

## Evolution of Urbanization: A Comprehensive Investigation from 2001 -2015 in Tamil Nadu

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**Abstract:** Urbanization is a concomitant of a combination of factors such as broad-based industrialization, growing real per capita income, division of labour, specialization, economies of scale, technological advancement, upgradation of skills, well-knit market network, and emerging service sector. Thus, urbanization is the outcome of “economic” and “demographic” growth process. Tamil Nadu occupies the number one slot in terms of degree of urbanization among major states. The proportion of urban population in the state at 48.5 percent as per 2011 Census was significantly higher than that of all India 31.2%. Among the major states, Tamil Nadu ranks first in the proportion of urban population in the country. The process of urbanization is a natural process associated with growth. The degree of urbanization in Tamil Nadu has progressively on the increase over a long span of period. Tamil Nadu accounted for 10.5 percent of the urban workers at all India. The work participation rate in urban areas of the state at 40.2 percent was higher than that of all India 35.3 percent in 2011. Tamil Nadu has 12 Municipal Corporations all under the administrative control of the Commissioner of Municipal Administration. The increase in urban population in Tamil Nadu has no doubt built pressure on housing demand particularly to the economically weaker sections and low income groups. Urban Water Supply, Lighting, Sanitation, Solid Waste Management, Urban Poverty, Drainage are in focus livelihood security for the urban poor by enhancing the employment opportunities, housing and basic amenities, universal education, ensuring towards women destitute and differently abled persons. Thus Tamil Nadu urbanization trend is expected to intensify. In this way this article shows the growth of urbanization in Tamil Nadu by indicating various table and graph.

**Keywords:** Population, Urbanization, water, Houses, Sanitation, Lights, Poverty, Drainage.

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### I. Introduction

Urbanization is a concomitant of a combination of factors such as broad-based industrialization, growing real per capita income, division of labour, specialization, economies of scale, technological advancement, upgradation of skills, well-knit market network, and emerging service sector. Thus, urbanization is the outcome of ‘economic’ and demographic’ growth process. Tamil Nadu occupies the number one slot in terms of degree of urbanization among major states.<sup>1</sup> An increasing urban population along with migration for want of employment opportunities from rural to urban areas has exerted undue pressure on various basic amenities. By Five Year Plan many processes are made for the growth of urbanization. The worst affected ones are the poor in urban areas. As more urban conglomerations grow without adequate infrastructure, the problems would be further aggravated. Therefore, the challenge before the Government is to guide the process of urbanization and to ensure that services viz., sanitation, water supply and basic housing are provided to urban residents. This paper focus on the growth of urbanization in Tamil Nadu from 2001 to 2015 through workforce, urban local bodies, urban poverty, housing condition and sanitation.

### Urban Population in All India and Tamil Nadu

In India among the major states, Tamil Nadu ranks first in the proportion of urban population in the country As per 2011 census the proportion of urban population in the state was 48.5 percent significantly higher than that of all India 31.2%.<sup>2</sup> Other states which surpass the 40 percent mark are Kerala 47.7%, Maharashtra 45.2% and Gujarat 42.6%. Least urbanization was noticed in Bihar 11.3%, Assam 14.1% and Orissa 16.7% where the ratio was less than 20.0 percent. The density of population living in urban areas of Tamil Nadu was 3521 people’s per sq.km. The sex ratio in urban areas of Tamil Nadu at 1000 was comparatively well ahead of all India ratio of 929. The overall literacy rate for urban areas of Tamil Nadu in 2011 Census was 87.0 percent while for all India it was 84.1 percent.<sup>3</sup> The proportion of Schedule Caste population in urban areas stood at 14.2 percent in Tamil Nadu against 12.6 percent at the National level, whereas the proportion of Schedule Tribe population stood at 0.4 percent and 2.8 percent respectively. The following table Shows urban population in India and Tamil Nadu.

**Urban Population in India and Tamil Nadu - 2011 Census<sup>4</sup>**

Category	India	Tamil Nadu
Urban Population	377.11	34.9
Share of Urban Population to Total	31.2%	48.5%
Child population in the age group 0-6 years	43.19	3.51
Scheduled caste Population	47.53	4.96
Scheduled Tribe Population	10.46	0.13
Literates	280.84	27.34
Sex Ratio	929	1000
Decadechange2001-2011	31.8%	27.0%

**Urbanization and Growth Trends in Tamil Nadu by 2011 Census**

As per 2011 Census the total urban population in the state was 34.92 million increasing from 27.48 million in 2001 Census. The process of urbanization is a natural process associated with growth. The degree of urbanization in Tamil Nadu has progressively on the increase over a long span of period. The proportion of urban population to total population of the state had steadily increased from 24.4 percent in 1951. With the introduction of seventy forth Constitutional Amendment Act in 1994, all the Town Panchayats were brought under urban fold. As a result, there was a significant rise in the proportion of urban population to 44.0 percent in 2001. In 2011, it had further moved up to 48.5 percent. As per 2011 Census the average density of population in the state was 554 persons per sq.km and in urban areas it was 3521 persons per sq.km. In 2011, urbanization rate in 17 districts is below the state average 48.5%. Among the 17 districts Ariyalur, Villupuram, Dharmapuri, Pudukkottai, Thiruvannamalai, Thiruvallur, Krishnagiri and Nagapattinam were the least urbanized ones.<sup>5</sup> Urbanization was higher than the state's average in the remaining 15 districts. Among these Chennai, Kanyakumari, Coimbatore, Thiruvallur, Kancheepuram, Tiruppur and Madurai are highly urbanized districts.

**II. Urban Work Force in Tamil Nadu**

Tamil Nadu accounted for 10.5 percent of the total urban workers at all India. The work participation rate in urban areas of the state at 40.2 percent was higher than that of all India (35.3%) in 2011.<sup>6</sup> Going by gender also, the work participation rate in the state was well ahead of all India. In both instances, the work participation rate of males was significantly higher than that of females. Between 2001 and 2011 Census the work participation rate in the state had improved from 37.5 percent to 40.2 percent, whereas at all India it was from 32.3 percent to 35.3 percent. Tamil Nadu accounted for 10.8 percent of the total main workers and 8.6 percent of total marginal workers in urban areas in India. In the state the proportion of main workers to total workers at 90 percent in 2011 Census was marginally higher than the all India level 88%.<sup>7</sup> The proportion of marginal workers to total urban workers in the state increased from 8.2 percent in 2001 Census to 10.1 percent in 2011 Census. It indicated that more marginal workers in urban areas were mostly engaged in informal sector with low productivity. In the state as well as all India, among marginal workers the composition of workers those working for 3 to 6 months and less than 3 months were in the ratio of 85:15 in 2011 Census.<sup>8</sup> The four-fold classification of main workers at the state level indicates that 'other workers' accounted for a larger chunk. Between 2001 and 2011 Censuses the proportion of other workers to total main workers significantly increased from 79.7 percent to 84.1 percent. This was mainly due to the sizeable employment opportunities created in the manufacturing and service sectors. There was a decline in the proportion of agricultural labourers from 10.7 percent to 8.6 percent, household industry workers from 6.3 percent to 4.7 percent and cultivators from 3.3 percent to 2.6 percent. The following table shows classification of workers by Gender in India and Tamil Nadu.

### Classification of Workers by Gender in India and Tamil Nadu–2011<sup>9</sup>

Country/State		Workers Participation Rate (%)	
		2001	2011
India	Males	50.6	53.8
	Females	11.9	15.4
Tamil Nadu	Males	55.8	58.5
	Females	18.9	21.8

#### Urban Local Bodies in Tamil Nadu

Tamil Nadu has 12 Municipal Corporations viz. Chennai, Madurai, Coimbatore, Tirunelveli, Salem, Tiruppur, Erode, Vellore, Dindigul and Thanjavur, Thoothukudi, Tiruchirappalli and 124 Municipalities. All these Urban Local Bodies, except Chennai are under the administrative control of the Commissioner of Municipal Administration. In addition, there are 528 Town Panchayats in the state under the control of the Director of Town Panchayats. Based on the annual income and population, the 124 Municipalities and 528 Town Panchayats were classified into different grades. Only 37.1 percent of the Municipalities in the state had an annual income of more than Rs.6.00 crore. A majority of 62.9 percent Municipalities had an annual income of less than Rs.6.00 crore. In the case of Town Panchayats as many as 84.8 percent had an annual income more than Rs.8.00 lakhs and only a meagre 15.2 percent having less than Rs.8.00 lakh. The State Government has so far constituted four State Finance Commissions to make recommendations on the devolution of resources to the local bodies and the recommendations are under implementation.<sup>10</sup> Devolution from state finances forms a major part of the resources of local bodies. The devolution of funds was shared vertically between the rural and urban local bodies in the ratio of 58:42. Of the total funds devolved to the urban local bodies 42%, the horizontal sharing between the Municipal Corporations, Municipalities and Town Panchayats was in the ratio of 30:41:29. The total devolution of funds by the State to urban local bodies witnessed an increase from Rs.2292.50 crore in 2011-12 to Rs.2798.59 crore in 2012-13 and a fall in 2013-14 to Rs.2717.32 crore.

### III. Housing Conditions in Tamil Nadu

As per the house listing of the Census of India 2011, the total number of houses in urban areas in Tamil Nadu was 8.93 millions. Of which 76.4 percent were in good condition, 22.4 percent were in livable condition and 1.2 percent in dilapidated condition. The increase in urban population has no doubt built pressure on housing demand particularly at the lower end viz., economically weaker sections and low income groups. Tamil Nadu Housing Board, Tamil Nadu Slum Clearance Board and Housing Co-operative Societies are the major housing delivery agencies in Tamil Nadu in the public sector focusing on housing economically weaker sections and low and middle income groups. These agencies have so far created 16.94 lakhs housing units. During Eleventh Plan period as against the target of 2.28 lakhs housing units, 0.58 lakh units were constructed by these agencies. The shortfall against the target was due to delay in removal of encroachment, litigation, delay in obtaining land clearance and approval. Under the Basic Services to the Urban Poor construction of 92,272 housing units and 3,852 infrastructure works were sanctioned in the mission cities Chennai, Madurai, Coimbatore and their 37 agglomeration towns at a total cost of Rs.2,339 crore during the period 2006-13.<sup>11</sup> Of which 45,300 housing units and 3,717 infrastructure works were completed by the end of the March 2013. The remaining works are under progress. In the expanded areas of Chennai Corporation 1,674 housing units were taken up at a cost of Rs.10.65 crore under this scheme, of which 1331 were completed. Under infrastructure component against 594 works 504 works were completed. In 17 Town Panchayats 2,487 dwelling units at an estimated cost of Rs.41.61 crores were taken up, against which 2,057 were completed.<sup>12</sup> The following table shows the outline of housing condition in Tamil Nadu.

#### Profile of the Urban Houses in Tamil Nadu 2011<sup>13</sup>

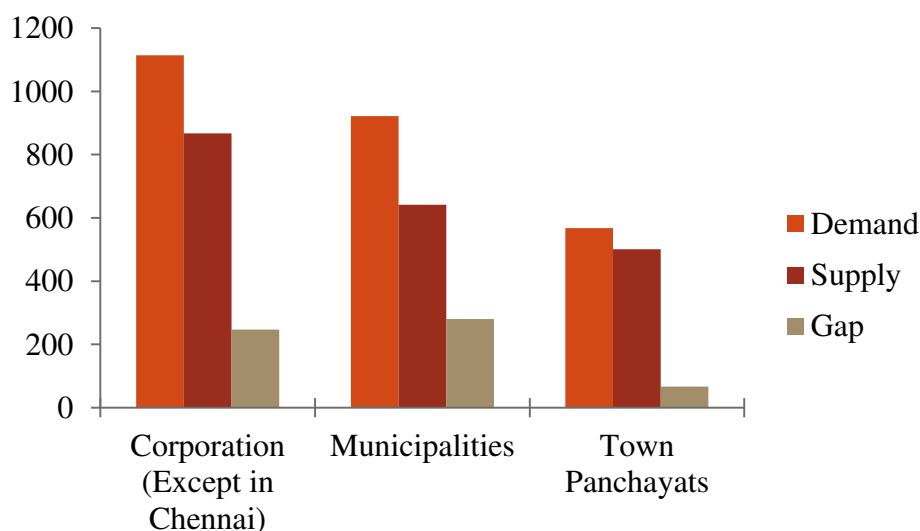
Category (By Roof Material (%))	Urban Houses
Total Census Urban Houses (lakhs)	89.29
Concrete	56.7
Tiles	24.2
Asbestos Sheet	8.2
Thatch	7.3
Others	3.6

#### IV. Urban Water Supply in Tamil Nadu

Tamil Nadu Government has accorded top most importance to ensure universal access to 24x7 water supplies in Urban Local Bodies. It is estimated that access to water increases the productive working hours of the urban poor in general and women in particular by 1.5 to 2 hours. However, ensuring equitable and adequate supply of drinking water and its effective delivery is a major issue for urban local bodies. The Urban Local Bodies are striving hard to meet the demand and supply gap in drinking water. As against the total demand of 2604 million litres per day of water in urban local bodies, the supply at 2010 million litres per day was short by 22.8 percent during 2013-14. Among the urban local bodies the short fall ranges between 11.8 percent and 30.36 percent in Municipalities.<sup>17</sup> Water supply projects are implemented in the state with assistance from Tamil Nadu Urban Development Fund, Urban Infrastructure and Governance – III and Urban Infrastructure Development Scheme for small and medium towns components of Japan International Cooperative Agency by agencies such as Tamil Nadu Water and Drainage Board and Chennai Metropolitan Water Supply and Sewerage Board.<sup>14</sup> State Government funding has been made available since 2011-12 under the Chennai Mega City Development Mission and Integrated Urban Development Mission. Loan funding from other sources is also being tapped through the Water Supply Pooled Fund. In Tamil Nadu, the per capita water service norms viz., 110 litres per capita per day in Corporations, litres per capita per day in Municipalities and 70 litres per capita per day in Town Panchayats are being adopted for water supply to habitants in urban local bodies. Only five Corporations, 35.4 percent of the Municipalities and 82.4 percent of the Town Panchayats in the State have fully adhered to the norms prescribed in supplying water to their habitants. The Chennai Metropolitan Water Supply and Sewerage Board cater to the drinking water supply to the households in Chennai Corporation.

In 2011, with a water supply of 682 million litres per day to a population of 47.60 lakh at the rate of 143 litres per capita per day. In 2012, the total area of 426 sq.kms covering a population of 68.28 lakh supplying 604 million litres per day of water at the rate of 88.47 litres per day. Thus, the increase in area and population has put pressure on water supply, thereby reducing the average quantity of supply by 54.53 litres per capita per day. Of the total water supply 555.61 million litres per day (92%) is supplied to domestic consumers, 23.66 million litres per day (4%) of water to bulk consumers and 24.80 million litres per day (4%) of water is being supplied to industrial consumers. With regard to sources of drinking water, as high as 80.3 percent of the urban households had received tap water, of which 66.3 percent from treated sources and 14.0 percent from untreated sources in Tamil Nadu. The remaining 19.7 percent of urban households received water from other sources viz., bore well, open well, hand pump and other sources. At all India 70.6 percent of the urban households received tap water. The following Chart shows the urban drinking water in corporation, Municipalities and Panchayat.

**Urban Drinking Water -Demand Supply and Gap (Million litres per day 2013 - 2014)<sup>15</sup>**



#### V. Source of Lighting in Tamil Nadu

The street lights are also one of the basic amenities to be provided by the Urban Local Bodies for safe and secured life to the urban habitants. Total street lights functioning in all Urban Local Bodies in the State as of 2013-14 was 13.12 lakhs. Of which 41.7 percent was in Corporations, 30.6 percent in Municipalities and 27.7 percent in Town Panchayats. Irrespective of the urban local bodies, Sodium Vapour Lamps and Fluorescent Tubular Lamps accounted for a major share in the street lights. It ranged between 84.6 percent in Town Panchayats and 96.1 percent in Municipalities. The combined share of Metal Halide Lamps and High Mast Lights in street lights in urban local bodies varied between High Mast Lights in street lights in urban local bodies varied between 1.4 percent in Town Panchayats and 1.8 percent in Corporations.<sup>16</sup> The proportion of

energy efficient Compact Fluorescent Light, Light Emitting Diode and Solar Lights was highest at 14.0 percent in Town Panchayats and lowest at 2.5 percent in Municipalities.

The street lighting expenditure on electricity bill is about 25 to 30 percent of the total expenditure by Urban Local Bodies which is a heavy burden on the financial resources of the Urban Local Bodies. So, this necessitates the use of energy efficient lighting system as well as alternate source of energy. The Urban Local Bodies can replace the existing lighting with more energy efficient lighting system like Light Emitting Diode and can also provide stand-alone solar lights that are self-contained and not use electricity so as to reduce electricity bills and maintenance cost. The street lights in Urban Local Bodies may have the facility to automatically activate at the 'dusk' and turn off at the 'dawn'. Among the Urban households, as high as 96.1 percent of the urban households in Tamil Nadu, had electricity connections for lighting purpose. Only 3.4 percent used kerosene for lighting. A minimum 0.3 Percent of households did not have any lighting facilities.<sup>17</sup>

## **VI. Sanitation in Tamil Nadu**

Sanitation and safe disposal of human waste is a critical element of public health, directly impacting the well-being of the people. Recognizing this and with the determination to make the State open defecation free by 2015 a massive programme of construction of public toilets was undertaken in Urban Local Bodies. Up to the end of the year 2012-13, totally 7,996 public toilets were constructed in Urban Local Bodies. In 2013-14 new public toilets numbering 947 were added to the already existing stock and taking the total to 8943 in Urban Local Bodies. Of the total number of public toilets located in urban local bodies 39 percent were in Municipalities, 37 percent in Town Panchayats and 24 percent in Corporations.<sup>18</sup> With regard to the accessibility of toilet facilities a higher 75.1 percent of the urban households had this facility within their premises. Only 8.6 percent of the households had availed the services of public toilets. Still 16.2 percent of the urban households in the State had followed the practices of defecating in open places as against 13.0 percent at all India. The inadequacy of proper sanitation facilities and lack of proper maintenance of public and community toilets in urban areas were the reasons for continuation of the practice of open defecation. Further a large number of public toilets were under repair. In order to ensure open defecation free status in urban areas hygiene education may be promoted in all schools. Sustained Information, Education and Communication may also be taken up to sensitize the urban folk to correct behavior practices. All public or community toilets in urban areas may be made functional by carrying out suitable repairs, ensuring uninterrupted water supply and electricity. The maintenance of the public or community toilets may have to be entrusted to the Community Based Organizations.<sup>19</sup> Fringe areas of cities and colonies of economically weaker sections and slum dwellers should be covered with low cost sanitation facilities on community basis with pay and use system with adequate maintenance.

## **VII. Solid Waste Management in Tamil Nadu**

Solid Waste Management is one of the important obligatory functions of the urban local bodies as per 74th Constitutional Amendment.<sup>20</sup> The ultimate goal of urban Solid Waste Management is to collect, treat, dispose of solid wastes generated by urban population in an environmentally friendly manner using the most economical means available towards maintaining a garbage free environment in urban areas. According to the Eleventh-Five Year Plan, Government of India, the per capita waste generation in urban areas varies from 0.2 kg to 0.6 kg per day depending upon the size of population.<sup>21</sup> With the increase in population and changes in their lifestyle, there was an increase in the quantum of waste in the urban areas. The total quantum of waste generated in urban local bodies of Tamil Nadu during 2013-14 was estimated at 14,090 tonnes per day. Of the total waste generated per day in urban local bodies in the State 61 percent was from Corporations, 26 percent from Municipalities and 13 percent from Town Panchayats.<sup>22</sup> On an average, per capita waste generated in urban local bodies of the State was estimated at 400 grams. At present for collection and transportation of solid waste in Chennai Corporation, 320 compactors, 37 haulage tipper trucks, 177 tipper lorries, 12 mechanical sweepers, 57 skid steer loaders and 21 front end loaders were deployed. Apart from that the Corporation had also deployed 17,026 sanitary workers. For effective clearance of waste a Short Message Service reporting pattern of disposal of solid waste has been evolved for the field staff in the corporation. The existing landfill sites of Chennai Corporation at Kodungaiyur and Perungudi are more than three decades old and habitation clusters have emerged around these areas in due course of time. Therefore, the Corporation of Chennai has proposed for reclamation and scientific closure of these two dumping grounds. The Corporation of Chennai has taken action for setting up waste processing facilities at Minjur-Vallur and at Kuthambakkam for the processing of garbage generated at North Chennai and South Chennai respectively. The Urban Local Bodies in the State had taken many initiatives to bring about improvements in solid waste management services. In 11 Corporations and 124 Municipalities to collect the primary collection and transportation of waste, 199 tipper lorries, 175 dumper placer vehicles, 71 compactors, 58 front end loaders, 12 sullage lorries, 4,528 push carts, 857 tricycles, 10,420 bins were in use. To effectively use available plastic waste to the maximum extent possible and to avoid environmental degradation laying of road by using plastic waste has been taken up in urban local bodies.

During the last three years (2011-12 to 2013-14), 136 metric tonnes of plastic wastes have been utilized for laying 324.16 k.m length of road in Urban Local Bodies. A total sum of Rs.187.18 crore was allotted to Urban Local Bodies under Integrated Urban Development Mission to strengthen primary collection and transportation of municipal solid waste.<sup>23</sup> A special Solid Waste Management Fund with a sum of Rs.100.00 crore was constituted during 2013-14 to finance solid waste management projects in weak urban local bodies. In Town Panchayats more than 4,100 vehicles were involved in primary collection and 1,100 vehicles were utilized for secondary collection of solid waste. Apart from that 7,273 sanitary workers and over 4,400 Self Help Group members were involved in effective implementation of solid waste management. During 2012-13, to strengthen infrastructure facilities and purchase of vehicles in 46 Town Panchayats Rs.9.50 crore was sanctioned under Integrated Urban Development Mission. During 2013-14, a sum of Rs.15.59 crore was allotted for the above purpose.

### **VIII. Urban Poverty in Tamil Nadu**

Poverty is symptomatic of inadequate economic growth, unemployment, inequitable distribution of income and population growth. The urban poverty ratio in the State declined from 19.7 percent in 2004-05 to 6.5 percent in 2011-12. In both the years, the ratio of urban poverty in the State was well below the National level. Between 2004-05 and 2011-12, the reduction in urban poverty ratio was 13.2 percentage points. It is higher than the all India 11.8 percentage points. Only in Andhra Pradesh, Kerala, Madhya Pradesh, Maharashtra, Rajasthan and Orissa the decline in poverty ratio between these two years was higher than the State.<sup>24</sup> During 2011-12, the State had ranked third lowest in the incidence of poverty among the major States. The principal factor that could be adduced for the rapid decline in poverty ratio in the State was adoption of a three-pronged approach: promotion of economic growth, promotion of human development and targeted programmes of poverty alleviation to address the multidimensional nature of poverty. The Public Distribution System has also provided a safety net for the poor and food security.

The Swarna Jayanthi Shahari Rozgar Yojana aims at urban poverty alleviation by providing gainful employment to the urban unemployed through setting up of micro enterprise ventures, and promoting self-managed community structures like Neighborhood Groups, Neighborhood Committees and Community Development Societies in the State through its five components.

- Urban Self Employment
- Under Skill Training for Employment Promotion
- Urban Women Self-Help
- Urban Wage Employment
- Urban Community Development Societies.

These five components livelihood security for the urban poor by enhancing their capabilities and providing employment opportunities, housing and basic amenities, universal access to health and education, ensuring social mobilization and special homes to vulnerable groups with special emphasis towards women destitute and differently abled persons. The following table indicates the poverty ratio of all state in India

**Urban Poverty Ratios in Major States (Head Count Ratio)(%)**

State	2004-05	2011-12
Kerala	18.4	5.0
Andhra Pradesh	23.4	5.8
<b>Tamil Nadu</b>	<b>19.7</b>	<b>6.5</b>
Maharashtra	25.6	9.1
Punjab	18.7	9.2
Gujarat	20.1	10.1
Haryana	22.4	10.3
Rajasthan	29.7	10.7



West Bengal	24.4	14.7
Karnataka	25.9	15.3
Orissa	37.6	17.3
Madhya Pradesh	35.1	21.0
Uttar Pradesh	34.1	26.1
Bihar	43.7	31.2
<b>All India</b>	<b>25.5</b>	<b>13.7</b>

### **IX. Drainage in Tamil Nadu**

In respect of disposing waste water, 75 percent of the urban households had drainage connections. Of which 44.8 percent had access to closed drainage and 30.2 percent with open drainage. The remaining 25 percent of urban households in the State had disposed it in open place. This proportion at the all India was lesser at 18.0 percent. The open drainage networks were often developed on piece meal basis without proper planning, integration of main drains and plan for maintenance. Hence, they are often ineffective.

### **X. Conclusion**

Tamil Nadu accounted for 9.3 percent of the total population in the country. In this way the Government of Tamil Nadu is very keen on converting the vicious circle of poverty in virtuous cycle of development of urban areas. Tamil Nadu Urbanization trend is expected to intensify. During 2001 to 2011 urban population growth at 27 percent outpaced rural population which grew at 6 percent. A recent report estimate that the share of urban population in Tamil Nadu will increase from 48 percent in 2011 to 67 percent by 2020. Urbanization in India is quickened by Government failure to boost agriculture and improve economic opportunities in rural areas by shifting the terms of trade towards the farm sector.

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