, a rise in property crime and a decrease in violent crime are seen.

Data shows that there is an increase in crime in urbanized areas. Some factors include per capita income, income inequality, and overall population size. There is also a smaller association between unemployment rate, police expenditures and crime. The presence of crime also has the ability to produce more crime. These areas have less social cohesion and therefore less social control. This is evident in the
geographical regions that crime occurs in. As most crime tends to cluster in city centers, the further the distance from the center of the city, the lower the occurrence of crimes are.

Migration is also a factor that can increase crime in urbanized areas. People from one area are displaced and forced to move into an urbanized society. Here they are in a new environment with new norms and social values. This can lead to less social cohesion and more crime.

SLUM

A slum is a highly populated urban residential area consisting mostly of closely packed, decrepit housing units in a situation of deteriorated or incomplete infrastructure, inhabited primarily by impoverished persons. It is a part of the city where the housing quality is low quality and living conditions are poor. While slums differ in size and other characteristics, most lack reliable sanitation services, supply of clean water, reliable electricity, law enforcement, and other basic services. Slum residences vary from shanty houses to professionally built dwellings, which, because of poor-quality construction or provision of basic maintenance, have deteriorated.

Due to increasing urbanization of the general populace, slums became common in the 18th to late 20th centuries in the United States and Europe. Slums are still predominantly found in urban regions of developing countries, but are also still found in developed economies.

According to UN-Habitat, around 33% of the urban population in the developing world in 2012, or about 863 million people, lived in slums.[8] The proportion of urban population living in slums in 2012 was highest in Sub-Saharan Africa (62%), followed by Southern Asia (35%), Southeastern Asia (31%), Eastern Asia (28%), Western Asia (25%), Oceania (24%), Latin America (24%), the Caribbean (24%), and
North Africa (13%). Among individual countries, the proportion of urban residents living in slum areas in 2009 was highest in the Central African Republic (95.9%). Between 1990 and 2010, the percentage of people living in slums dropped, even as the total urban population increased.[8] The world's largest slum city is found in the Neza-Chalco-Ixtapaluca area, located in the State of Mexico.

Slums form and grow in different parts of the world for many different reasons. Causes include rapid rural-to-urban migration, economic stagnation and depression, high unemployment, poverty, informal economy, forced or manipulated ghettoization, poor planning, politics, natural disasters, and social conflicts. Strategies tried to reduce and transform slums in different countries, with varying degrees of success, include a combination of slum removal, slum relocation, slum upgrading, urban planning with citywide infrastructure development, and public housing.
NATIONAL URBAN POLICY (NUP)

1) Introduction : India is in the midst of a major urbanization boom. India’s level of urbanization is lower than its peer group of developing countries: China (45%), Indonesia (54%), Mexico (78%) and Brazil (87%). By 2030, India’s urban population is projected to increase to 600 million. The Union government is set to come up with India’s first National Urban Policy framework. Globally, around one-third of countries have a NUP in place.

2) Need for NUP

- To spell out the country’s plan for urbanisation.
- To outline and highlight the importance and objectives of cities.
- UN Habitat mandates that all member-nations should have such a policy.
- For leveraging urbanization to the fullest extent and with the greatest efficiency.
- For addressing India’s current urban distress.
- To build capacities at the state/urban local bodies level to prepare cities for future challenges.
- To focus on areas such as inclusive growth, infrastructure finance system and robust urban information system.
- To make cities and human settlements inclusive, safe, resilient and sustainable as per goal 11 of UN’s SDG.
- To streamline development and ensure that all urban missions are brought under a common platform.
- To deal with issues like slum prevention and regularization, access to land, basic services and infrastructure, urban mobility, urban energy requirements and job creation.
- To address this, India needs to develop its own national urban policy (NUP) for future growth of cities.
3) Significance / Results Expected

- A NUP will provide a framework for states, which would be encouraged to adopt a state version of this policy.
- It would encourage programmes and policies to be integrated and aim at operationalizing the spirit of the 74th Amendment.
- NUP would involve participation of all stakeholders.
- The policy will look at urban legislation, urban economy, and urban planning.
- Increases private and public investments in urban development and consequent improvement of cities’ productivity, inclusiveness and environmental conditions.
- Better coordination by national actors, as well as lower levels of government in all sectors.
- Environmentally friendly urban and national development.

4) The Paradigm Shift

- According to a draft note by UN-Habitat, India has moved from a ‘business-as-usual approach’ to paying systematic attention to urbanisation and its challenges.
- The paradigm changes it has brought while addressing the challenges of urbanisation are:
  Taking urbanisation as an opportunity rather than a challenge.
  Citizen-centric approach to align the development agenda of the cities with people’s priorities and needs.
  Cooperative federalism: Freedom and resources to states/urban local bodies (ULBs) to design and implement.
  Renewed focus on integrated planning through convergence and qualitative improvements.
• Commitment to environment sustainability.
• Focus on inclusive growth.
• Technology to enhance efficiency of services delivery.
• Shift from project-based approach to outcome-based approach.

5) **Concerns / Challenges**

• Indian cities face challenges in terms of deficits in infrastructure, governance and sustainability. • With rapid urbanization, these problems are going to aggravate, and can cumulatively pose a challenge to India’s growth trajectory.
• The poverty and social isolation of minority groups in cities.

6) **Way Forward**

• Need for a comprehensive framework that takes a holistic approach to the interrelated challenges that have an impact on the growth of cities.
• Sustainable urban development needs to be led by the central government working closely with state and local governments.
• Since majority of city-related issues are state subjects, states must take the lead in order to make cities vibrant economic centres.
• Promoting non-motorised and other innovative mobility solutions, utilise human capital infrastructure and inclusion for persons with disabilities.
• The provisions of the 74th Constitution Amendments Act should be implemented by the civic bodies in true spirit.
• The urban policies should contribute to achieve the goals of poverty alleviation and removal of unemployment and under-employment.
• Focus on infrastructure that leads to delivery of services to citizens
MASTER PLAN

A master plan is a dynamic long-term planning document that provides a conceptual layout to guide future growth and development. Master planning is about making the connection between buildings, social settings, and their surrounding environments. A master plan includes analysis, recommendations, and proposals for a site’s population, economy, housing, transportation, community facilities, and land use. It is based on public input, surveys, planning initiatives, existing development, physical characteristics, and social and economic conditions.

Master planning can assume some or all of these roles:

- Develop a phasing and implementation schedule and identify priorities for action
- Act as a framework for regeneration and attract private sector investment.
- Conceptualize and shape the three-dimensional urban environment.
- Define public, semiprivate, and private spaces and public amenities.
- Determine the mix of uses and their physical relationship.
- Engage the local community and act as builder of consensus.

As city regeneration initiatives are generally long-term propositions, it is important to consider the master plan as a dynamic document that can be altered based on changing project conditions over time. For example, in the case of the Santiago repopulation program detailed in this volume, the municipal master plan was modified 29 times during the implementation phase. These changes sought to either allow for more
density and height in some areas, or to restrict and lower the height of the buildings—including the definition of areas under patrimonial protection. This flexibility has been beneficial to the real estate sector, enabling increases in the number of floors and housing units per building.

Master plans can have an important role in determining the shape of the urban environment. If not well conceived, they can lead to problems in the future. For instance, one of the criticisms of Santiago’s master plan was that it was too flexible in setting standards for beautification and building volume design. Hence, the quality of these buildings in terms of architectural design and construction materials was considered one of the weaknesses of the repopulation program (see photograph). The residents also criticized the unpleasant contrast of the high tower buildings with the existing historic urban fabric, as well as the fact that the new towers are not well integrated within the traditional neighborhoods. All of these issues could have been addressed well in advance as part of the master plan.