

TREND OF URBANISATION IN ERNAKULAM WITH RESPECT TO KERALA

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Abstract: *Urbanisation is a global spatial phenomenon. As per United Nations Population Division, more than half of the world population lives in urban areas. There are significant regional variations in urban experiences. It is in this context that, the urbanisation trends of Kerala, with its unique settlement pattern and diverse socio economic characteristics, stands out as a question before urban Geographers. This paper tries to bring forth the unique urban pattern of Ernakulam, a district of Kerala, in relation to that of the state. Ernakulam witnessed greater degree of urbanisation during 2001 – 2011 periods. The urban growth is accentuated by increasing number of small and medium towns, which points to the spatial dispersal of urban amenities in Kerala. The urban – rural ratio of Ernakulam is 213.19, which indicates that the possibility of a total urbanisation of the district is not too far-off. The study identified that Kochi with its emerging IT, transport, industrial, commercial and entertainment sector acts as a growth pole for the urbanisation of Ernakulam as well as central Kerala.*

Key words: Degree of Urbanisation, Urban-Rural Ratio, Rural-Urban Continuum

Introduction

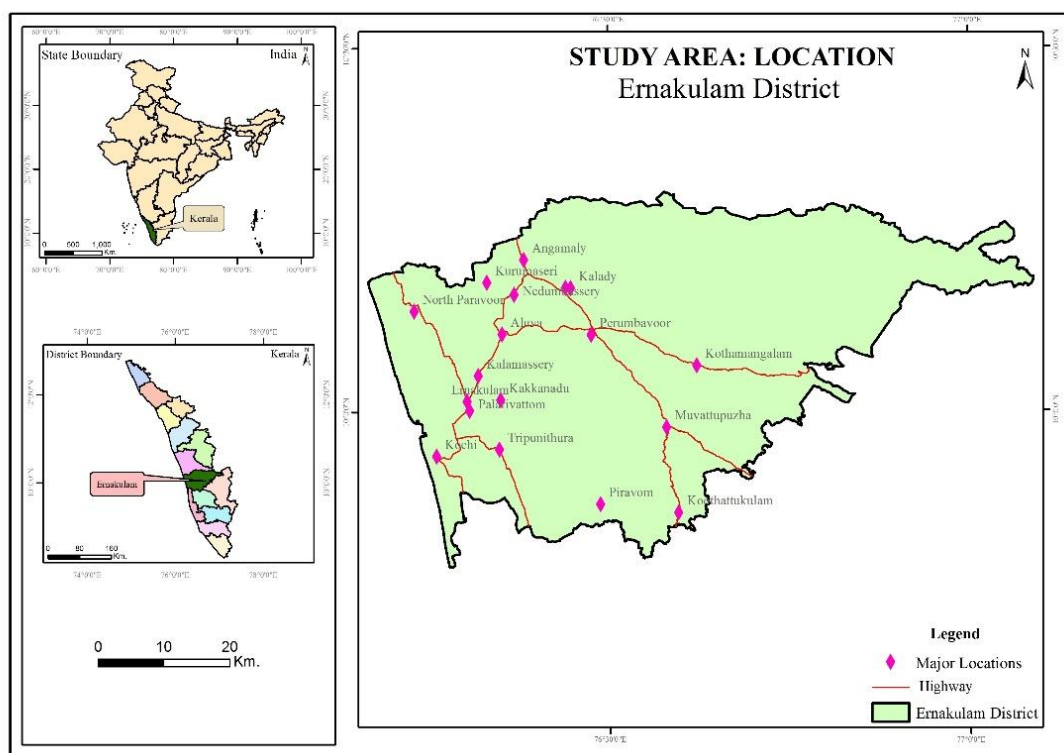
Urbanisation is a spatial phenomenon involving accumulation of population, structural transformation and socio-psychological change affecting both people and places (Siddhartha and Mukherjee, 2016). It can also be defined as the spatial concentration of population and non-farm economic activities. It is a long term process which reflects spatially and temporally. This process of becoming rural to urban takes place in varied pace and patterns in different regions. The study of urbanisation occupies paramount importance in the developmental studies of any area. Urbanisation is a global spatial phenomenon. As per United Nations Population Division, more than half of the world population lives in urban areas. Rampant and uncontrolled urbanisation leads to many positive as well as negative consequences in economy, environment and society. So monitoring and understanding the trend of urbanisation in a timely manner is crucial to any development plan. India is at “accelerating stage in the process of urbanisation” (Kumar and Rai, 2014). A proper understanding of urban dynamics in a diverse country like India can be accomplished only with a regional study. It is in this context that, the urbanisation trends of Kerala, with its unique settlement pattern and diverse socio economic characteristics, stands out as a question before urban Geographers.

The urbanisation experiences of Kerala are different from the rest of India. Kerala recorded rapid urbanisation recently. The spatial manifestation of urban growth in Kerala is also very distinct from the remaining parts of the country. The socio – economic conditions and “better diffusion of urban features over space” has “led to a neither rural nor urban” spatial pattern in Kerala (Sreekumar, 1990). It is hard to demarcate between rural and urban areas of Kerala. Among the districts, Ernakulam with 68 percent of urban population is the most urbanised. Hence, a study of various aspects urbanisation of the state with special emphasis on Ernakulam seems quite relevant. This paper tries to unfold the unique urban pattern of Ernakulam, a district of Kerala, in relation to that of the state. The study uses urban growth rate, rural growth rate, Urban – Rural ratio and growth rate of new urban centres as tools to unwind the process, trend and degree of Urbanisation in the study area.

Study area

The paper discusses the urbanisation pattern of Ernakulam, a south Indian district in the state of Kerala. The district covers an area of 3063 sq.km and supports a total population of 3282388. It comprises 7 taluks and 124 villages. It extends from 9° 42' 30" N to 10° 18' N latitudes and 76° 12' E to 76 ° 36' E longitudes. The district constitutes 7.89 percent of the total area of Kerala and ranks the third highly populated district in the state. Ernakulam has a tropical humid climate with an annual rainfall varying between 250 cm to 360 cm (Natural Resources Data book, Kerala State Land Use Board, 2012). The physiographic divisions of the district comprises of an extensive coastal plain in the West, a midland of rolling topography with dissected lateritic plateaus and very gentle slope and a highland region with general elevation rising above 70 meter from mean sea level in the east. The district is drained by two rivers namely, Periyar and Muvattupuzha and a network of canals and backwaters. All the villages of the district are electrified and it uses up the major share of power produced in the state (Natural Resource Data book, Kerala State Land Use Board, 2012). In 1990, Ernakulam became the first fully literate district in the whole country of India. The district has a good network of transportation and communication. Besides, it houses the Cochin port, Cochin International Airport at Nedumbassery, National Highways, and National Waterway: 3, and the Kochi Metro Rail network. Ernakulam is popularly known as the 'commercial capital of Kerala'. The availability of power supply, skilled labour, transportation network, the coastline and the port has paved the way for industrial growth in the district. The location of the selected area of study is shown in figure 01.

Figure 01: 1 Location Map - Ernakulam



Objectives

This paper attempts to examine the growth, pattern and trend of urbanisation in Ernakulam in relation to that of Kerala for a period from 1901–2011. The specific objectives include:

- To compare the volume and trend of urbanisation in Ernakulam and Kerala for the period 1901–2011.
- To examine the recent trend in the emergence of new urban centres.
- To find out the degree of urbanisation attained by the district of Ernakulam from 1901 to 2011.

Materials and Methods

As the paper highlights demographic characteristics, the study is based on Census data of various years supplemented by District Urbanisation Report 2011, issued by Department of Town and Country Planning and Economic Review Report published by State Planning Board. For comparing the volume and trend of urbanisation of Ernakulam and the state of Kerala, the decadal urban population growth rate for the period 1901–2011 was computed. The decadal growth in number of towns for the period 1991–2011 was also taken into account and represented using bar diagram to show the astounding increase in medium and small towns. The degree of urbanisation of Ernakulam for the period 1901 - 2011 was measured using indices such as percent urban, percent rural and urban – rural ratio.

$$\text{Urban Percent} = (\text{Urban Population}/\text{Total Population}) * 100$$

$$\text{Rural Percent} = (\text{Rural Population}/\text{Total Population}) * 100$$

$$\text{Urban – Rural Ratio} = (\text{Urban Population}/\text{Rural Population}) * 100$$

Later, the results are expressed with the help of tables and diagrams to discuss the urban trends of the study area.

Results and Discussions

Urbanisation of Kerala shows its own peculiarities from the rest of India. The lack of marked distinction between rural and urban areas is a salient feature of urbanisation in Kerala. This can be attributed to the spatial pattern of settlements existing in the state. Kerala exhibits a continuous spread of settlements rather than those separated with open lands or fields (Economic Review, State Planning Board, 2016). This congested pattern is clearly visible along transport nodes and networks. This unique spatial form projects most parts of Kerala as an urban centre in it. Ernakulam is the most urbanised (68.07 percent) district of Kerala (Census of India, 2011). It is, thus interesting to study the volume and trend of urbanisation of Ernakulam with respect to Kerala. There are several methods to study urban growth and trends. But demographic parameters occupy the prime position in any urban study. According to Bocquier and Costa (2015), “urban transition is the spatial manifestation of changing relationships between demographic and economic systems”.

Comparative Population Growth Trend of Kerala and Ernakulam

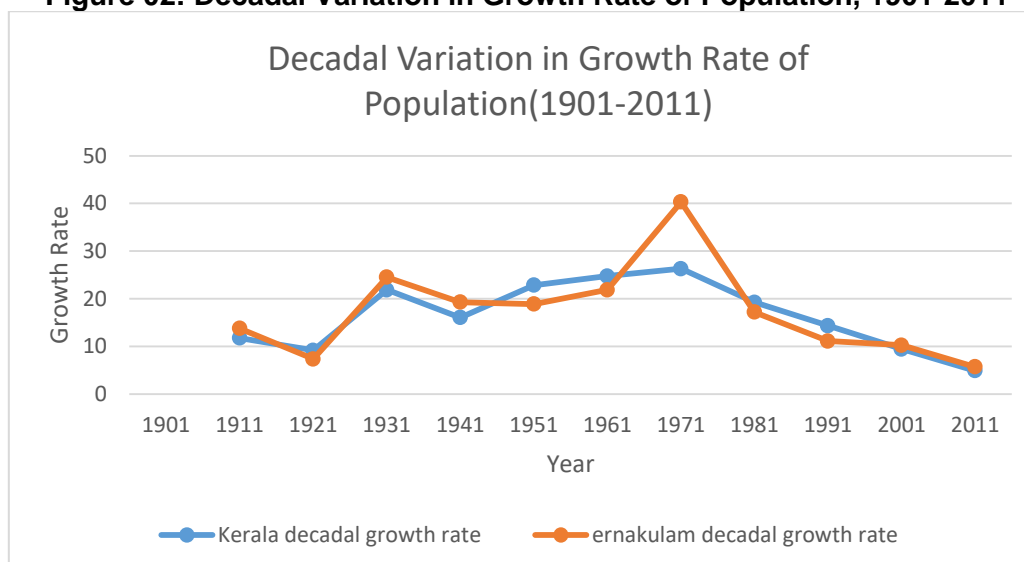
The table: 1 shows the comparative statistics of total population in the state of Kerala and Ernakulam district from 1901 to 2011 census. Even though Kerala experiences a gradual rise and fall of population throughout the last century, the population growth of Ernakulam shows a fluctuating tendency and an abrupt decrease after the 1970s. Generally, the population growth is on a declining trend. The fall in the growth rate of Kerala after 1991 is due to the population policies and family planning schemes implemented by Government of Kerala, besides the state’s achievements in education and health care sectors.

Table: 1 Decadal Variation in Population (1901-2011)

Year	Kerala		Ernakulam	
	Total Population	Decadal Growth Rate	Total Population	Decadal Growth Rate
1901	6396262	----	646261	
1911	7147673	+11.75	735297	13.78
1921	7802127	+9.16	789343	7.35
1931	9507050	+21.85	982769	24.5
1941	11031541	+16.04	1172335	19.29
1951	13549118	+22.82	1393730	18.88
1961	16903715	+24.76	1698575	21.87
1971	21347375	+26.29	2383178	40.3
1981	25453680	+19.24	2535294	17.18
1991	29098518	+14.32	2817236	11.12
2001	31841374	+9.43	3105798	10.24
2011	33406061	4.91	3282388	5.69

Source: Census of India, Various Issues.

Figure 02: Decadal Variation in Growth Rate of Population, 1901-2011



The abrupt changes in population growth rate of Ernakulam during 1971-81 period is due to major jurisdictional alterations undergone by the district. Idukki district was formed in 1972 by annexing Thodupuzha, a moderate densely populated taluk from Ernakulam district. Besides, Kothamangalam taluk was newly demarcated in Ernakulam during this period.

Volume and Trend of Urbanisation: Kerala and Ernakulam

Table 02 exhibits the volume and growth of urban populace in both the state of Kerala and Ernakulam district. In the state, the major shift in urban growth happened in the last decade (2001-2011), where the urban diaspora has almost doubled (47.7 percent) from the previous census year (25.97 percent in 2001). Ernakulam registered about 43 percent increase in urban population in 2011 than from 2001.

Table 02: Comparison on trend of urbanisation: Kerala and Ernakulam

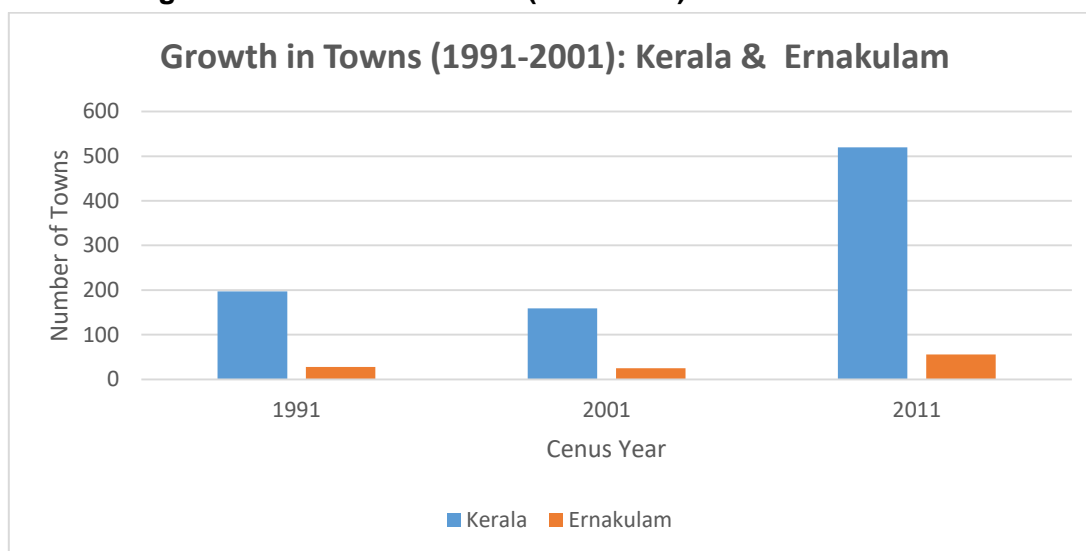
Year	Urban Population Kerala	Percentage Urban Population Kerala	Urban Population Ernakulam	Percentage Urban Population Ernakulam
1901	454499	7.11	74198	11.48
1911	5,24,661	7.34	87353	11.88
1921	6,80,900	8.73	96492	12.22
1931	9,16,330	9.64	150579	15.32
1941	11,95,550	10.84	189809	16.19
1951	18,25,832	13.48	261923	18.79
1961	25,54,141	15.11	395310	23.27
1971	34,66,449	16.24	636010	26.69
1981	47,71,275	18.74	1002892	39.56
1991	76,80,294	26.39	1373177	48.74
2001	82,66,925	25.97	1477085	47.56
2011	1,59,34,926	47.7	2234363	68.07

Source: Census of India, 2011

Growth in the Number of Towns: Comparison

Another significant characteristic of urbanisation in Kerala is the growth in the number of towns. Generally, urbanisation is defined as the progressive concentration of population in urban areas (Davis, 1965). However, in the context of Kerala, urbanisation cannot be viewed as the product of accumulation of population in its major existing cities alone, which is called the incremental component of urbanisation (Sreekumar, 1990). But the unique Kerala pattern reveals that it is mainly due to increase in the number of new urban centres (extensional component) as well as due to urbanisation of the periphery of existing urban centre, which is also termed as 'urban sprawl' (Economic Review, State Planning Board, 2016). This is clearly evident from the figure 03 shown below.

Figure 03: Growth in Towns (1991-2001): Kerala & Ernakulam



Kerala set a shocking record of about 227 percent increase in urban centres (520) in 2011 census from the previous census (159 in 2001). The same trend is also seen in Ernakulam, though in moderate numbers. Here, the number of towns doubled from 25 in 2001 to 56 in 2011. A slight decrease in urban centres is also observed during 1991 to 2001, that is, from 197 to 159. This was because of declassification of 42 towns in 2001 census and merging of 16 census towns in Trissur, Kollam and Thiruvananthapuram corporations. At the same time, 18 towns were newly identified. The alarming rise in urban centres recently, points to the unique spatial pattern of settlements and the settlement behaviour of the people. It is inferred that people tends to avoid congested metro cities and prefer to reside in peripheries and in small and medium towns. A fairly well-developed transport network, presence of education, health care and other basic amenities in every small towns of Kerala led to this scattered settlement pattern in the state. This is the reason why a rural – urban polarisation is absent in Kerala paving way to a rural – urban continuum. Rural – Urban Continuum is a situation where “emerging spatial form is neither rural nor urban “, (Sreekumar, 1990). According to Chattopadhyay (1995), “settlements of Kerala do not have any distinct core, nor do the villages have any marked nodality”. The rural to urban boundaries in Kerala seem to be “more imaginary than real. This kind of settlement pattern is called as Rural –Urban continuum (Firoz, 2014).

Process of Urbanisation: Ernakulam district

The figure 04 depicts the process of urbanisation in Ernakulam district. It is evident that during 2001–2011, the graph of urban growth shows a precipitous increase, while total population is on a steady rise. For the first time, the urban population of Ernakulam constituted the lion’s share (68.07 percent) of the total people and thus became the most urbanised state in Kerala. In 2001 census period, this position was held by Kannur district with 50 percent of urban population.

Degree of Urbanisation: Ernakulam

The degree of urbanisation refers to the relative number of people who live in urban areas (Datta, 2006). The variables used in measuring the degree or the level of urbanisation are Urban Percent [(urban population/total population)*100], rural percent [(rural population/total population)*100] and urban – rural ratio [(urban population/rural population)*100]. The urban – rural (U/R) ratio ranges from 0 to infinity, i.e., $0 < U/R < \infty$. When the entire people are rural dwellers, then U/R ratio becomes zero. When the urban population equals the total population, then the U/R ratio tends to infinity. The degree of urbanisation of Ernakulam is showed in table: 3. It is clear that the urban – rural ratio took a dramatic turn after 2001. This is represented graphically in figure 05.

Figure 04: Process of Urbanisation in Ernakulam district

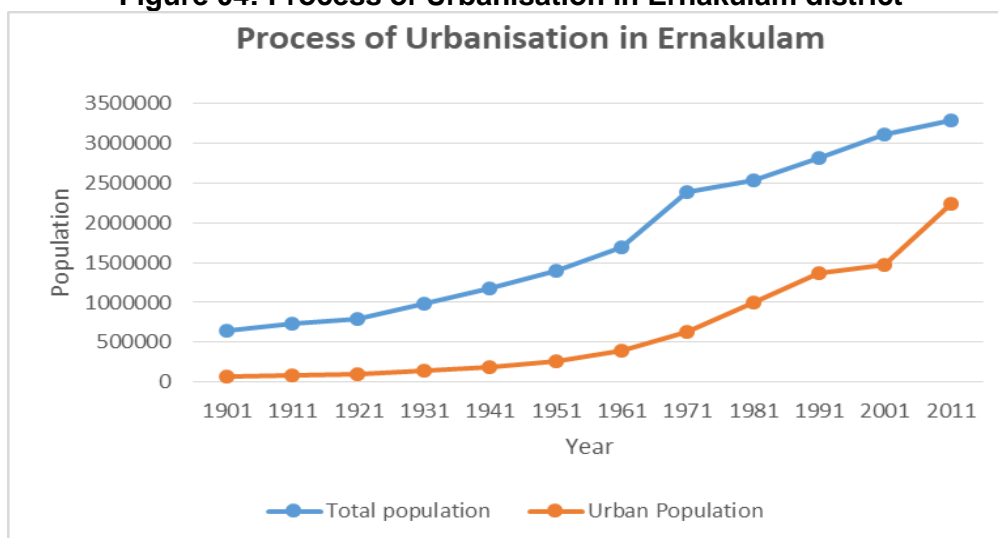
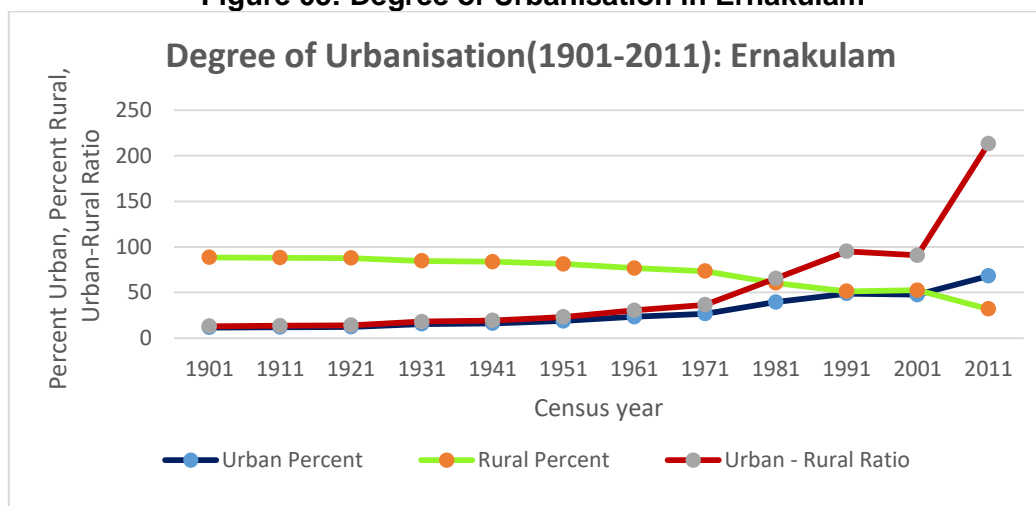


Table 03: Degree of Urbanisation in Ernakulam, 1901-2011

Year	Urban Percent	Rural Percent	Urban - Rural Ratio
1901	11.48	88.52	12.97
1911	11.88	88.12	13.48
1921	12.22	87.78	13.92
1931	15.32	84.68	18.09
1941	16.19	83.81	19.32
1951	18.79	81.21	23.14
1961	23.27	76.73	30.33
1971	26.69	73.31	36.41
1981	39.56	60.44	65.45
1991	48.74	51.26	95.08
2001	47.56	52.44	90.69
2011	68.07	31.93	213.19

Source: Calculated by author using various census data

Figure 05: Degree of Urbanisation in Ernakulam



The urban – rural ratio represents the number of urbanites per each rural person within a unit of area. The U/R ratio for Ernakulam in 2011 is around 213, which implies that for every 100 rural persons, there are 213 urbanites in the district. This high ratio indicates that Ernakulam is fast heading towards a complete urbanisation. Many factors can be cited as the reason for this remarkable growth of urbanisation in the district. These factors can be categorised into historical factors and recent factors, that is, after 2001. Historically, the

district's development gained a lot from the strategic position of Kochi port in the Western coast of India. With the development of the port in post-colonial period, Kochi rose to prominence as a centre of trade, commerce and many industries. Thus Ernakulam came to be known as the commercial capital of Kerala. Kochi grew at an accelerated pace than any other urban centres of the state, which in turn, the urban transformation of the whole district. However, rather than acting as a magnet that attracts population into the inner city, Kochi Urban Agglomeration(UA) expands spatially "by annexing adjacent small towns and peripheral areas into its sphere of influence" (Aleyamma M P, 2010). Kalamassery, Eloor and Aluva are some of the industrial centres in the district.

After 2001, the district experienced a surge in the degree of urbanisation. Construction boom in Ernakulam started during the previous decade, especially increase in vertical structures, that is, high rise buildings and apartments (Aleyamma M P, 2010). During this period, small and medium towns of the district like Perumbavoor, Kalady, Aluva and Angamali became the preferred destination of interstate migrant workers. This has altered the demographic structure of the district. The major in-migrant influx into the district started after 2000, when Kochi emerged as an important hub of IT, particularly after the establishment of Info Park at Kakkanad in 2004. This has resulted in age selective migration of young and educated group into the district. In addition to these, many other factors like, the opening of international container trans-shipment terminal at Vallarpadam, new transport modes like airport, metro rail, water metro, new business centres like shopping malls, renovation of heritage centres and boost in entertainment sector like tourism and media in the recent decade also gave impetus to the rapid urbanisation of the district.

This rapid urban growth leads to many positive as well as negative consequences. Along with economic growth, regional development, rise in employment opportunities and diffusion of infrastructure facilities, the hasty urbanisation of an entire district will also create many undesirable effects which shall not be overlooked. There will be critical scarcity of land for future developments which will be reflected in the rising land value of the area. Gradually, only high class affluent community can afford to settle in the district forcing the middle class and marginalised community to migrate from the district, paving way for gentrification. The proliferation of impervious concrete structures over the natural land cover can result into grave situations like acute scarcity of drinking water, ground water depletion and increased flood vulnerability. The repercussions of the great August deluge of 2018, that shook entire Kerala, in the highly inhabited areas of Aluva and Kochi is a lesson that Kerala should never fail to remember. Reclamation of wetlands and cultivable land in the name of green field construction activities will ultimately result in food scarcity. The disproportionate increase of motor vehicles to the road density is the main reason of traffic congestion. Like any other towns in the world, the question of urban sewage and waste disposal is a serious concern in Ernakulam too. According to the State Pollution Control Board action plan (2010), there are 83 red category industries in Kochi Metropolitan area, of which, 95 percent are situated at Eloor – Edayar and Ambalamugal industrial cluster alone. Around 260 million litres of trade effluents reach the backwaters of Kochi per day. All these after effects validate that unchecked urbanisation have far reaching and long term negative consequences. Therefore, timely uncompromising urban planning is the need of the hour.

Conclusion

Urban growth pattern of Kerala shows some distinguishable features. Kerala witnesses unprecedented urbanisation since 2001. The urban inhabitants has almost doubled (47.7 percent) in the state of Kerala during the period 2001-2011. Simultaneously, Ernakulam registered 43 percent in growth rate in urban population during 2001-11. The Kerala pattern of urban growth discloses that urbanisation is the outcome of extensional components such as emergence of new urban centres and urbanisation of peripheries of existing town. This is evident from the 227 percent increase in urban centres in 2011 census from that of 2001. In 2011, with 68.07 percent urban populace, Ernakulam became the most urbanised district of Kerala. The Urban – Rural Ratio of Ernakulam unveils that for every 100 rural people, there are 213 urbanites in the district. Both historical and recent factors can be attributed to this surge in urban growth. Historical reasons include ancient trade, propinquity of a natural harbour, European colonial trade interests, and the development of Kochi port. Moreover,

recent developments like post-independence plan measures, high literacy rate, construction boom, establishment of International Container Terminal, Airport, Mobility Hub, Metro Rail, Info Park, Export Processing Zone, Industrial Estates, blooming of entertainment and media sector and commercial centres like malls etc. have favoured the fast urbanisation of Ernakulam.

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