

An Assessment of Social Infrastructure in East Zone of Surat City

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ABSTRACT

Social infrastructure plays a significant role in the citizen's comfort and satisfaction. It improve a quality of life and service. for that, the social infrastructure plays a important role . The social infrastructure deals with the aspects of health-care facilities, education facilities, socio-cultural facilities, recreational facilities and open spaces, distributive services and, safety management. Surat is on a path to become a smart city, for the growth of the city availability of social infrastructure is an essential. Thus, The distribution of social infrastructure according to the norms and standard is among important goal for surat municipal corporation. Due to the growth of population , the require of social infrastructure increases and oppress happen on the existing infrastructure.

Keywords— *Infrastructure gap, health facility, socio-cultural, social infrastructure*

1. INTRODUCTION

The term 'infrastructure' seems to be of relatively recent origin. It has been derived from the French language in the 19th century, perhaps as early as 1875. The word 'infrastructure' is a combination of two words 'infra' means below 'structure' means form. It can be defined as the set of interconnected structural elements that provide supporting framework of an entire structure of development. Every nation strives to fulfill the basic needs of its citizens and accomplishes higher growth rates. Infrastructure contributes towards fulfilling both objectives. Physical infrastructure directly supports economic growth and social infrastructure helps in improving the quality of living standards of the community. The social infrastructure deals with the aspects of health-care facilities, education facilities, socio-cultural facilities, recreational facilities and open spaces, distributive services and, safety management. Current work is aimed at performing an analysis of demographic and in relation to that, exploration of gaps in the existing social infrastructure referring to Urban and Regional Development Plan Formulation Guidelines (URDPFI) of Government of India.

2. STUDY AREA PROFILE

Surat city is situated at latitude 21°12'N and longitude 72°52'E on bank of river Tapi. General terrain of the city is 13 Mt above the MSL. It is situated in a well-developed region of the Southern Gujarat. Surat Municipal Corporation (SMC) has practiced Zonal systems for public administration, following a functional decentralization approach of services management . The whole Surat city has been divided into 7 zones . Here, the assessment of social infrastructure is discussed. The urban area of surat has witnessed a huge rise in the population over past decades. The overwhelming population increase is a result of in migration caused due to

enormous economic opportunities and the extent of industrialization in the Surat city. The demographic information past few decades population of Surat city are shown in table.

Table 1 Demographics of Surat city

Year	1991	2001	2011	2021
Population	14,66,187	27,06,243	44,44,691	59,50,831

(source: [World Urbanization Prospects](#) - United Nations population estimates and projections of major Urban Agglomerations)

Surat's 2018 population is now estimated at 6,563,585. In 1950, the population of Surat was 233,565. Surat has grown by 892,661 since 2015, which represents a 4.99% annual change. These population estimates and projections come from the latest revision of the UN World Urbanization Prospects.

Area and population distribution of various zone are given in below table.

Table 2 Zonal distribution of area and population

No.	Zone	Area (In sq. km)	Population (2001)	Density	Population (2011)	Density
1	Central	8.18	4,13,641	505.67	4,08,760	499.71
2	South-West	111.912	2,42,466	21.67	3,47,447	31.05
3	South	61.764	4,07,980	66.05	6,95,028	112.53
4	South-East	19.492	3,97,257	203.81	7,48,304	383.90
5	East	37.525	7,11,516	189.67	11,37,138	303.03
6	North	36.363	4,16,370	144.50	7,05,163	193.92
7	West	51.279	2,87,144	56.00	4,24,986	82.88

(Source: Surat Municipal Corporation)

Below is the information about the population in constituent administrative wards of the East zone of Surat.

Table 3 Wards of East zone with population

No.	Ward	Year 1991	Year 2001
1	Ashwini Kumar – Navagam	43136	76906
2	Fulpada – Hirabag	56215	68602
3	Fulpada North	19748	70492
4	Kapadra – Nana Varachha	20401	74741
5	Karanj West	26885	75756
6	Karanj North	58478	68439
7	Umarwada – Magob	48166	71195
8	Karanj South	36891	73976
9	New Ward	0	14564

10	New Ward	16885	118691
	Total	326805	713362

(Source:Surat Municipal Corporation)

Town Planning

The government of Gujarat uses T.P. Schemes tool for land management. The Gujarat Town Planning and Urban Development Act, 1976 includes two type of planning, (1) Development Plan which included broad land-use of an area, (2) T.P. Scheme which deals with detail planning. Public use is included in T.P. Schemes as reservation. Public use included social infrastructures like school, Health center, and Community Hall under section 40.

There are total 128 T.P. Schemes included under the boundary of Surat city, as per status of August 2018. Out of total 51 final, 18 preliminary and 59 drafts T.P. Schemes and reaming T.P. Schemes are draft submitted to the government as per [4]. Besides, The Town Planning Department at SMC is also involved in other task related to planning. According to the needs of the city/corporation the proposals of D.P. and T.P. Schemes are made.

3. DATA COLLECTION

Data collection was done to assess the existing number of social infrastructure in the study area. According to the URDPFI guidelines, social infrastructure includes educational facilities; healthcare facilities; socio-cultural facilities; open spaces; sports facilities; distribution services; police safety; and safety management. Information was collected with the help of Surat Municipal Corporation.

There are many facilities are available in surat city but there is only one performing art centre which is constructed on L.P Savani Road, Adajan, Surat consists of Auditorium, Recording Room, Dance Room, Music Room, Sculpting Room and Drawing Room are assembled in 2575 square meter area which falls under T.P Scheme No. 32 (Adajan) Final Plot No.90 having overall Plot area of 6813 square meter.

According to URDPFI, 2014 guidelines and obtain identical requirement of facility as per guiding norms. Set parameters were as for the social infrastructure, like 1 Preprimary school for 2,500 population, 1 primary school for 5,000 population and 1 senior secondary school for 7,500 population and 1 music, dance and drama centre for 1 lakh population and 1 meditation and spiritual centre for 1 lakh population as on.

Table 4 Required social infrastructure

Sr.No.	Category	Population Served Per Unit	Land Area Requirements
1	Music, dance and drama centre	1 Lakh	1000 Sqm
2	Meditation and spiritual Centre	1 Lakh	5000 Sqm

(source: URDPFI)

Table 5 Available social infrastructure in East zone

Sr.No.	Category	Population Served Per Unit
1	Music, dance and drama centre	0
2	Meditation and spiritual Centre	0

(Source:SMC)

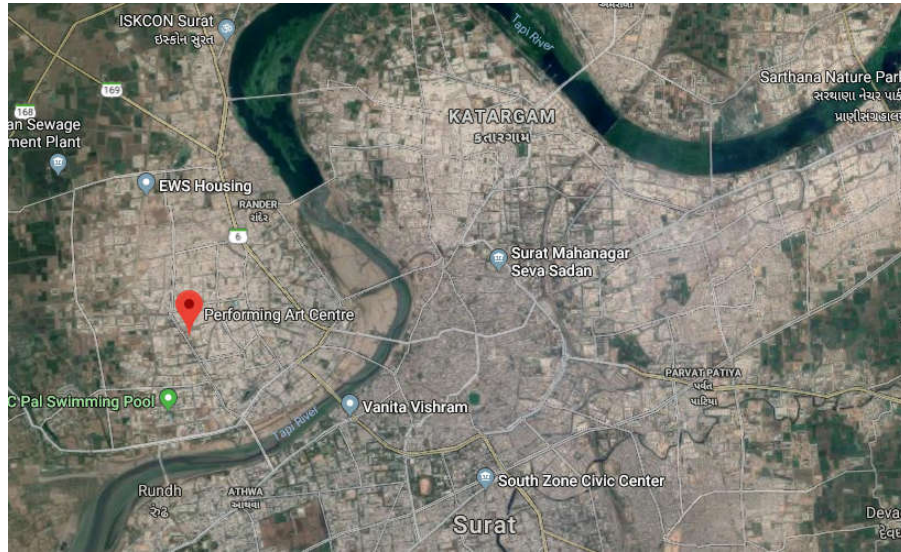


Figure 1 Present performing art centre (source: Google image)

4. GAP IDENTIFICATION

Gaps were identified considering the norms suggested by the URDPFI guidelines, 2014. The ideal requirement for various social infrastructure was found using the predefined norms in the guidelines. For example, a pre-primary school for 2,500 population, a library for every 15,000 population, a community park for every 1,00,000 population, a maternity home for every 45,000 population, a fire station for every 2,00,000, a police station for 90,000 population and so on. For example, gap identifications of performing art centre is shown as below:

Table 6 Gap Identification

Sr.No.	Category	Existing	Require	Population Served Per Unit	Land Area Requirment
1	Music, dance and drama centre	0	7	1 Lakh	1000 sqm
2	Meditation and spiritual Centre	0	7	1 Lakh	5000 sqm

According to URDPFI 2014, 7 music, dance and drama centre, 7 meditation and spiritual centre require in east zone of surat city. The gap identification by comparing existing provision with norms and standrard based recommended requirements were obtained. For the development of any area, check on availability of social infrastructure is sufficient so that by doing gap analysis we can find scarcity of social infrastructure of East zone of Surat.

5. CONCLUSION

Development of any urban area dependent upon their current population and future planning of area depends upon their population projection for next 10 year as per URDPFI guideline. SMC estimate population by constant growth rate of Surat city. Surat city is not having this kind of strategy every zone having different population. This affect the growth of the city. Crucial findings include a considerable deficiency in the educational facilities, open spaces, police station coverage, and socio-cultural facilities. Lack of infrastructure make less growth of town. It is a general thought that the social infrastructure has prime importance towards achieving sustainable communities.

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