

Growth and Trend of Urbanisation in Sikkim: An Analysis

¹Debalina Roy and ^{*2}Susanta Das

¹M.Phil. Student, Department of Geography and Applied Geography, University of North Bengal

²Assistant Professor, Department of Geography, Mirik College, West Bengal

ABSTRACT

Nearly half of the population lives in urban areas in the global scenario. But India and other developing countries were below the average worldwide. Urban areas seem to constitute a big part of the region's economy as they include most large businesses, indicating global economic integration. This study explores Sikkim's urbanisation level and pattern. This research is based on secondary data. It was a meso level analysis. Sikkim is a hill state with some of the country's hardest terrain. Thus, with approximately 47.11 per cent (2019) of land protected under trees, the number of habitable land falls further. Diverse indices, such as urban development levels or the degree of urbanisation, decadal rates of urbanisation growth, urbanisation rates, contribution of urban growth to total growth, pace of urban development, rank size rule etc. were examined for both the level and trend of the urbanisation process. The study finds that the urbanisation level in the study area is poor. Only one district's urbanisation is good and some districts are steadily expanding.


Keywords: *Pace of Urbanization, Rate of Urbanization, Urbanization. Transition*

Article Publication

Published Online: 15-May-2021


*Author's Correspondence


Susanta Das

 Assistant Professor, Mirik College, West Bengal

 susantadas.geo@gmail.com

© 2021 The Authors. Published by *Research Review Journals*

This is an  open access article under the

CC BY-NC-ND license 
(<https://creativecommons.org/licenses/by-nc-nd/4.0/>)

1. Introduction

Sikkim is an isolated state. The study area consists of four districts and nine towns. The subdivisions are also divided into 400 blocks of revenues and 51 forest blocks. Since urbanisation in Sikkim is a comparatively recent phenomenon, there are only 9 towns, of which only Gangtok, the capital, is a town of class I category, while the rest is in class IV, V and VI category. Sikkim, a nesting small and beautiful Himalayan state, is an untainted state bordered on three sides by Tibet, Bhutan and Nepal on the international boundaries, North-east, West and East respectively and the Darjeeling district of West Bengal, respectively.

Urbanisation is a phenomenon that affects the population, economic change and socio-cultural change. The term urban growth was used to describe the transition processes from predominantly rural to mainly urban centres. A steady concentration of people and activities to towns are the main aspects of urbanisation. Urbanisation is often considered to be a synonym for urban expansion. Demographically, urbanisation reflects an increase in the urban population over one year period in comparison to the overall population. The degree of urbanisation varies between the various locations. Spatial differences on urbanisation correlate with demographic phenomena, structural social change and behavioural urbanisation. The urbanisation process, as defined in 1964 by Riesman, is the overall process of change and its consequences, when a society is transformed from an agricultural to an industrial economy and a small homogenous to a broad, heterogeneous mass. Consequently, many developmental efforts are concentrated mainly in urban areas, where migration from towns to towns has been very strong. In contemporary urban studies, the space configuration and dynamics of urban growth are essential subjects of study. Various studies have answered the questions covering a number of topics. This transformation initially involves the open space construction between the central business district and its outskirts.

Urbanization refers to the diffusion into rural hinterland of the influence of urban growth poles. Urbanization is a phase that moves to towns, converts their primary activities into secondary/tertiary/quaternary activities in towns. Until 1961, only one city Gangtok existed, but there were eight cities in 1981. The rapid rise in population density in 2011 by 86 people per square kilometre

compared to 45 people per square kilometre in 1981 shows that land resources are costly. Urbanization has become a popular trait of everywhere. Its growth is reflective in terms of social-economic life. Industry and transportation expansion has helped the cities expand. Geometric growth and the quantity of rural-urban migration from the neighbouring states and countries are directly driving pressure. In this paper, the trends and patterns of urbanisation and various evolving factors of Sikkim's urbanisation have been discussed.

2. Objectives

- (i) To analyse the urbanisation patterns in different major towns of Sikkim.
- (ii) To study the development of the towns.
- (iii) To examine the town's rank size rule.

3. Study Area

Sikkim is considered as the research area for the purpose of this study. In North-East India, Sikkim is a hilly small region. The state is bounded by the north by Tibet; east by Bhutan; south by western Bengal and west by Nepal. Sikkim ranges from $88^{\circ} 00' 58''$ E to $88^{\circ} 55' 25''$ E longitudes and $27^{\circ} 4' 46''$ N to $28^{\circ} 7' 48''$ N latitudes. Sikkim has four districts- East Sikkim, North Sikkim, South Sikkim and West Sikkim. The district capitals are Gangtok, Mangan, Namchi and Gyalshing respectively. These four districts are further divided into sixteen sub divisions; Pakyong, Rongli, Rangpo and Gangtok are the subdivisions of East district. Soreng, Yuksom, Gyalshing and Dentam are the subdivisions of the West district. Chungthang, Dzongu, Kabi and Mangan are the subdivisions of the North district. Ravongla, Jorethang, Namchi and Yangyang are the subdivisions of the South district. (www.sikkimtourism.gov.in). Most of the state's residents live in rural areas i.e. 75.03%, (Census 2011).

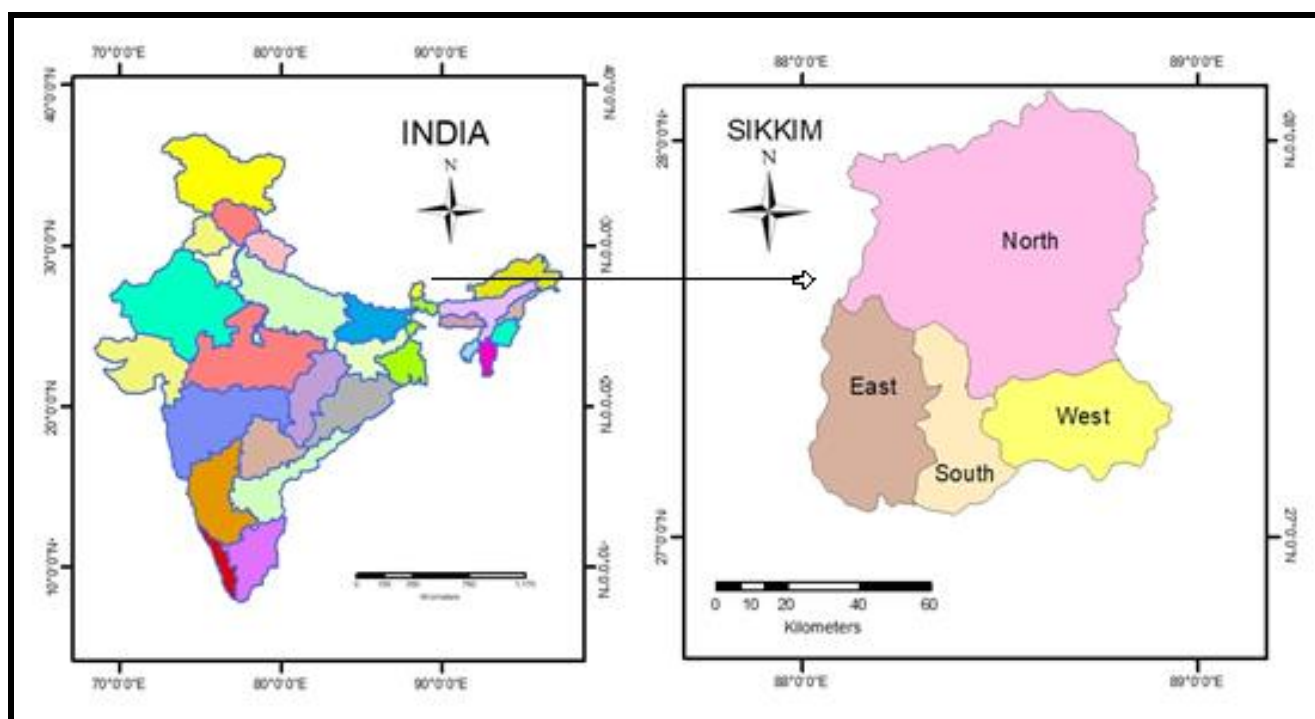


Figure 1 Location Map of the Study area

4. Data Sources:

The choice of an appropriate methodology is a crucial part of study design as it supports in the scrutiny of the data incorrect form which in turn helps either endorse or discard.

(I) Data and Maps:

Data have been collected mainly by use of the census publications for the purpose of spatio-temporal actions in urban planning, i.e. Town Directory, District Census Handbook, State Socio-Economic Census, 2006, Government of Sikkim, State Annual Action plan (SAAP), Sikkim Human Development Report, State Statistical Handbook, State statistics handbook, Census of India, State Statistics and Evaluation Report and publication of government papers and journals.

The present study will use statistics as well as cartographic methods to analyse the pattern of urbanisation in Sikkim. The analysis is focused on the secondary data sources. The spatio-temporal trend and pattern analysis showed decadal differences in urban populations across 9 major towns. To show the map different software is used for presenting data, such as Global mapper and ARC-GIS.

The research is based on secondary data sources. Census of India 1971, 1981, 1991, 2001 and 2011 are mainly data sources. This is a meso-level analysis as stated previously.

The urbanisation process was examined based on selected urban indicators- urbanisation stage, decadal population growth and urbanisation rate (Sivaramakrishnan et al., 2005). The Eldridge index (Vaidyanathan, 1981) also discusses the speed of growth. Eldridge index points to adjustments as a ratio to the highest potential shift percentage of the urban population. Sita and Phadke (1985) used this index to analyze the pace of urban growth in their study.

- (a) Level of urbanization: It applies, for a specific period, to the proportion of the urban population compared to the total population.

Thus, **Level of Urbanization = (Urban Population ÷ Total Population) X 100**

- (b) Decadal urban population growth which indicates the time-related degree of urbanisation.

Thus, **Decadal growth of urban population (2001-2011) = {Urban Population (2011) – Urban Population (2001)} ÷ Urban Population (2001) X 100**

- (c) The urban growth rate represents a decadal change of the urban population percentage.

Thus, **Rate of Urbanization (2001-2011) = (Per cent of Urban Population in 2011 – Per cent of Urban Population in 2001) ÷ Per cent of Urban Population in 2001 X 100**

- (d) For calculating the pace of urbanisation, as previously indicated, the Eldridge index (Vaidyanathan, 1981) is used.

Thus, **Pace of Urbanization (2001-2011) = (Per cent of Urban Population in 2011 – Per cent of Urban Population in 2001) ÷ (100 – Per cent of Urban Population in 2001) X 100**

- (e) The pace of urban growth takes account of absolute urban population growth with respect to the maximum expected growth of the decade.

Thus, **Pace of Urban Growth (2001-2011) = (Urban Population in 2011 – Urban Population in 2001) ÷ (Total Population in 2011 – Urban Population in 2001) X 100**

- (f) A significant indicator of the study of urbanisation processes is the contribution of urban population growth to overall population growth.

Thus, **contribution of Growth in Urban Population to Total Growth (2001-2011) = (Urban Population in 2011 – Urban Population in 2001) ÷ (Total Population in 2011 – Total Population in 2001) X 100**

We calculate the Zipf's Rank size Rule of the towns of the study area. The formula was $P_i = K r_i$ Where, P_i = expected population of a town of rank, r_i = rank of the city in descending order, K = population of the largest town. (Saha and Basu)

5. Demographic Profile of Sikkim-

The total estimated area is 7096 square kilometres according to state revenue records. South Sikkim is the smallest district with an area of 750 sq. km and North Sikkim is the largest, covering 4226 square km. Sikkim has a population total of 540851 with a population density of 76 people per square kilometre, according to the 2001 census. A total of 206360 people (33.8% of the total) are for the projected tribe population. 288484 males and 25 2367 females in the Sikkim state were recorded in 2001. The proportion of urban populations according to the 2001 census was 11.07% and 88.93% for rural population. 890 was the sex ratio and 81.42% was the literacy rate.

According to a 2011 census, Sikkim's overall population is 610577 with population density of 86 per sq. km. There are 323070 males and 287507 females. Only 25.15 percent populations live in urban areas. There are eight statutory towns and one census town. In the 2011 census there are two municipalities and five Nagar Panchayats which are Namchi and Gangtok.

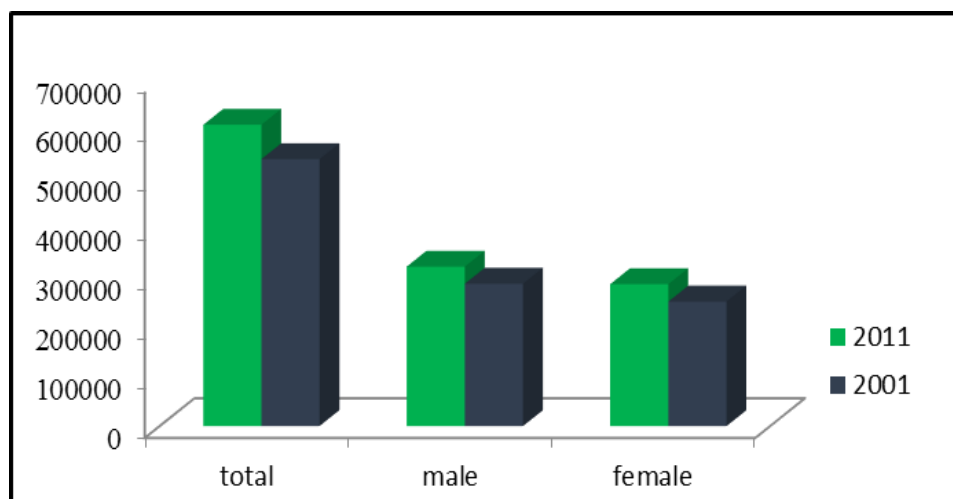


Figure 2 Population of Sikkim

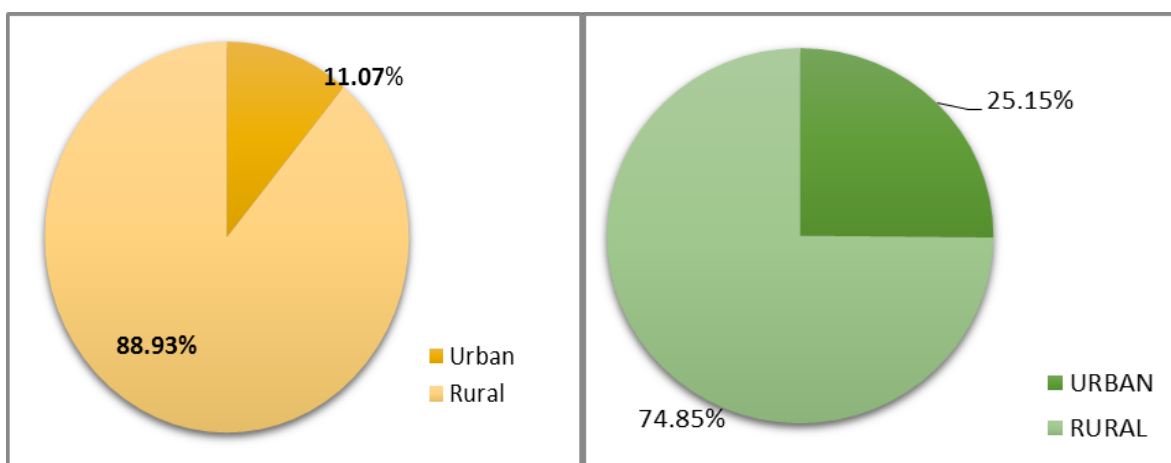


Figure 3 Urban and Rural population in the year of 2001 and 2011

(i) Population:

The urban population of Sikkim has grown at the rate of 33.03% during the decade 1991- 2001 which is higher than national growth rate. The total population of the state is 0.05% of India’s population and it is the least populace state amongst all states. Highest population found in East district and lowest population found in North district according to 2001 and 2011 census.

Table 1 Population in different Districts of Sikkim, 2001

Districts	Total	Male	Female
North	41030	23414	17616
East	245040	132917	112123
South	131525	68241	63284
West	123256	63912	59344

Source- District Census Handbook, 2001

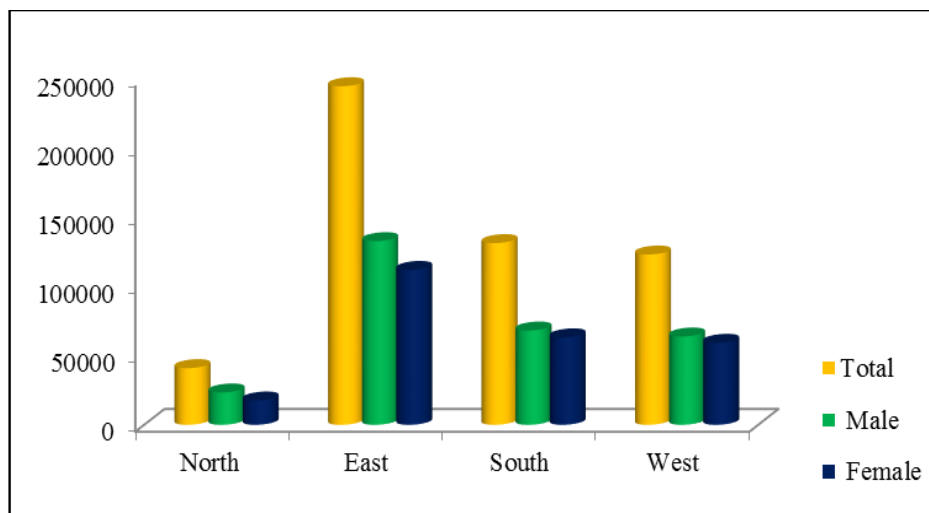


Figure 4 Population in different Districts of Sikkim, 2001

Table 2 Population in different Districts of Sikkim, 2011

Districts	Total	Male	Female
North	43709	24730	18979
East	283583	151432	132151
South	146850	76670	70180
West	136435	70238	66197

Source- District Census Handbook, 2011

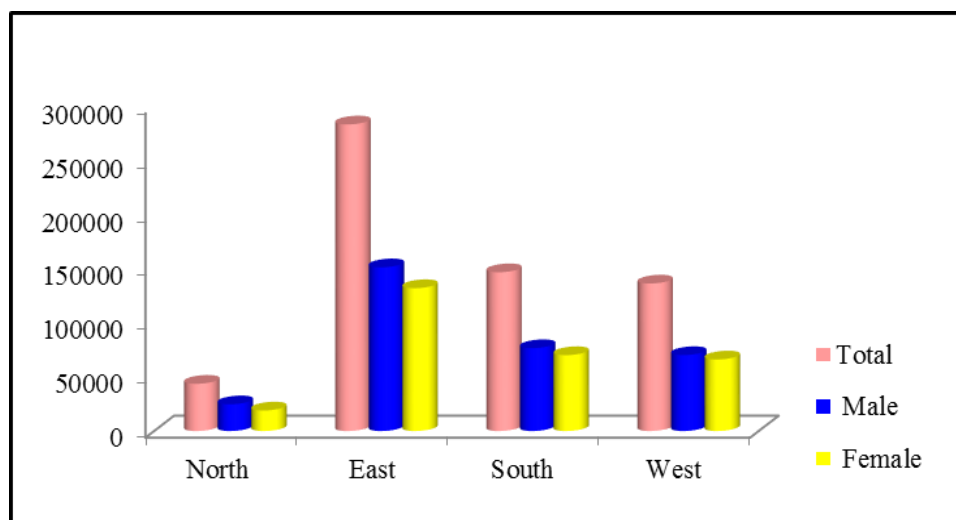


Figure 5 Population in different Districts of Sikkim, 2011

Table 3 District wise rural-urban population in Sikkim

Districts	Urban	Rural
North	10.62	89.38
East	43.19	56.81
South	14.44	85.56
West	3.85	96.15

Source- District Census Handbook, 2001 & 2011

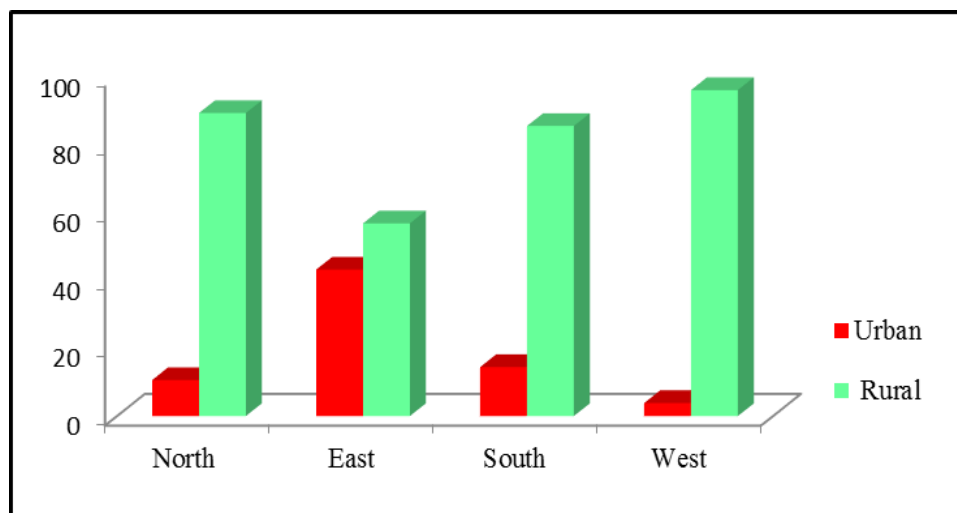


Figure 6 District wise rural-urban population (%) in Sikkim

(ii) Population Density:

The population density represents the ratio of population to the area of any region. In 2001, a population density of 76 people per square kilometre is estimated, compared with 57 in 1991, and in 2011 the population was raised to 86 per square kilometre.

Thus there is net addition of 19 persons per sq. Km. in the state during the decade 1991-2001. The density of population of Sikkim is very low when compared to the national average of 382 persons per sq. Km. Highest population density found in East district that is 297 and lowest in North district according to 2011 census.

Table 4 District wise population density of Sikkim in different census

District	2011	2001	1991
North	10	10	7
East	297	257	187
South	196	175	131
West	117	116	84

Source- District Census Handbook, 2001 & 2011

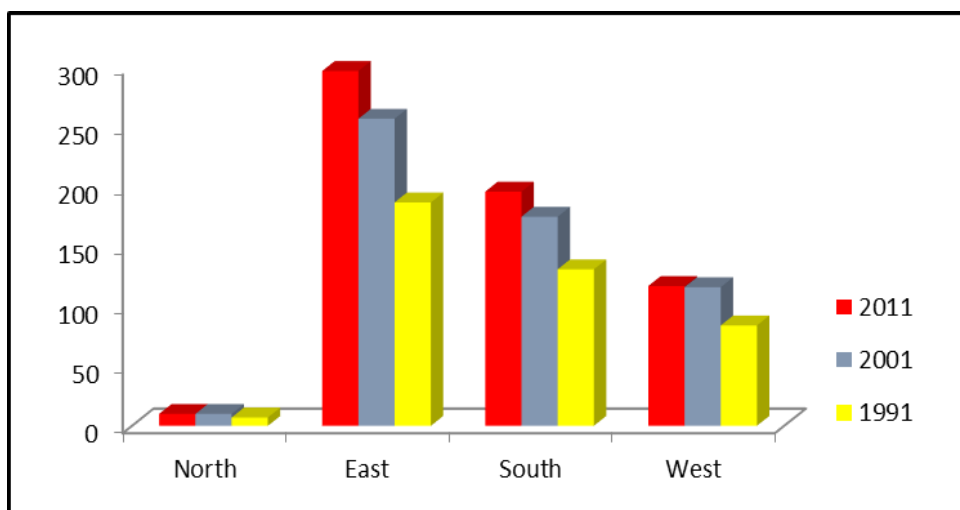


Figure 7 District wise population density of Sikkim in different census

6. Urban Growth of Sikkim:

In 1951, Sikkim's urban population was just 2744, representing only 2% of the State's total population. In 1981-1991 urban growth was negative, i.e. -27.61%. From the table below, it becomes clear that the whole colonial era was marked by very slow urban growth. In 1981 the urban population was 16.15% but decadal growth between 1971 and 1981 amounted to 159.98%, a decadal growth rate below that of previously decadal. The decadal rate of growth in 1991-2001 was 61.86 percent lower than in previous years. The population growth rate in the East District is highest and in the North district it is lowest.

Table 5 Decadal growth rate of urban population in Sikkim

Year	Total Population	Total Urban Population	% of Urban Population	Decadal Growth (%)
1951	137725	2744	2	-
1961	126189	6848	5.42	149.56
1971	209843	19662	9.37	187.12
1981	316385	51096	16.15	159.98
1991	406457	36988	9.1	-27.61
2001	540851	59870	11.07	61.86
2011	610577	153578	25.15	153.42

Source- Census of India (1951-2011)

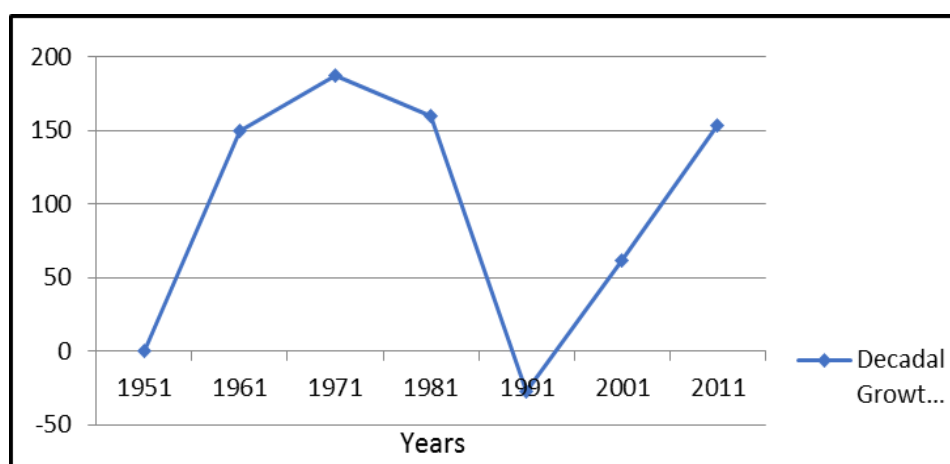


Figure 8 Decadal growth rate of urban population in Sikkim

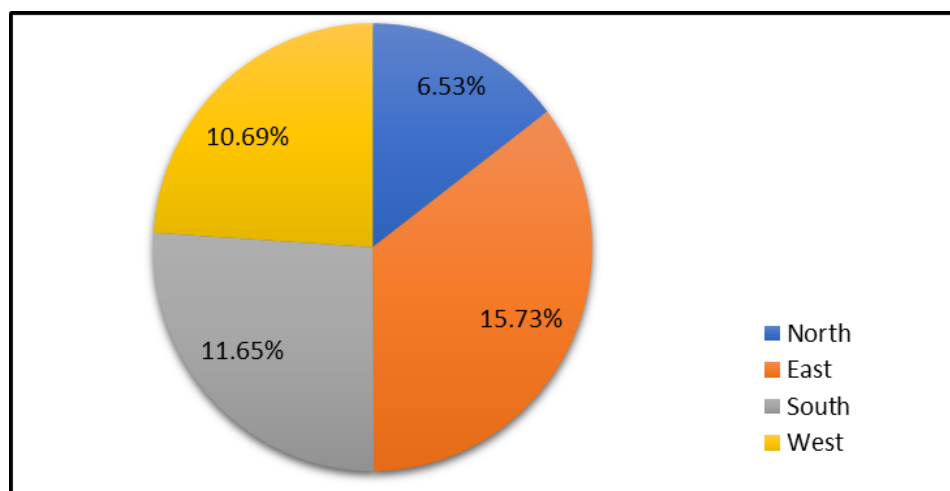


Figure 9 Population growth in different districts of Sikkim

(i) Urbanization trends in Sikkim:

The Sikkim urban population growth was clearly seen in all years of the census to have been very slower. The contribution of the urban population to the entire Indian average population was higher than that of Sikkim. The urban population share in Sikkim has been very low in the period 1961 to 2001, but in 1981 the urbanisation rate was higher than other years of the census. In the census of 2011, this number was found to be far higher than the previous census.

Table 6 Trend of Urbanization in Sikkim

Years	India	Sikkim
1971	19.91	9.37
1981	23.34	16.15
1991	25.73	9.10
2001	27.30	11.07
2011	31.16	25.15

Source- Census of India (1971-2011)

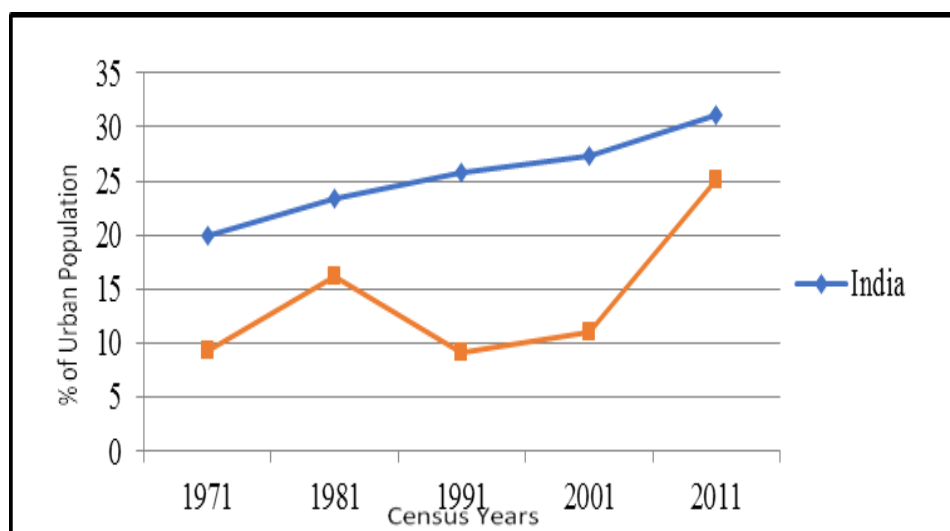


Figure 10 Trend of Urbanization in Sikkim

There is no question that urban population growth has raised steadily in the 2001 census and growth has increased progressively in the census 2011. The highest urbanisation in the East district and lowest in the West district was reported in 2001. More differences can be seen in the East district and mild differences between 2001 and 2011 in the South and North districts and minor differences can be seen in West district of Sikkim.

Table 7 District wise total urban population of Sikkim (in percentage)

Districts	2001	2011
North	3.04	10.62
West	1.48	3.85
South	3.00	14.44
East	21.57	43.19
Sikkim	11.07	25.15

Source- District Census Handbook, 2001 & 2011

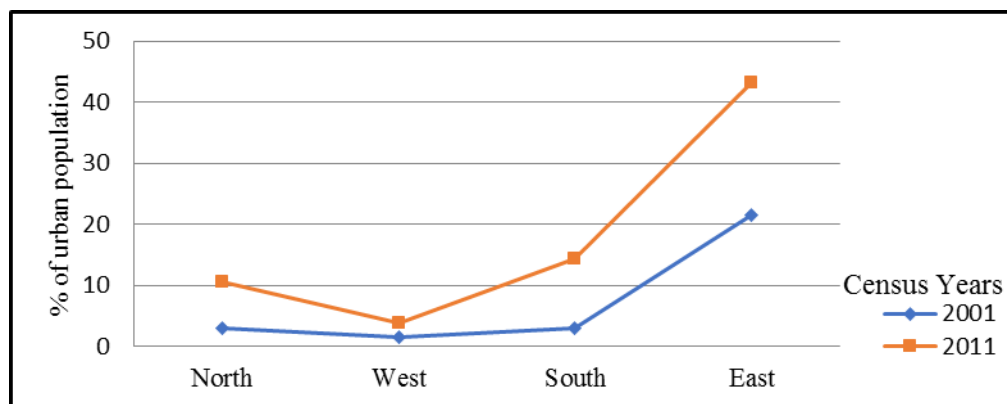


Figure 11 District wise total urban population of Sikkim (in percentage)

(ii) Size, Class & Status of Town:

Out of 9 towns, one municipality of Gangtok is of category I, while two towns namely the Municipal Council of Namchi and Rangpo Nagar Panchayat are of Class IV population size are between 10000 to 19999. The three towns Jorethang Panchayat, Singtam Nagar Panchayat and Rhenock Census Town are each classified as 5000-9999 population sizes, while other three towns such as Mangan Nagar Panchayat, Gyalshing Nagar Panchayat and Nayabazar have recorded that Bazar Area is classified as less than 5000 in population size in class VI.

Table 8 Class-wise number of towns

Class	Population Size	No of Towns
Class-I	1000000 & above	1
Class-II	50000-99999	-
Class-III	20000-49999	-
Class-IV	10000-19999	2
Class-V	5000-9999	3
Class-VI	Less than 5000	3

Source- District Census Handbook, 2011

This figure shows the pattern in different census years for the urban population of towns. Since 1971 to 2011, Gangtok has been the most populous town in Sikkim. The urban population of Gangtok has increased significantly compared to other places. Mangan had the least population, according to census 1971, Gayzying had the lowest population in 1981 and 2001, while in 1991 Namchi was among the lowest population and in 2011, the lowest population found in Nayabazar. Rhenock is a census town that was added to the 2001 census after the concept of urban area was updated in 2001.

Table 9 Population of different towns of Sikkim in different census

Towns	1971	1981	1991	2001	2011
Gangtok	13308	36747	25024	29359	100286
Singtam	1926	4043	3868	5432	5868
Rangpo	1786	2452	2980	3709	10450
Mangan	331	780	803	1248	4644
Jorthang	762	3921	1939	2967	9009
Namchi	460	1444	630	979	12190
Nayabazar	651	952	1045	996	1235
Gayzying	445	745	717	828	4013
Rhenock	-	-	-	5201	5883

Source- District Census Handbook 1971 to 2011

(iii) Level of Urbanisation in 2011:

The urbanisation patterns in Sikkim correlate well with the urban distribution pattern. The urban growth level in three districts of Sikkim is less than the national average, but the urbanisation level in East district is greater than the national average. The level of West District urbanisation is very poor relative to other districts.

Table 10 District wise level of urbanization

Districts	Urban population	Total population	Level of Urbanization
North	4644	43709	10.625
East	122487	283583	43.193
South	21199	146850	14.436
West	5248	136435	3.847

Source- Calculated by the authors

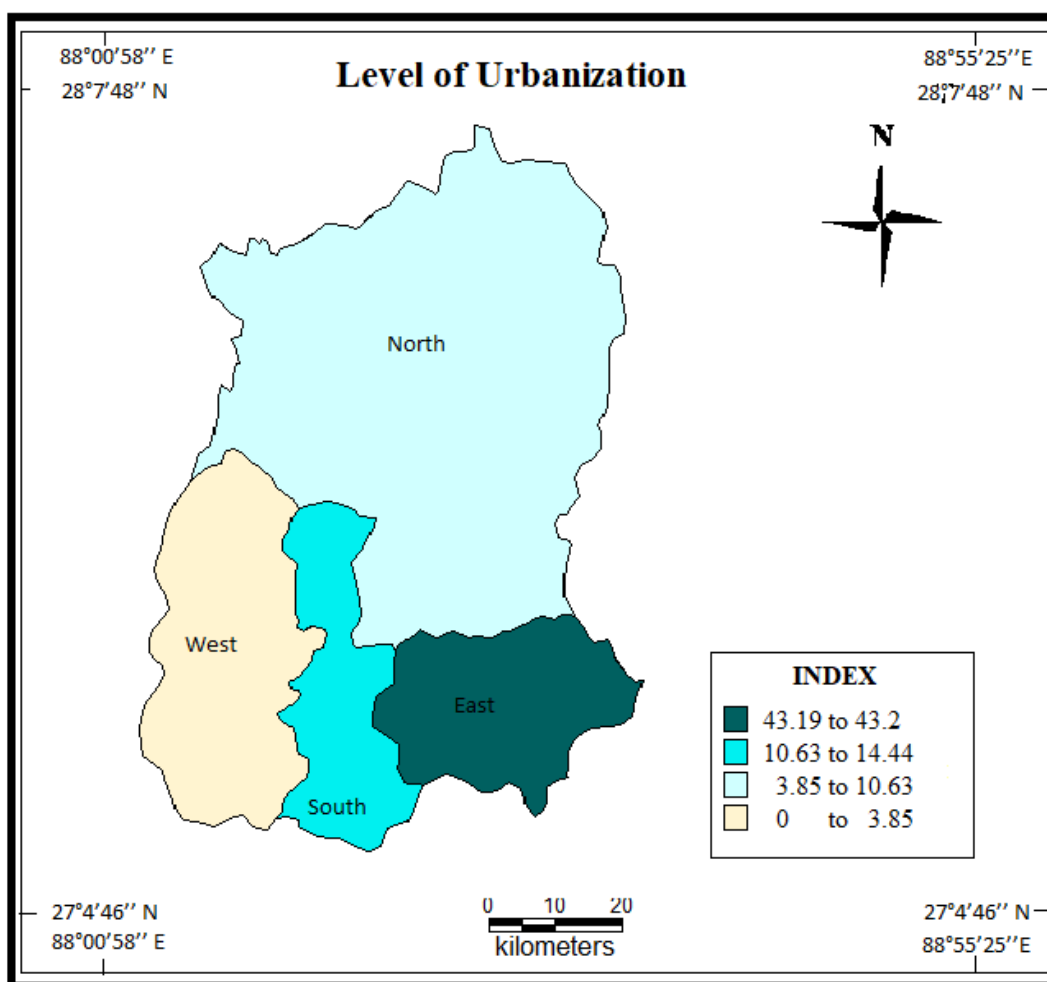


Figure 12 District wise level of urbanization

(iv) Decadal Growth Rate in 2001-2011:

The decadal growth rate of urban populations in four state districts exceeds the national average, while the decadal growth rate for East and West districts has been very low despite higher urban population concentrations. In the South district, there is the largest decadal rise in urban population. Although in North district there was a reasonable decadal growth rate.

Table 11 District wise decadal growth of urban population (2001-2011)

Districts	Urban Population 2011	Urban Population 2001	Decadal Growth of Urban Population
North	4644	1248	272.12
East	122487	52852	131.75
South	21199	3946	437.23
West	5248	1824	187.72

Source- District Census Handbook, 2001 & 2011

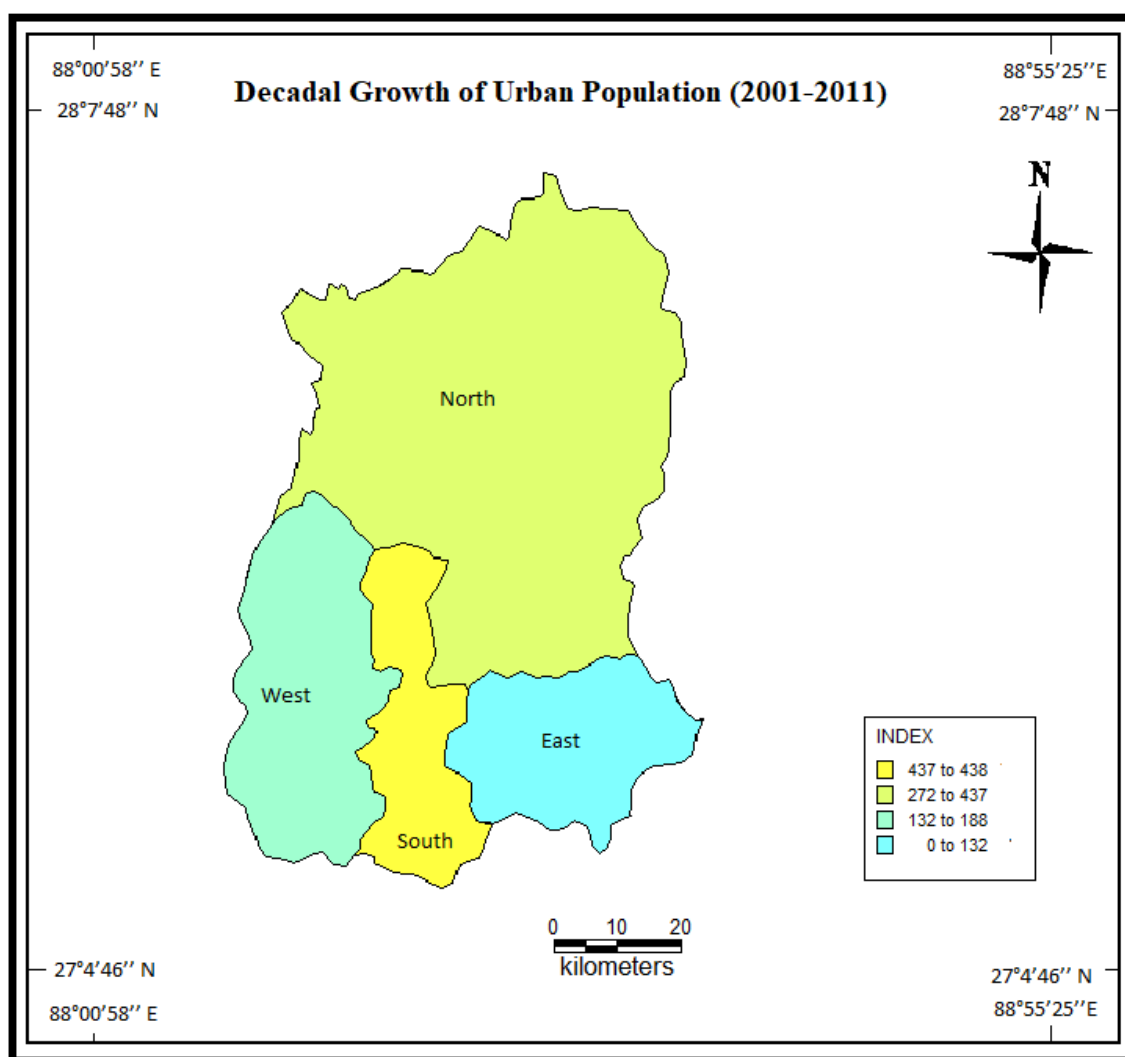


Figure 13 District wise decadal growth of urban population (2001-2011)

(v) Rate of Urbanisation in 2001-2011:

During the 2001-2011 periods, Sikkim reported a positive urbanisation rate. The number of urban areas in all districts is rising. Interestingly, there are also inter-district differences. The urbanisation rate in the East district is lower than in other regions. But, in the South district, the urbanisation rate is higher than in three other districts. The urbanisation rate exceeds the national average.

Table 12 District wise rate of urbanization (2001-2011)

Districts	% of Urban Population 2011	% of Urban Population 2001	Rate of Urbanization
North	10.62	3.04	249.34
East	43.19	21.57	100.23
South	14.44	3.00	381.33
West	3.85	1.48	160.14

Source- Calculated by the authors

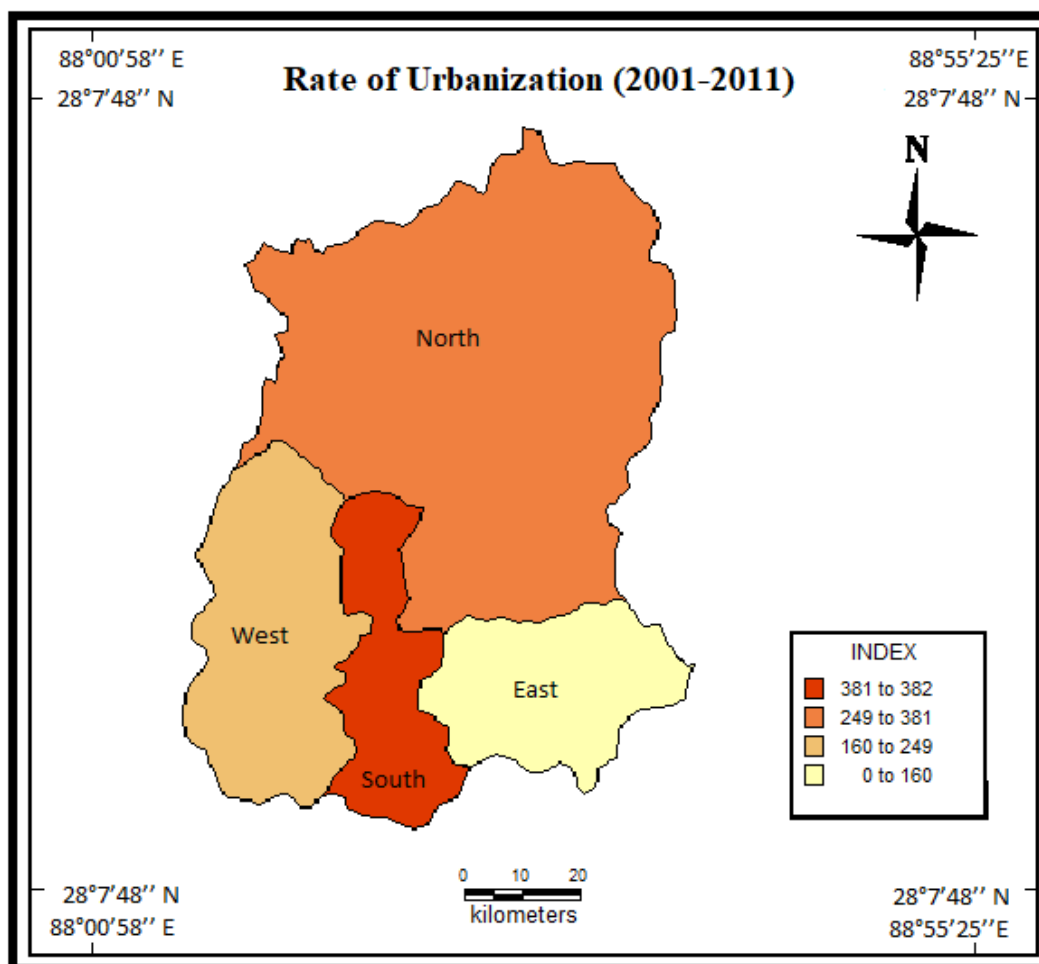


Figure 14 District wise rate of urbanization (2001-2011)

(vi) Pace of Urbanisation in 2001-2011:

In four state districts, in three districts namely North, East and South, urbanisation pace exceeds a national average. In Western District, the urbanisation pace is lower than the national average. The West district has reported very low urbanisation pace. The East district has the highest pace of urbanisation. In the North and South districts, modest urbanizations were identified.

Table 15 District wise pace of urbanization (2001-2011)

Districts	% of Urban Population 2011	% of Urban Population 2001	Pace of Urbanization
North	10.62	3.04	7.82
East	43.19	21.57	27.58
South	14.44	3.00	11.79
West	3.85	1.48	2.41

Source- Calculated by the authors

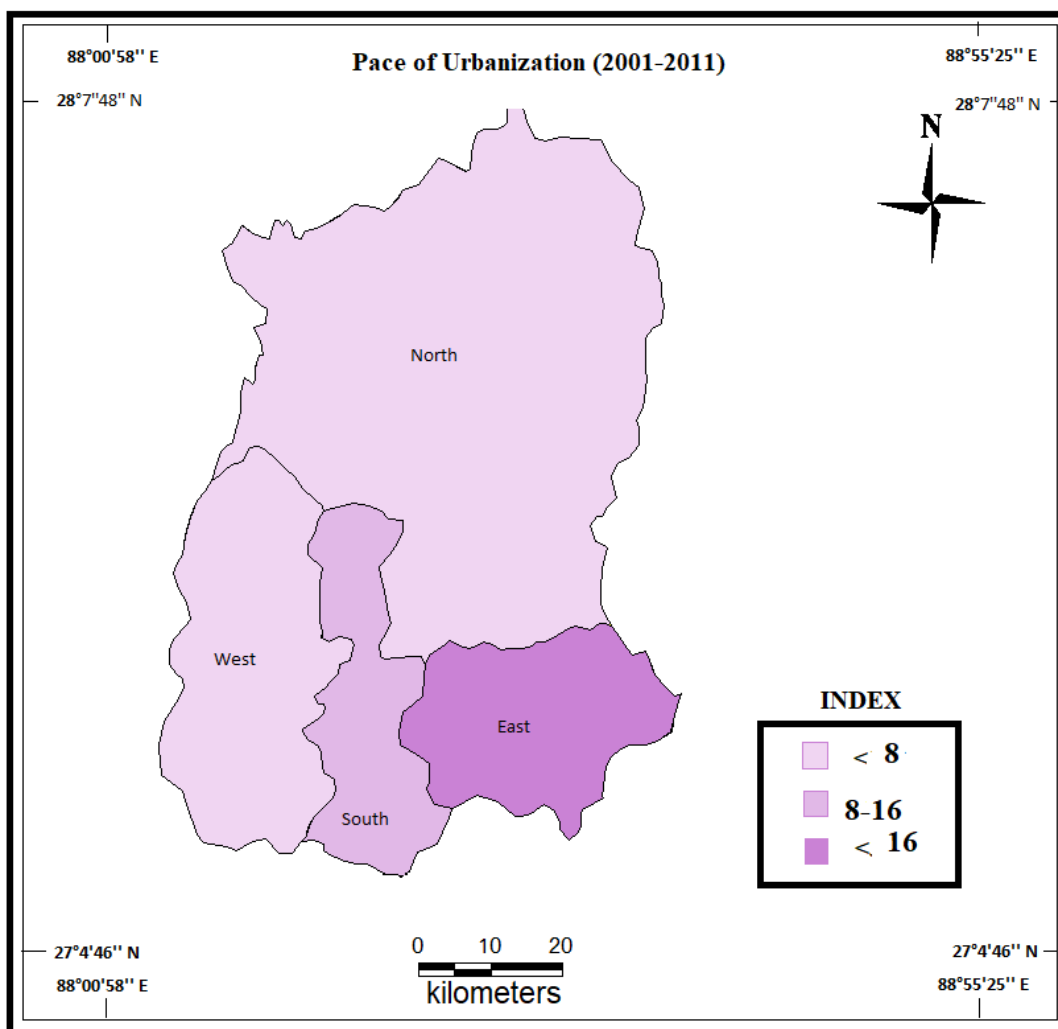


Figure 15 District wise pace of urbanization (2001-2011)

(vii) Pace of Urban Growth in 2001-2011:

Although inter-district variation exists, all districts have shown positive urban development. The growth of Sikkim was absolute. Three districts have shown less growth than the national average because their urban population rise is less than at the national level, and the Eastern District showed more growth than the national average which suggests a higher urban population rise than that at the national level.

Table 16 District wise pace of urban growth (2001-2011)

Districts	Urban Population 2011	Urban Population 2001	Total Population 2011	Pace of Urban Growth
North	4644	1248	43709	8.00
East	122487	52852	283583	30.18
South	21199	3946	146850	12.07
West	5248	1824	136435	2.54

Source- Calculated by the authors

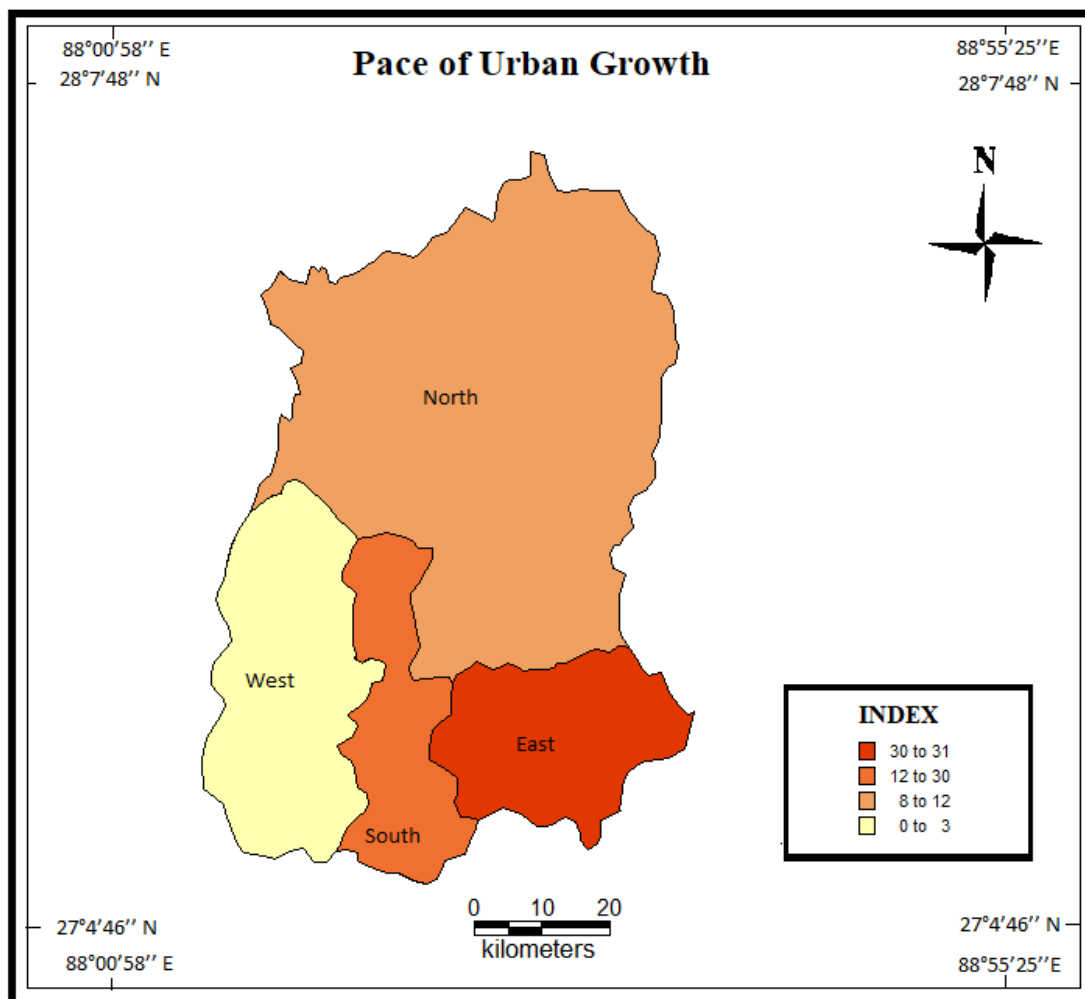


Figure 16 District wise pace of urban growth (2001-2011)

(viii) Contribution of Growth in Urban Population to Total Growth in 2001-2011:

Less than 50% have been contributed to the West alone. This is primarily due to rural communities in these districts. Other districts contribute a more urban population growth during the period because the proportion of urban populations in these districts is comparatively higher. Thus, urban population growth contributes positively to the overall population structure. There is a very high rise in the East district.

Table 17 Contribution of growth in urban population to total growth

Districts	Urban Population 2011	Urban Population 2001	Total Population 2011	Total Population 2001	Contribution of Growth in Urban Population to Total Growth
North	4644	1248	43709	41030	126.76
East	122487	52852	283583	245040	180.67
South	21199	3946	146850	131525	112.58
West	5248	1824	136435	123256	25.98

Source- Calculated by the authors

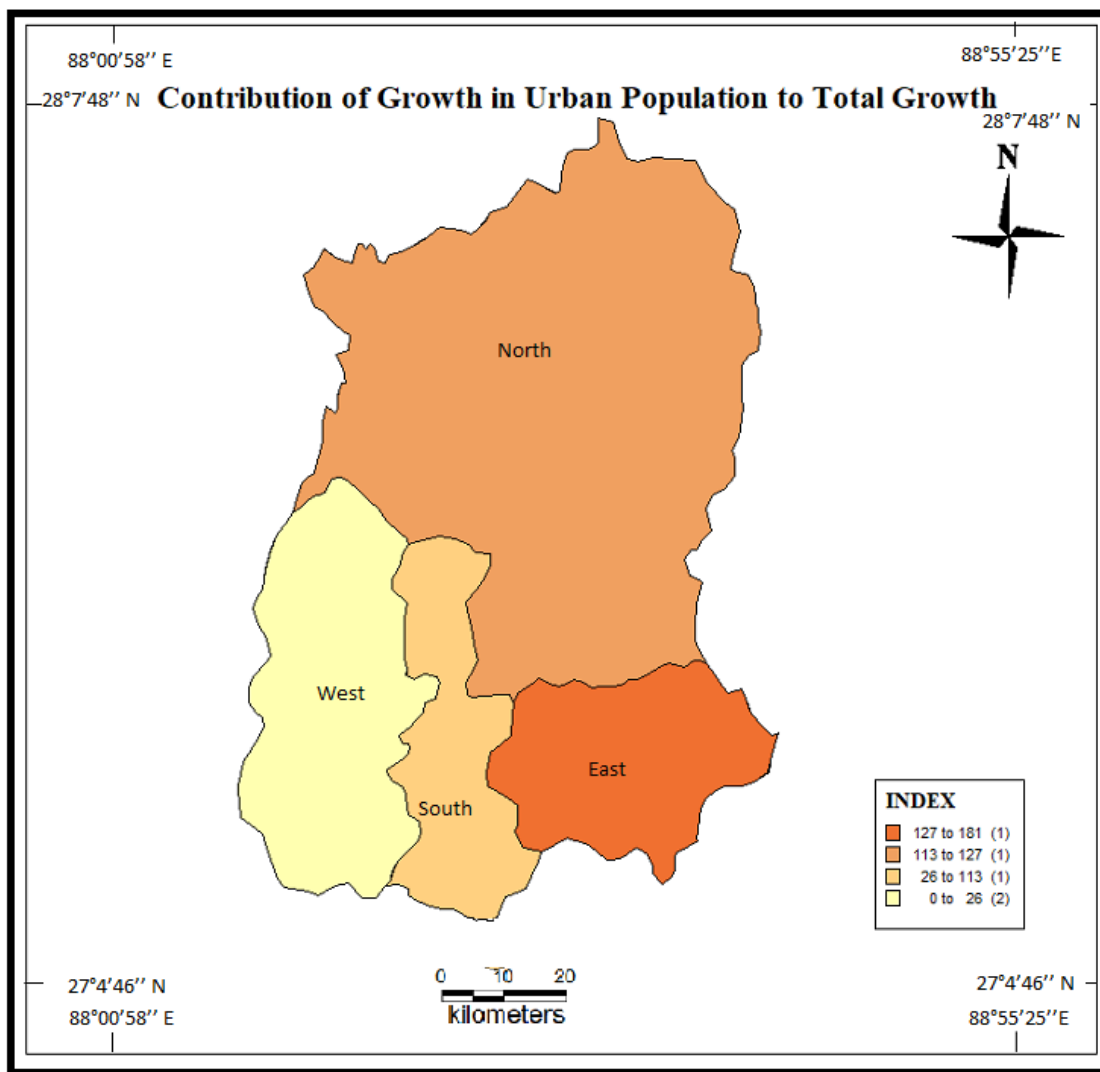


Figure 17 Contribution of growth in urban population to total growth

Table 18 Rank Size Rule of the cities in Sikkim

Towns	Actual Population	Rank(R)	1/R	Pe (Estimated Population)
Gangtok	100286	1	1	54288
Namchi	12190	2	0.5	27144
Rangpo	10450	3	0.333333	18096
Jorthang	9009	4	0.25	13572
Rhenock	5883	5	0.2	10858
Singtam	5868	6	0.166667	9048
Mangan	4644	7	0.142857	7755
Gayzying	4013	8	0.125	6786
Nayabazar	1235	9	0.111111	6032
	$\Sigma 153578$		$\Sigma 2.828968$	

Source- Calculated by the authors

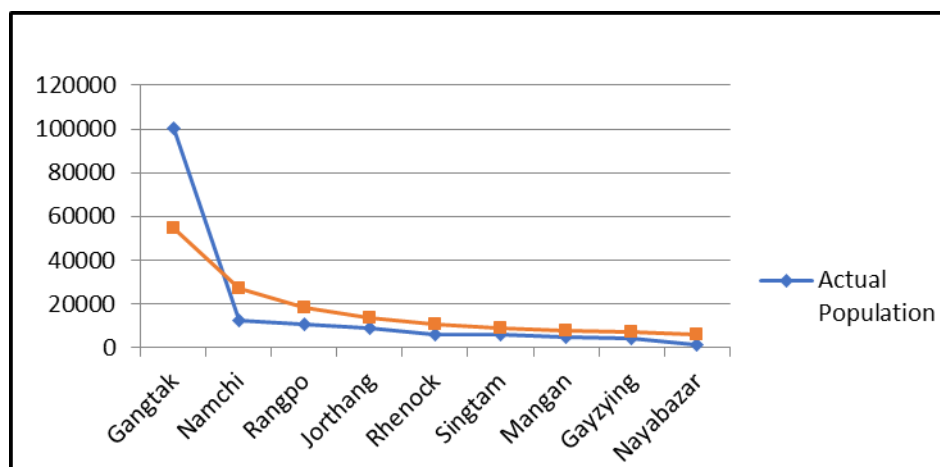


Figure 18 Rank Size Rule of the cities in Sikkim

Table and figure indicate that the population of the largest city is higher than the population predicted. But the actual population of other cities is smaller than predicted. The estimated population in 5, 6, 7 cities is double that of the present population. The 2nd categorised urban area is nearly twice as populated as predicted.

7. Conclusion

It is clear that the degree of urbanisation of the state is poor after discussing all parts of it. After the study of the trend and the degree of the urbanisation in various censuses, it was said that the proportion of the urban population was low, but the rate of urbanisation until 2001 was low and this rate was very high after this census than the national average. Spatial analysis of the development showed that the East District is the forward most district and that the West is the backward one. The study found that in the East District, urbanisation and urban development rates are low, while in the East District, urbanisation and development rates are higher. In South District, decadal growth in town's population from 2001 to 2011 is fastest. Much of the population is induced by agriculture and very low industrialization as the major cause of the low urbanisation rate. It was obvious that people were trying to go to the district's main city. It is suggested from the report that the government should take some measures to establish small towns or urban areas.

Acknowledgement

The authors are grateful to Census of India and Government of Sikkim for providing us such useful data regarding this small research.

References

1. Aktar. N & Sultana. C (2016), Trends and Pattern of Urbanization in West Bengal, *Pratidhwani the Echo*, V (I), 61-74.
2. Chakraborty. S et al, (2015), Changing Pattern of Urbanization in West Bengal: An Analysis of 2011 Census of India Data, *Asian Journal of Research in Social Sciences and Humanities*, 5(5), 169-181
3. Chan. M and Puri. V. K (1982), *Regional Planning in India*, (Allied Publishers Limited).
4. Dasgupta .B (1987), Urbanisation and Rural Change in West Bengal, *Economic and Political Weekly*, Vol. 22, No. 7, Mumbai, pp. 276-287
5. District Census Handbook, Sikkim, (Census of India, 2001). Retrieve from <http://www.censusindia.gov.in/2001census/dchb/DCHB.html>.
6. District Census Handbook, Sikkim, (Census of India, 2011). Retrieve from- <http://www.censusindia.gov.in/2011census/dchb/DCHB.html>.
7. Ghosh B. &Chakma N. (2014), Urbanisation in West Bengal: An Analysis of Recent Processes, *Space and Culture*, India,2(2), 29-41
8. Giri P. (1998). Urbanisation in West Bengal, 1951-1991, *Economic and Political Weekly*, Vol.33, No.47/48, Mumbai, pp. 3033-3038
9. Harvey J. (2000), *Urban Land Economics*, (Palgrave Macmillan, Fifth Edition), 256-257
10. ILGUS (2002), *Urban West Bengal*, Institute of Local Government and Urban Studies, Calcutta
11. Konar D.N. (2009), *Nature of Urbanisation in West Bengal in the Post-Independence Period*.
12. Lampard E. (1965), *Historical aspects of urbanization in P.M. Houser and L.E. Schnore, The Study of Urbanization*, (New York,).

13. Mandal S. (2017), Level and Trend of Urbanization: A Study on Purulia District of West Bengal, *IOSR Journal Of Humanities And Social Science*, Volume 22, Issue 12, pp 11
14. Paul K. and Sharma D. (2016), Post Facto, Trend And Pattern Of Urbanity In Sikkim, *Archives of Applied Science Research*,8(5):43-54
15. Ramachandran R. (1989), *Urbanization and Urban System in India*, (Oxford University Press).
16. Roy Chaudhuri J.R (2001), *An Introduction to Development and Regional Planning*, (Orient Longman Ltd. Kolkata).
17. Saha P. and Basu P. (2010), *Advanced Practical Geography*, (Books & Allied (P) Ltd.,) 257-261.
18. Sarkar. A (2001), Urbanization and City Size Distribution of West Bengal, India 1091-2001, *Indian Journal of Regional Science*, 43(1), 9-16
19. Sharma R. and Tanwar S. (2018), *Growth of Urbanization in Himachal Pradesh:A Statistical Analysis*, *ResearchGate*.
20. Sita K. and Phadke V.S (1985) *Urbanisation in Maharashtra, 1971-81*, in Prasad, N. Banerjee, S and Dutt, G.K (edited), *Modern Geographical Concepts*, Department of Geography, The University of Burdwan, pp. 265
21. Sivaramakrishnan K.C, Kundu A.& Singh B.N(2005), *Handbook of Urbanisation in India-An Analysis of Trends and Processes*, *Oxford University Press*, 177
22. Vaidyanathan K.E. (1981) Rural-Urban Distribution of Population in West Asia, *Population Geography*, 3 (1&2), pp. 96-11
23. Wirth L. (1938), Urbanization as a way of Life, *American Journal of Sociology*, 44, January, 1-24.