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## Spatial pattern of distribution of population in Kerala population 2011: A district wise dissection

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### Abstract

The distribution of individuals worldwide is known as the population. The unequal distribution of the population based on a number of different causes. The term "population distribution" also refers to the spatial pattern created by factors such as population dispersion, agglomeration formation, linear spread, etc. Both densely populated and sparsely populated areas exist. Climate, landforms, topography, soil, energy and mineral resources, accessibility-such as proximity to coastlines, natural harbours, navigable rivers and canals, cultural factors, political boundaries, restrictions on immigration and trade, government policies, types of economic activities, technology, including types of farming and transportation facilities, social organisation, and last but not least, demographic factors like age distribution-are the main factors affecting population distribution. The major causes of the decline in population in some locations have been unfavourable physical circumstances and a lack of viable livelihood options. Perhaps the most significant geographic factor affecting population dispersal is the climate. Population distribution is influenced by a number of social, demographic, economic, political, and historical factors in addition to physical ones.

**Keywords:** Distribution, climate, population

### Introduction

The distributional pattern of the population is one of the significant parameters for as demographic characteristics of the population geography. This demographic attribute has a vital significant in regional planning and development, in terms of socio-economic and administrative planning of a territory. The spatial distribution of the population, determine the distribution of spatial distribution of basic amenities and the facilities and the health services in accordance with the spatial distribution of the population in an area. Further the spatial distribution of the population, health services, infrastructural facilities, transport and communication development of an area.

### Study Area

The Kerala state is wedged between the Western Ghats and the Lakshadweep Sea. Located between the latitudes 8°18' and 12°48' in the north and 74°52' and 77°22' in the east. Kerala has a climate of humid tropical rainforest with occasional cyclones. The state's width ranges from 11 to 121 kilometres, and it includes a 590-kilometer coast. Geographically, Kerala can be split into three climatically diverse regions: the western lowlands, which are coastal plains, the central midlands, which are rolling hills, and the eastern highlands, which are rocky and cool mountainous terrain.

The district wise share of population of Kerala state is tabulated as follows:

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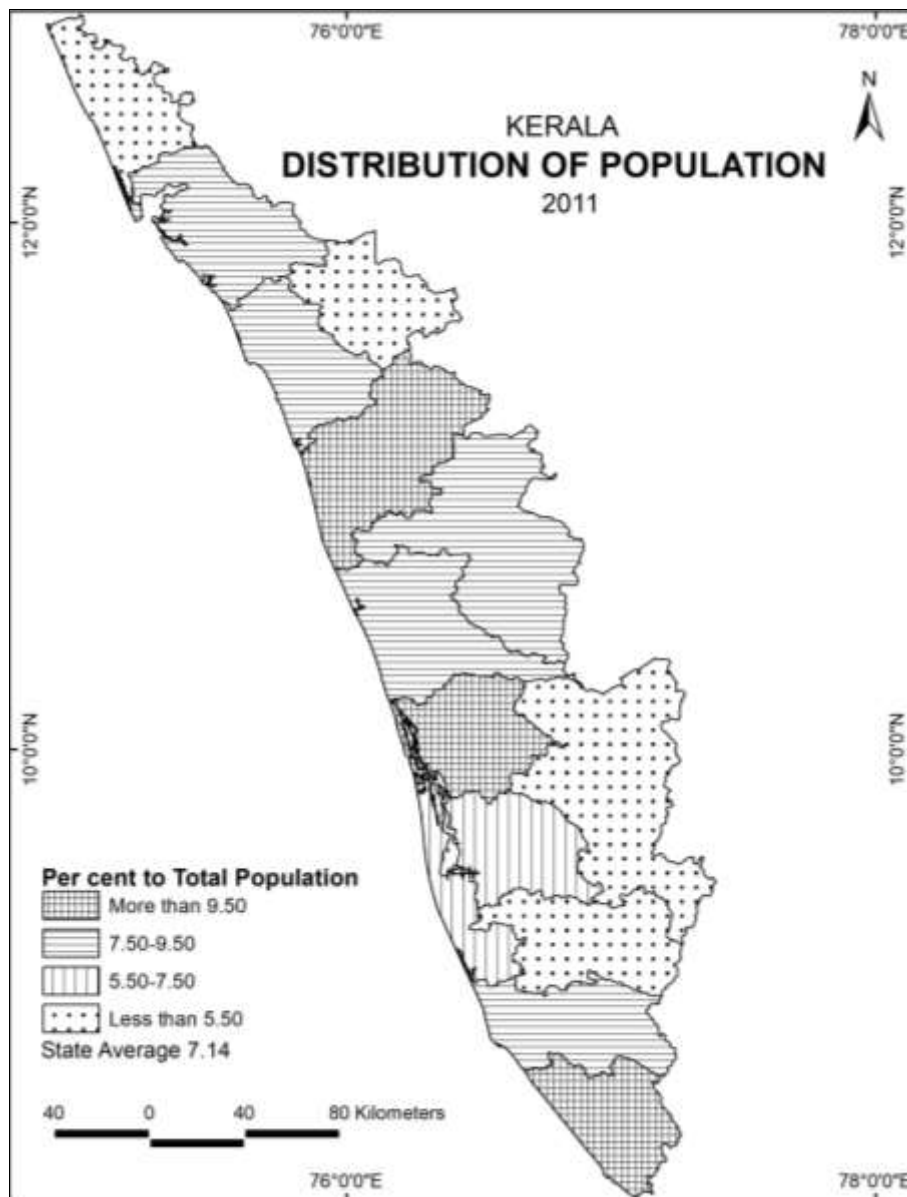
**Table 1:** District wise Distribution of Population of Kerala 2011

District/State	Population	Percent to Total Population of State
<b>Kerala</b>	<b>33406060</b>	<b>100.00</b>
Malappuram	4112920	12.32
Thiruvananthapuram	3301427	9.88
Ernakulam	3282388	9.83
Thrissur	3121200	9.34
Kozhikode	3086293	9.24
Palakkad	2809934	8.41
Kollam	2635375	7.89
Kannur	2523003	7.55
Alappuzha	2127789	6.37
Kottayam	1974551	5.91
Kasaragod	1307375	3.91
Pathanamthitta	1197412	3.58
Idukki	1108974	3.32
Wayanad	817420	2.45

**Source:** Census of India (2011) <sup>[1]</sup>, Primary Census Abstract, Kerala, Series-7, Directorate of Census Operations, Kerala.

**Note:** Districts have been arranged in descending order of population percentage range.  
The district wise distributional pattern of the share of the

population is also displayed in a map 1 which is shown as follows:

**Map 1:** Kerala Distribution of Population 2011

Keeping in view the tabulated figures of the district wise population numbers which shows a descending order of the population numbers (Census, 2011) <sup>[1]</sup> in the above-mentioned map-1 indicates a significant regional disparity in the district wise share of population numbers to the state. It is quite obvious from the tabulated figures and the map-1 which shows that the maximum share of the district wise share belonged to first category (over 9.50) percent (Very high % of population) are the districts which include Malapuram, Thiruvananthapuram, and Ernakulam which have above the state average. In the second category, which

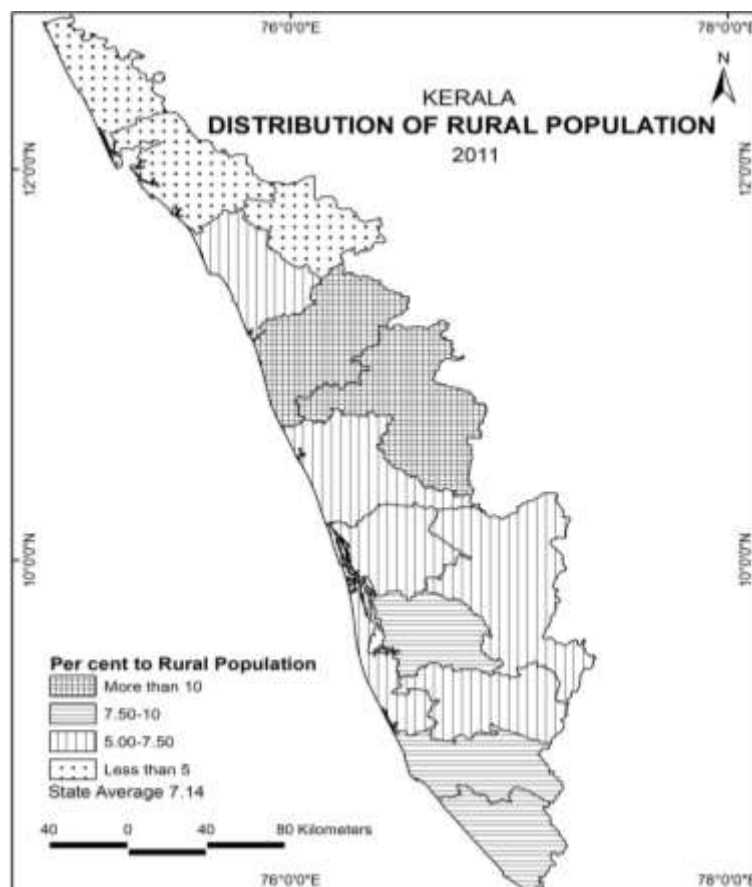
include the percentage between 5.50 to 7.50% (High %) have five districts which include the districts such as Kannur, Kozhikode, Palakkad, Thrissur, and Kottayam which are mostly below of state average, i.e. 7.14 percent. Lastly, there are four districts, which include the Kasaragod, Wayanad, Idukki, and Pathanamthitta which have less than 5.50 (Low level of share of percent population) to the state. Further, the district wise distributional share of the rural population in accordance with 2011 census, tabulated as follows:

**Table 2:** District wise Distribution of Share of Rural Population to state, 2011

District/State	Population	Percent to Total Population of State
<b>Kerala</b>	<b>17471135</b>	<b>100.00</b>
Malappuram	2295709	13.14
Palakkad	2133124	12.21
Thiruvananthapuram	1529831	8.76
Kollam	1448217	8.29
Kottayam	1409158	8.06
Pathanamthitta	1065799	6.10
Idukki	1056929	6.05
Ernakulam	1048025	6.00
Thrissur	1024794	5.87
Kozhikode	1013721	5.80
Alappuzha	979643	5.61
Kannur	882017	5.05
Kasaragod	798328	4.57
Wayanad	785840	4.49

**Source:** Census of India (2011) <sup>[1]</sup>, Primary Census Abstract, Kerala, Series-7, Directorate of Census Operations, Kerala.

**Note:** Districts have been arranged in descending order of population share to the state share in terms of percentage which is shown in the map 2, as follows:



**Map 2:** Kerala Distribution of Rural Population 2011

Keeping in view the tabulated figures (Table:2) and the map:2, it is quite obvious that the majority of the rural population of the Kerala is concentrated in the middle located districts, rather than the end located districts of Kerala. In the northern Kerala, the rural population is relatively sparsely populated, as compared with the southern part of the state which is discussed as follows:

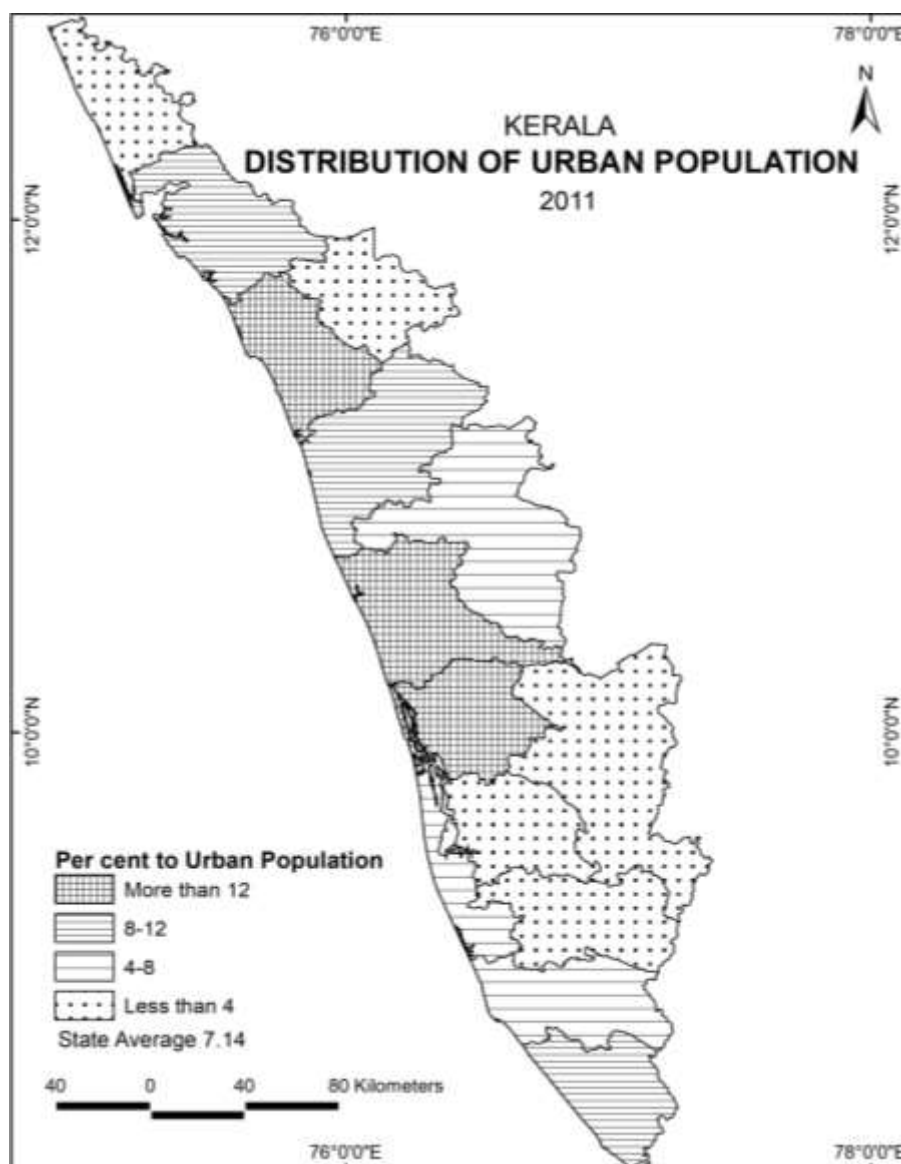
The district wise distributional pattern of the rural population in the Kerala state, shows that maximum share of the rural population which ranges from more than 10 percent, (Very high %) of the rural population which have two districts, namely Malapuram and Pallakad which have maximum share of rural population. With regarding to second category of share of the rural population, it is obvious from the tabulated figures which shows the percentage of rural population from 7.50 to 10 percent, which include Kollam, Thiruvananthapuram and Kottayam districts of Kerala. With regarding to third category of share of the rural population, it is obvious from the tabulated figures which shows the percentage of rural population from 5.00 to 7.50 percent, which include Khozikod, Thrissue, Ernakulam, Idduki and Pathanathita districts; whereas, there are 3 districts are above state average and two are blow state average figure of the rural population to the state. Further,

the district wise distribution of the urban population of the Kerala state is tabulated as follows:

**Table 3:** District wise Distribution of Share of Urban Population to state Kerala, (2011)

District/State	Population	Percent to Total Population of State
Kerala	15934926	100.00
Ernakulam	2234363	14.01
Thrissur	2096406	13.16
Kozhikode	2072572	13.01
Malappuram	1817211	11.4
Thiruvananthapuram	1771596	11.12
Kannur	1640986	10.30
Kollam	1187158	7.45
Alappuzha	1148146	7.21
Palakkad	676810	4.24
Kottayam	565393	3.55
Kasaragod	509047	3.19
Pathanamthitta	131613	0.83
Idukki	52045	0.33
Wayanad	31580	0.20

**Source:** Census of India (2011) <sup>[1]</sup>, Primary Census Abstract, Kerala, Series-7, Directorate of Census Operations, Kerala



**Map 3:** Kerala Distribution of Urban Population 2011

All these district wise distribution of share of urban population to the Kerala state is shown in a map (Map: 3) as above:

The district wise distributional pattern of the urban population in the Kerala state shows that maximum share of the urban population which ranges from more than 12 percent (Very high) have three districts, namely Kozhikode, Thrissur and Ernakulam which have maximum share of urban population. With regarding to second category of share of the urban population, it is obvious from the tabulated figures which shows the percentage of urban population from 8 to 12 percent (High level) which include Kannur, Mallapuram and Thiruvananthapuram districts of Kerala. With regarding to third category of share of the rural population, it is obvious from the tabulated figures which shows the percentage of rural population from 4 to 8 percent (Medium level of the share) which include the, Palakkad, Alappuzha and Kollam districts of Kerala where all the districts are below the average figure of the share of the urban population of Kerala state. Lastly, there are 5 districts which have low level of the urban population which is below 4 percent (Low level of share of urban population) include the districts which include Kasaragod, Wayaad, Idduki, Kottayam and Pathanamthitta.

### Conclusion

In the present study, the spatial distribution of the physiographic and topographical attributes of the Kerala state and the regional character of the hinterland of the different ports, located in the Kerala state have a considerable impacts on the size and space of the population of the district and its spatial share and distribution of the rural and the urban population of a district in the state. However, the study shows a peculiar relationship between the size of the urban population of a specific district in relation to its rural population with its varied density and distributional aspects of the other demographic attributes.

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