

# Operating Performance of Kumbakonam Municipality for Urban Development

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## ABSTRACT

Urbanization is the outcome of 'economic' and 'demographic' growth process. The Twelfth Five Year Plan aims to achieve "safe and affordable housing and also inclusive, sustainable and slum-free cities" in Tamil Nadu. In this way the Government of Tamil Nadu is very keen on converting the vicious circle of poverty into virtuous cycle of development in urban areas. Kumbakonam is a second largest administration and special grade municipal town in Thanjavur district. Kumbakonam Municipality undertake the activities like water supply, sanitation, solid waste management, roads, street lights, slum development, market facilities, bus stand, Burial grounds and slaughter houses for urban development.

## 1. Introduction

Urbanization is the outcome of 'economic' and 'demographic' growth process such as broad-based Industrialization, growing real per capita income, division of labour, specialization, economies of scale, technological advancement, up gradation of skills, well-knit market network, emerging service sector, etc. among major urbanized states, Tamil Nadu is the number one slot in terms of degree of urbanization. An increasing urban population along with migration for wants of employment opportunities from rural to urban areas increases demand on various basic amenities in towns like drinking water, sewage, sanitation, housing and urban transport which are inadequate to meet the growing needs worst affect the urban poor, which cause the big 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. The Twelfth Five Year Plan aims to achieve "safe and affordable housing and also inclusive, sustainable and slum-free cities" in Tamil Nadu. In this way the Government of Tamil Nadu is very keen on converting the vicious circle of poverty into virtuous cycle of development in urban areas. The total fund earmarked for urban development during the Plan period is Rs. 54,408 corers which encompass Rs.12, 685 corers from the State and the anticipated flow of funds of Rs.17, 971 corers from the Government of India and Rs.23, 752 corers from other sources.

## 2. Objectives of the study

1. To know the Social and Demographic Characters of kumbakonam
2. To analysis the operating performance of kumbakonam Municipality for Urban Development.

## 3. Methodology

This study is based on secondary data, obtained from Final Report Conversion of City Corporate Plan to Business Plan for Kumbakonam Municipality June 2007. Simple statistical tool percentage used for this present study.

## 4. A brief profile of Kumbakonam

Kumbakonam is a temple city surrounded by over 188 historic temples and is famous for Mahamagam Festival celebrated once in 12 years, the town is a reglious centre, the two rivers Cauvery and Aresalar provide the North and South boundaries respectively. Kumbakonam is a second largest administration and special grade municipal town in Thanjavur district. It is also important for industrial (small-scale) and commercial activities since the last quarter of the 19<sup>th</sup> century.

## 5. Social and demographic characteristics

According to 2001 census, population of kumbakonam is 140,021. Total area of land is 12.5 sq. km. the following table 1 below shows the population trend of kumbakonam since 1951, because of limited land area, lack of industries and outward migration growth of population during the last two decades has slowed down.

Table 1: Population Trend of Kumbakonam

Year	Population		Decadal Growth rate %
	Population	Variation	
1951	91648	2460	36.81
1961	92581	933	1.02
1971	113130	20549	22.20
1981	132832	19702	17.41
1991	139449	6617	4.98
2001	140021	572	0.4

Source: Census of India

The urban agglomeration shows that overall literacy rate of kumbakonam is 86.36percent, female literacy is 76.76 percent and sex ratio was 1010 females per 1000 males. Compare with state average literacy rate and sex ratio of kumbakonam is favorable.

## 6. Economic Development

With total population, because of limited opportunities, workforce is only 30 percent, in this more than 60 percent

engaged in tertiary sector and less than 2 percent engaged in primary sector which indicate that there is a need to develop the economy. There is a large scale agricultural activity. The town is a religious centre famous for tourism which supports the activities like trade and commerce. In kumbakonam 194 industries exist. In this rice and flourmills are 57, two tobacco industries provide employment for 100 workers, handicraft activities like silk weaving and bronze sculpture promote employment and output to the town.

## 7. Development of Heritage and tourism

In kumbakonam more than 180 temples are there, in this 6 temples attract large number of devotees, due to this the floating population is high which require large amount of infrastructural development like modern heritage sites, hospitality, connectivity including transport, medical development, sanitation, etc. for the development of heritage and tourism.

## 8. Pattern of Land Utilization

The town extends for an area of 12.58 sq.km with the local planning area extending for 64.02 sq. km. table 2 explain the land use pattern in Kumbakonam. 32.09 percent of land use for

**Table 2: Land-use pattern in Kumbakonam**

Sl.No.	Type	Area (in Hectare)	% of total
1	Residential	403.68	32.09
2	Commercial	34.61	2.75
3	Industrial	15.27	1.21
4	Roads	125.44	9.97
5	Public and semi-public	81.46	6.48
6	Services and utilities	15.64	1.24
7	Open space and recreation	2.11	0.17
8	Vacant	17.18	1.37
9	Non urban use	562.61	44.72
	Total	1258.00	100.00

Source: Final Report Conversion of City Corporate Plan to Business Plan for Kumbakonam Municipality June 2007

residential purpose, 9.97 percent for roads, 2.75 percent for commercial activities, 1.21 for industrial activities, non urban use include the presence of rivers, lakes, water bodies, agricultural land etc, occupy major share of 44 percent. The city corporate plan (CCP) points out the need to direct commercial activities to the periphery of the town.

## 9. Operating performance of Kumbakonam Municipality

Kumbakonam Municipality undertake the activities like water supply, sanitation, solid waste management, roads, street lights, slum development, market facilities, bus stand, Burial grounds and slaughter houses for urban development.

### Water Supply

In early days, two schemes from river Cauvery (head works at Valayapettai) and river Coleroon (head works at Kudithangi) at a distance of 3.5 km and 11 km respectively but

these two supply only 7.78 MLD as against the requirement of 13.22 MLD (for a population of 150,000 at 90 LPCD), hence a new combined water supply scheme (with a designed capacity to serve 250,000 by 2026) implemented. With the financial assistance of Rs. 17 crore from HUDCO and TUFIDCO this scheme was done. Table 3 reveals Particulars of Water Supply

**Table 3: Particulars of Water Supply**

Source	Scheme I Coleroon (Infiltration wells)
Location of Head works	Kudithangi
Distance from the city	6 km
Collection well capacity	3 lakh litres
Yield	2000 LPM
No. of OHTs	5
Throughput capacity of OHTs	15 MLD
Distribution pipeline length	100 km
<b>Daily Supply</b>	
Domestic	15.8 MLD
Commercial	1 MLD
Number of public fountains	720
Estimated Loss of water	5%
<b>Service Connection</b>	
Water connections (Nos)	11,700
Coverage (% of properties assessed)	50%
Public stand posts (Nos)	720

Source: Final Report Conversion of City Corporate Plan to Business Plan for Kumbakonam Municipality June 2007

The water is drawn by pumping and transmitted to 9 Overhead Tanks which is located in various parts of the town. In early days water drawn from river Cauvery is directly transmitted to the town. Later, with the addition of water from Coleroon River it conveyed to Valayapettai Ground level reservoir, from where it is transmitted. The town is divided into 10 water supply zones with a total distribution length of 105 km. There are 9 Over Head Tanks (OHT) in different areas with a total capacity of nearly 7.5 MLD. Net water supply per day is nearly 16 MLD. Currently, total water connections are 11,700 with 720 public stand posts across the town.

### Sanitation

With the assistance of Rs.60 corer from the National River Conservation Directorate (NRCD) Kumbakonam Municipality implementing an Underground drainage scheme (UGD).

**Table 4: Sanitation**

% of households	
Septic tanks	62 %
Low cost sanitation	4 %
Public conveniences	5 %
Total	71 %
% of households without access	29 %

Source: Final Report Conversion of City Corporate Plan to Business Plan for Kumbakonam Municipality June 2007

For this nearly 80 km of the pipeline for the project has been completed with nearly 25 km work in progress. Table 4 provides details of the existing sanitation facilities in Kumbakonam. According to this, 62 percent of the people have septic tanks, 9 percent have low cost sanitation. Nearly 29 percent of the people do not have organized sanitation facilities.

### Management of Solid Waste

Out of 85 Million Tons (MT) of solid waste per day generates by kumbakonam, nearly 75 MT (or 88%) is collected. Table 5 gives the information about solid waste management. In Sesambadi villages about 12 km from the town the disposal yard is located and is not adequate (vis-à-vis the norm of 1 acre per 1000 population), the city corporate plan (CCP) suggest that for 100 percent coverage of solid waste management the Kumbakonam Municipality adding another 15 acres of land with additional equipment for waste collection and the CCP also suggest the need for private participation like NGOs for better performance.

**Table 5: Solid Waste Management**

Generation /day	
Domestic	32
Commercial	22
Industrial	11
Public and semi public	14
Market waste	10
Total	89
Collection / day	75 MT
Disposal yard / area	1/5.6 acres
Method of disposal	20 T per day through anerobic composting

Source: Final Report Conversion of City Corporate Plan to Business Plan for Kumbakonam Municipality June 2007

### Roads and transport

Table 6 shows the road network under the jurisdiction of Kumakonam Municipality

**Table 6: Road Network**

Type	Municipal Roads		State Highways		Total	
	Km	%	Km	%	Km	%
BT. Roads	78.19	64	18.71	100	96.90	69
Cement Concrete pavement	19.75	16	-	-	19.75	14
W.B.M roads	8.85	7	-	-	8.85	6
Earthen Roads	15.5	13	-	-	15.5	11
Total	122.29	100.00	18.71	100.00	141.00	100.00

Source: Final Report Conversion of City Corporate Plan to Business Plan for Kumbakonam Municipality June 2007

Road network of Kumbakonam Municipality is 122 km in this 80 percent is surface roads (both B.T. and CC). In addition, about 18.7 km of highway roads traverses the Kumakonam Municipal limit, because of ongoing underground drainage project and heavy rains the roads are in bad condition. The Vision Plan of kumbakonam mentions that Rs. 530 lakhs need for the improvement of 59 km of roads.

### Street lights

Table 7 shows the Existing Street Lighting Facilities provided by the Kumbakonam Municipality. In this 66.7 percent are tube lights and 32.7 % are sodium vapour lamps, for interior streets tube lights are provided and for major roads and junctions sodium vapour lamps are provided. The average length of street light post is between 23 meter as against the municipal norm of 30 meter.

**Table 7: Existing Street Lighting Facilities**

Street Lighting	Total	
	No	%
Sodium Vapor Lamps	1420	32.7
Mercury Vapor Lamps	17	0.4
Tube lights	2897	66.7
High Mast Lamps	9	0.2
Total	4343	100.0

Source: Final Report Conversion of City Corporate Plan to Business Plan for Kumbakonam Municipality June 2007

## 10. Other facilities

### Market facilities

Three important markets operate for people; in addition to this Uzahavar Sandhai also operate to

meet the vegetable needs of people, in all markets there are heavy congestion. In Darasuram, a new market has been constructed with Rs. 5 corers and with 1 corer the existing fish market modernized by the Kumbakonam Municipality.

### Bus stand

A new bus stand with over 50 bus bays operate since 1995, the bus stand provides a range of facilities to the commuters. The city corporate plan of kumbakonam municipality shows that infrastructure of bus stand is sufficient to meet the needs of the people.

### Burial Grounds

Kumbakonam Municipality maintained 4 burial grounds with roads, lighting, water supply and burning sheds facilities located adjacent to the river front, they pose environmental hazards. In few there also a new Electric Crematorium.

### Slaughter house

With limited facilities 3 slaughter houses exist, hygiene conditions of these are not satisfied, the city corporate plan of

kumbakonam municipality observes that modernization of slaughter houses must be needed.

### **Development of Slum**

With growing population the number of slums and the number of people living slum area is also growing which cause a big challenge for urban development hence, Kumabkonam Municipality take the survey on 45 streets / areas in 31 wards in the town, as per the survey there are 45 slums in kumbakonam, estimates that Rs. 90 corers would be required for slum rehabilitation and resettlement of which Rs. 13 corers has been already sanctioned.

### **11. Conclusion**

Kumbakonam municipality play a predominant role for Urban Development, but lack of technical capacity at all levels throws challenges on planning, monitoring and implementing the urban development programme, for enhancing their responsiveness, managerial and technical capabilities, periodic training, skill assessment and skill upgradation initiatives need to be undertaken. To meet the skill deficit in short term, hiring consultants from private sector through a fast track process may be thought of. To address the problems of urban infrastructure like provision of affordable housing, supply of safe drinking water, solid waste disposal management, urban transportation, rehabilitation of slum population and eradication of urban poverty there is a need for effective intervention of the Government.

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