Chapter – 11
SPATIAL STRUCTURE

In this chapter, the spatial pattern of activities, hierarchy of settlement, hierarchy of nodes and road network evolving out of the settlement analysis are sinergically linked to obtain the spatial structure.

11.1 SPATIAL STRUCTURE OF THE DISTRICT

In settlement analysis, the following aspects pertaining to settlements of the district were studied

1. Land use distribution
2. Population distribution
3. Occupational structure
4. Functional character
5. Hierarchy of settlements
6. Hierarchy of nodes
7. Urban profile

Spatial structure of the district is derived mainly from the Activity pattern, Hierarchy of settlements and Hierarchy of nodes and Connectivity. *(Fig 11.1)*

11.1.1 Hierarchy of settlements

The study of hierarchy of settlement is explained in the chapter 7. As per the settlement analysis, it is found that the settlements in the District can be grouped into four hierarchies. The future hierarchy of settlement of the district evolved shows that Thrissur Municipal Corporation is the highest order settlement in the District. Chalakkudy Municipal Council, Irinjalakkuda Municipal Council, Kunnamkulam Municipal Council are the existing and Chelakkara and Mattathur are the proposed second order settlements. Kodungallur Municipal Council, Guruvayur Municipal Council and Grama Panchayats of Alagappanagar, Pananchery, Venkitangu, Valappad and Wadakkanchery are the proposed third order settlements. In general there is one first order settlement, 5 second order settlements and 7 third order settlements in the District as shown in *figure 11.2.*

11.1.2 Hierarchy of Nodes

The study of hierarchy of node shows that, obviously Thrissur round and surrounding area is the 1st order node of the District acting as a commercial centre.
serving the entire District. Based on the service area of the existing second order nodes, nine extra nodes are proposed as second order and based on the service area of the existing third order nodes, ten extra nodes are proposed as third order for serving the entire area effectively by considering population distribution, centrality and existing status of the nodes. Finally there are 20 suggested second order nodes and 43 suggested third order nodes. The suggested hierarchy of nodes is shown in fig 11.3

11.1.3 ACTIVITY PATTERN

Activity pattern within the district is derived based on the land use concentration pattern, functional character and future urban profile. The activity pattern of urban, primary sector, secondary sector, Agriculture and allied activity, forest activity are analyzed based on the above data. The three aspects namely Land use concentration pattern, Functional Charactor and Urban Profile which cover all the aspects taken for the study of the settlements are combined in order to evolve the activity pattern (functional character is determined based on population distribution and land use, Urban profile is derived taking into account of occupational structure and hierarchy of settlements, the land use concentration pattern is studied based on the land use analysis) and real ground scenario is also taking into consideration.

By superimposing the five activity pattern, the final activity pattern of the district is emerging out. And it is shown in fig 11.4.

11.1.4 CONNECTIVITY

Modified proposed road network contains mainly five types of proposed roads. They are as follows.

1. Ring Road around Thrissur Municipal Corporation
2. Radial Roads (1st order Road) – Connecting 1st order settlement with second order settlement.
3. Ring Road connecting second orders.
4. Road connecting ring road with other major nodes.
Fig: 11.3: Suggested hierarchy of nodes

Fig: 11.4: Activity Pattern of the District
The modified proposed road network is shown in fig. 11.5

11.1.5 Spatial Structure of the Region (Thrissur & Surrounding Three Districts).

The development of Thrissur district also affected by the activity pattern of neighboring Districts especially due to presence of Ernakulam, the trade and commercial centre of the State. The activity pattern of Thrissur district with adjacent district is shown in figure 11.6. From the figure it is clear that secondary and tertiary activities are more predominant in coastal areas of Thrissur and Ernakulum districts. Primary related activity is more predominated in the eastern region of the district due to the effect of activity pattern of Palakkad district where primary activity is more concentrated at the boundary between Thrissur and Palakkad.

Urban activity is predominating in the Methala, Eriyad, and Edavilngu Grama Panchayats and Kodungallur Muncipal Council, it may be due to the effect of activity pattern of Ernakulum on Thrissur district. The study also reveals the transportation corridor based developments which are shown in table 11.1
### Table 11.1: Transportation corridor development based on regional spatial structure

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Name of transportation Corridor</th>
<th>Major Transportation Network</th>
<th>Major Activity as per spatial structure</th>
<th>Suspected generators of development momentum</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Chavakkadu-Guruvayoor-Kodungallor–Methala-Paravoor-Ernakulam</td>
<td>NH-17</td>
<td>Tertiary supported by Fisheries, SSI, and HHI</td>
<td>Ernakulam Municipal Corporation and Surrounding Municipal Council, Kodungalloor (MC) &amp; Surrounding Urban Agglomeration</td>
</tr>
<tr>
<td>4</td>
<td>Thrissur – Wadakkanchery – Shornur</td>
<td>SH 22</td>
<td>Agriculture and allied activities, SSI and HH industry</td>
<td>Thrissur Municipal Corporation, Shornur (MC) &amp; Surrounding Urban Agglomeration</td>
</tr>
<tr>
<td>5</td>
<td>Thrissur – Kunnamkulam-Kuttippuram</td>
<td>SH69</td>
<td>Tertiary activities supported by secondary activities</td>
<td>Thrissur Municipal Corporation, Kunnamkulam (MC) Shornur (MC) &amp; Kuttippuram &amp; Surrounding Urban Agglomeration</td>
</tr>
</tbody>
</table>
Fig: 11.6 Activity pattern of Thrissur district with adjacent district
11.1.4 SPATIAL STRUCTURE

The spatial structure of the district is obtained by overlaying the activity pattern, road network and hierarchy of settlements derived. The spatial structure so obtained is shown in figure 11.7.

11.2 INFERENCES

The activity pattern of urban, primary sector, secondary sector, agriculture and allied activity, forest activity are studied.

Based on the hierarchy of settlements, hierarchy of nodes, modified proposed transportation network and the activity pattern of various parameters, the spatial structure of the district is evolved.