CHAPTER 23

SPATIAL STRUCTURE

This chapter deals with the study of functional character, activity pattern, hierarchy of settlements and nodes, external development thrust, existing road network and Spatial Structure of Kannur Corporation area.

23.1 FUNCTIONAL CHARACTER

Functional character of a region is determined based on the population distribution within the region, average plot size and land use of that area. The major activity within the Corporation area decides its function. The ward may be rural if agriculture and allied activities are high, whereas urban, if secondary or tertiary sector activities are predominant. Based on this, the wards are classified as Urban, Semi Urban and Rural.

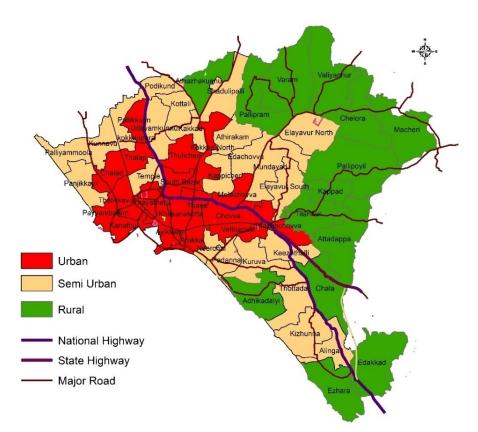


Figure.23.1 Functional Character of Kannur Corporation area

Functional character is derived from tool kit. In order to formulate the functional character, it includes the ward wise population, ward wise area and various land uses such as residential, commercial, industrial, agricultural, transportation, water bodies and vacant lands. Mainly, urban characters are observed in core town wards.

Table.23.1 List of wards and their functional character in Kannur Corporation area

Ward Name	Functional Character	Ward Name	Functional Character
Adhikadalyi	Rural	Macheri	Rural
Alingal	Semi	Melechovva	Urban
Arakkal	Urban	Mundayad	Semi
Athazhakunnu	Rural	Neerchal	Semi
Athirakam	Semi	Padanna	Semi
Attadappa	Rural	Pallikkunn	Urban
Ayikkara	Urban	Pallipoyil	Rural
Chala	Rural	Pallipram	Rural
Chalad	Urban	Palliyamoola	Semi
Chelora	Rural	Panjikkayil	Semi
Chovva	Urban	Payyambalam	Urban
Edachovva	Semi	Podikund	Semi
Edakkad	Rural	Shadulipalli	Semi
Elayavur North	Semi	South Bazar	Urban
Elayavur South	Semi	Temple	Semi
Ezhara	Rural	Thalap	Urban
Kakkad	Semi	Thalikkavu	Urban
Kakkad North	Urban	Thana	Urban
Kanathur	Urban	Thayatheru	Urban
Kappad	Rural	Thazhechovva	Urban
Kappicheri	Semi	Thottada	Semi
Keezhathalli	Semi	Thulicheri	Urban
Khasanakotta	Urban	Tilannur	Rural
Kizhunna	Semi	Udayamkunnu	Semi
kokkenpara	Semi	Valiyannur	Rural
Kottali	Semi	Varam	Rural
Kunnavu	Semi	Vettilapalli	Urban
Kuruva	Semi		

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Urban, Semi Urban and Rural are various functional characters observed in the Corporation area. The ward wise functional character is listed in Table.23.1 and it is Figure.23.1 represented in which indicates that it is clear that the majority of wards in the planning area are classified as Semi Urban (23) followed by Urban category (18). The eastern part of the Corporation area comes under rural category.

23.2 ACTIVITY PATTERN

Activity pattern is decided based on the existing land use and functional

character. Land uses are broadly divided into three; Urban, Secondary and Primary land use. Primary land includes agricultural land, use irrigation lands and water bodies whereas secondary land use includes residential and vacant Industries, public and semi-public, commercial, transportation etc. are considered in urban land use. Ward wise classification of major land use pattern in Kannur Corporation area is shown in Figure.23.2. From the figure, it is clear that the urban land use classification is concentrated in central wards and scattered along the major transportation network.

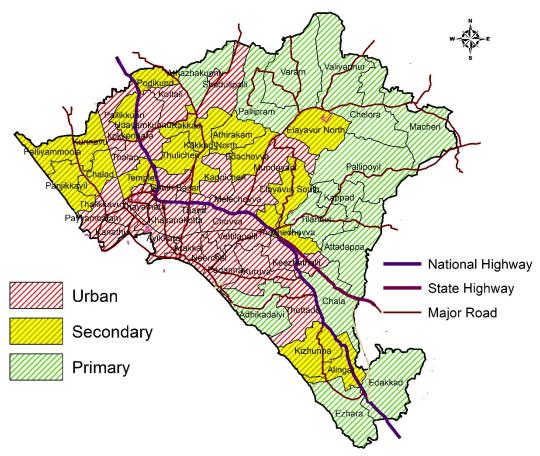


Figure.23.2 Ward wise classification of major land use pattern in Kannur Corporation area

Around these urban wards, secondary pattern is located. The remaining wards which are located along north-east and eastern periphery of the planning area come under primary land use category.

Derivation of the activity pattern of Kannur Corporation area by merging the major land use concentration with the functional character is given in Table.23.2. According to the table, the activity pattern of the Corporation area is derived and is shown in Figure.23.3. The derived activity pattern shows much similarity with land use concentration of the planning area.

Table.23.2 Derivation of Activity
Pattern

Sl. No.	Combination of Land Use Concentration and Functional Character Land use Functional Pattern Character		Activity Pattern
1	Primary	Rural	Primary
2	Secondary	Rural	Primary
3	Primary	Semi urban	Secondar y
4	Secondary	Semi urban	Secondar
5	Secondary	Urban	Urban
6	Urban	Semi urban	Urban
7	Urban	Urban	Urban

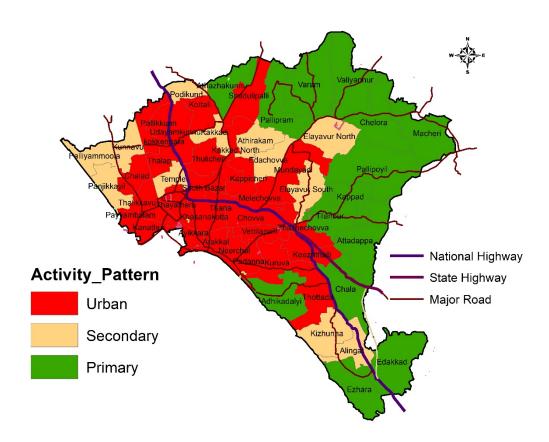


Figure.23.3 Activity Pattern of Kannur Corporation area

The wards which are concentrated along NH66 and other major roads reflect urban activity pattern. The wards which surround the urban activity wards show the secondary activity. All the remaining wards show the primary activity and these wards are located along the north eastern and eastern side of the city.

23.3 HIERARCHY OF SETTLEMENTS

One of the uniqueness of spatial planning is the identification of the hierarchy of various settlements of a region based on certain factors like the

trend of physical development, location importance; rural or urban, administrative status of settlements, trend of urbanization etc. Cumulative functional index (CFI) method is used to find out the hierarchy of settlement. The CFI of a settlement is assessed based on the number and presence of the facilities in the settlement such as educational facilities, health facilities, market Facilities in agriculture and allied sector, physical infrastructure facility and transportation facility.

As per District Urbanization Report of Kannur District 2011, the old Kannur Corporation is categorized as 1st order settlement in the district.

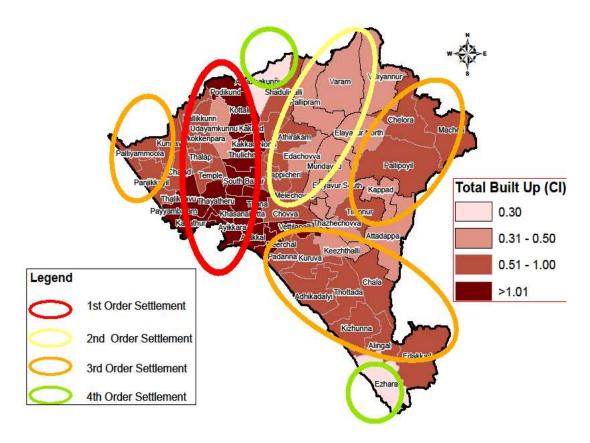


Figure.23.4 Hierarchy of Settlements

23.3.1 EXISTING HIERARCHY OF SETTLEMENTS

The existing Hierarchy settlement in Kannur Corporation area is analysed based on the urban settlement of the planning area. In order to identify the urban settlement. the built up land use concentration is analysed. The hierarchy of settlement is broadly classified into four namely, settlement. 2nd1storder order settlement, 3rd order settlement and 4th order settlement.

The area with the highest built up concentration (value greater than 1) is categorized as 1st order settlement. This region is seen in the western side of the planning area and located along National Highway side. In this region, transportation, trade and commerce,

education, health and basic amenities are largely concentrated. Similarly, 2nd and 3rd order settlement are seen adjacent to 1st order settlement where built up concentration is moderate (between 0.3 to 1). The remaining portion of the planning area is categorized as 3rd order settlement where concentration of primary activities is high. The Figure 23.4 shows the hierarchy of settlement of Kannur Corporation area.

23.4 EXISTING HIERARCHY OF NODES

Hierarchy of nodes in Kannur municipal Corporation area is categorized into four, 1st order, 2nd order, 3rd order and 4th order nodes based on their significance.

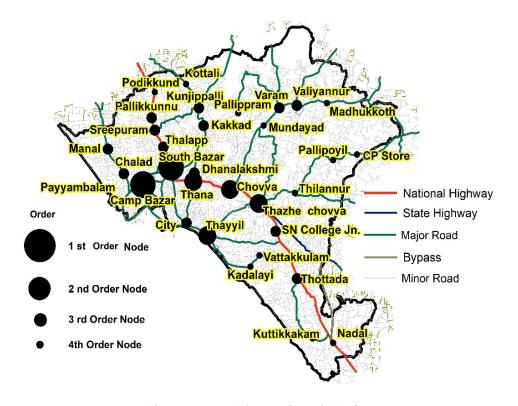


Figure.23.5 Hierarchy of Nodes

The Figure 23.5 shows the hierarchy of nodes in planning area. Caltex, New bus stand area, Plazza and Railway station area are marked as 1st order nodes. Thana, Mele Chovva, Thazhe Chovva and City junctions categorized 2nd order node. Remaining nodes are come under third and fourth order. The Figure.23.5 shows the hierarchy of nodes in the planning area.

23.5 EXTERNAL DEVELOPMENT THRUST

The major external development thrusts in Kannur Corporation area are Pariyaram Medical College, Ezhimala Naval Academy, Azheekkal Ferry, Parassinikadavu Muthappan Temple, Kannur Military Contonment and Kannur International Airport. Location of external development thrusts in the planning area is shown in Figure.23.6.

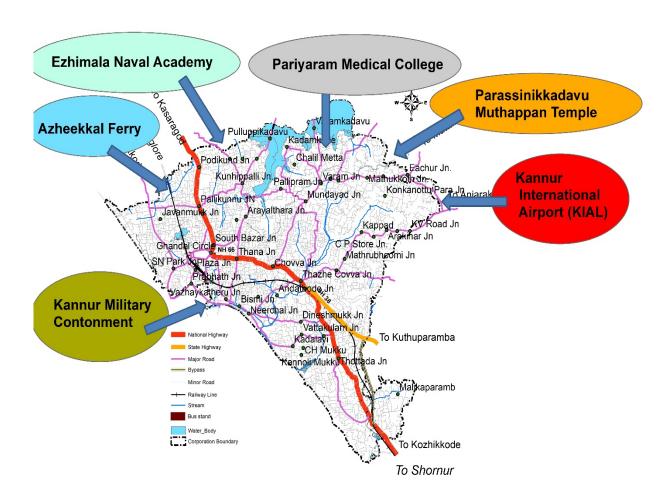


Figure.23.6 External Development Thrust of Kannur Corporation area

23.6 EXISTING ROAD NETWORK

The spatial structure of any city is highly influenced by its accessibility or road connectivity of the city. Roads and Railway are the existing mode of transportation facilities within the planning area. Road connectivity is the major mode of transportation. National Highway 66 and State Highway 38 are the major road Kannur Municipal network in Corporation. NH66 passes through the CBD of the planning area in South North direction by dividing the entire

area into two parts, Coastal area and non-coastal area. SH38 starts from Kannur Municipal Corporation area and it connects Kannur to Kuttiyadi. The major District Roads in the planning area includes Thazhe Chovva-Anjarakkadi Road, Kannur-Melechovva-Mattannur Road, Kakkad Road. Azhikode Road. ThekkilepeedikaThayyil Road. Figure.23.7 shows the existing Road network of the planning area.

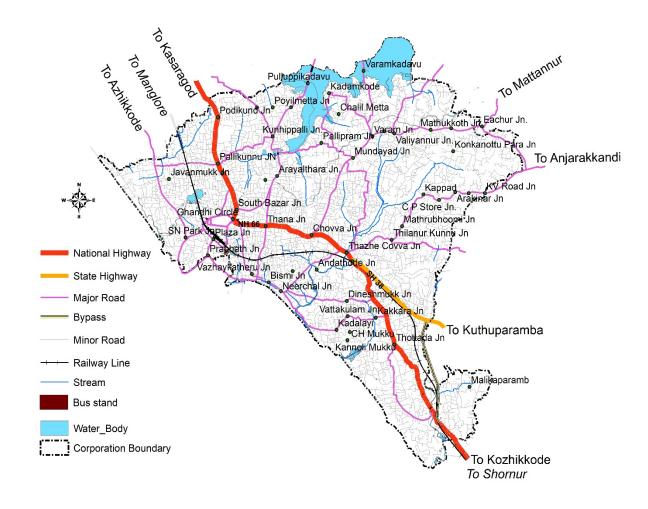


Figure.23.7 Existing Road Network

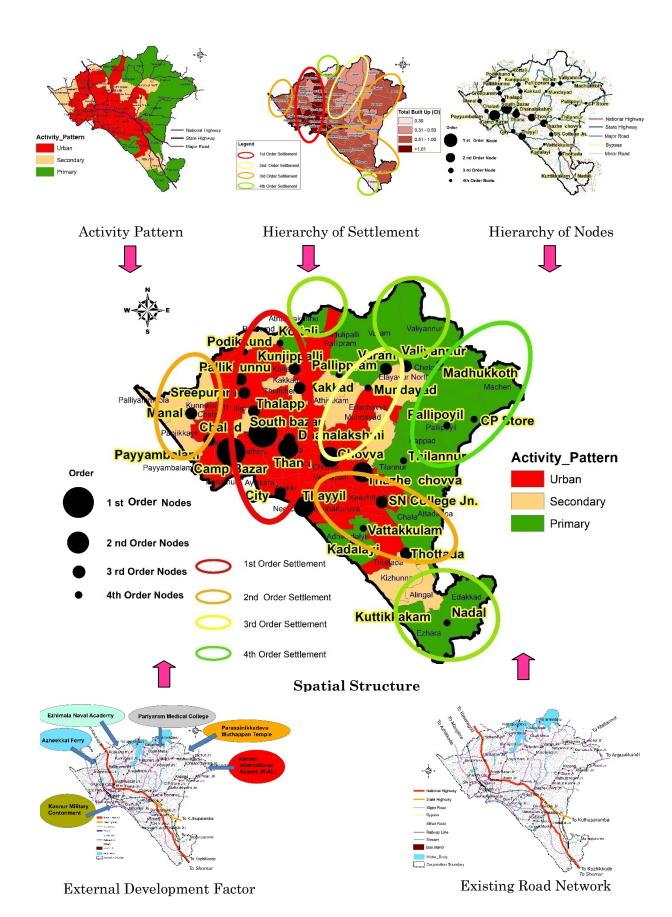


Figure.23.8 Formulation of Existing Spatial Structure

23.7 EXISTING SPATIAL STRUCTURE

Existing Spatial Structure of planning area is derived from the analysis of various parameters such as Activity pattern, Hierarchy Settlements, of nodes, Hierarchy External Development Thrust and Existing Road Network. Formulation of Spatial of Kannur structure Corporation is shown area Figure.23.8. From that, it is clear that the wards located at CBD area and situated along NH 66 show the urban character. 2nd and 3rd order settlements are seen in wards showing secondary activity whereas 4th order

settlements are in wards with primary activity.

23.8 INFERENCE

Spatial Structure is derived from detailed analysis of various parameters like activity pattern, functional character, road network, hierarchy of settlements and nodes. Urban character reflects along the major transportation corridor especially along NH66 where the 1st order settlement and nodes identified. Urban Rural Continuum is observed from CBD to the peripheral portion of the Corporation area.