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Identification of public realm aspects in connection to the trends of urbanization in Indian cities

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ABSTRACT

If the population keeps growing and lands are desired, there is always a need to explore the numerous directions of how the city immediately emerges. The new trend for future development and urbanization is higher density development. The barrier between advocacy of higher density environment and social sustainability asks for a descriptive and systematic interpretation for inclusive growth. The paper discusses the dynamics of urbanization trends and the immediate attention that has to be considered to ensure quality public life through understanding and finding the aspects of public realm. This work investigates several ways of how the public spaces are manifested and understood. The intent of the paper is to identify the aspects of public realm which could contribute to a resourceful organization of public spaces.

Keywords: rapid urbanization, population growth, quality of public realm, public spaces.

1. INTRODUCTION

Due to urbanization, the city's population is increasing rapidly and the present pattern of growth is leading to urban sprawl. According to (Khurana, 2011) the improvement of living criterion's is the intent of progress. "Quality of living can be understood as the extent to which cities provide conditions to live favorable to physical, social, mental and spiritual safety and health" (Eckersley, 2013). Referring to (Eckersley, 2013). "Quality of living is both unbiased and biased, and is how individuals experience the physical conditions where they live in" (Eckersley, 2013). As the city forms get denser the need to improve its economic and environmental sustainability along with the regular changes in function and form (Partners) occurs. The author (Partners) mentions that "the current dominant model of progress – material progress – regards economic growth as paramount because it creates wealth which is needed for the living quality to progress, increasing individual choices, opportunities and meeting community needs and national goals". The modification and development of communal customs and behavior are a share of the social sustainability according to (Partners). Therefore, change is an essential factor that influences the sustenance of a community.

The idea of social sustainability is grey and ill-defined yet is the central aspect. Designers work to organize the built environment for use by people. Community sustenance is mandatory for designing to be justified. Even with regards to three columns of sustainability, social aspect is the one which is most neglected. As per the divisions of sustainability (a) **Environmental sustainability** is the amounts of renewable resource yield, created pollution, and non-renewable reserve lessening that can be persistent forever. (b) **Social sustainability** is the capability of a place/city/country, to attain at a distinct level of social welfare for life. (c) **Economic sustainability** occurs when a political component, such as a nation, has the desired percent of its population below its preferred standard of living equal. The percent needs to very low, somewhere around 5% or less.

To achieve the goals of social sustainability objectives such as social inclusion, enhancing quality for the community, efficiency, compactness, accessible and inclusive communities are central. The social dimension can be seen both as an amalgamating component and as means for maximizing the power of the relationship between environment, society, and economy. Jan Gehl quotes that "The public components of our life's is disappearing because of privatization in our society". It is essential to enhance the experience of places in order to promote and foster the social interaction of people in cities. He tries to explain that Public life of people is a basic factor that determines the **quality of experience of a city**, for which the city should provide its people with **worthy public spaces** that can act as a promoter for **increasing the of public life and public activities**. The quality of Public spaces depend on the public realm of each place or space with regards to which the efficiency or the experience of the communal life varies in cities. Various literature reviews and social theories have been analyzed, understood and criticized to understand the factors responsible for the impacts or effects of urbanization on the public spaces.

2. AIM, OBJECTIVES, RESEARCH QUESTION & METHODOLOGY

2.1 Aim

“To understand and analyse the transformation of urbanization trends of Indian metropolitan cities and identify the aspects that influences the efficient use of public realm”

2.2 Research Questions

- (a) What are the patterns of urbanization in Indian metropolitan cities?
- (b) What are the aspects of public realm?

2.3 Objectives

- (a) To understand the urbanization trends and identify the position of Indian metropolitan cities in accordance to the current urbanization pattern.
- (b) Identifying the aspects of public realm to tackle its quality with the rapid pace of urbanization.

2.4 Methodology

The procedure of understanding the tendencies of urbanization and growth of Indian cities has been understood through research papers, books, statistical data which explains the patterns and the modulation in which the Indian cities have been growing and developing. Later to understand the current trends of population increase and development in metropolitan and other selected cities, they have been analyzed through the data inferences and the results about the city’s growth trends were studied to understand the complexity and rate at which these cities have been experiencing the population explosion and growth. *Public place survey, street survey and professional survey* were conducted from which the qualitative data was analyzed which were used to infer out conclusions about the people’s perception and aspiration towards urban public spaces. Then finally from the literature reviews and primary surveys, the relevance of public realm in city with the pace of urbanization is understood, with which the further analysis with the key findings from all the literature, best practices and case studies were categorized and aspects of public realm were identified and recommended for the sustainable and effective usage of public places.

3. LITERATURE BACKGROUND

3.1 Urbanization - Study and Analysis:

The Globalization has steered the economy across the globe and movement of the people, product, capital etc. in a faster and easier manner. Urbanization comes into full swing as a consequence to Globalization (Haas, 2014). The urbanization as a concept, is an essential part of the process of development. Both Industrialization and growth of urban population are always together (Dr. Joan Clos, 2011), similar to agriculture and villages, industry and growth of towns. There exists an association between growth of urban population and economy, for which a good example is, the developed or industrialized countries and a few developing countries. As a result, most of the population started to migrate to cities, towns and other urban areas which have facilitated the evolution of knowledge and have been the initiators of older settlements and the growth engines (Singhsodhi, 2003). The urbanized population in almost every country will grow, most of the world inhabitants live in places that are urban.

The idea of growth in India started earlier in 1950, when only about 30% of the population of the world is living in places that are urban, which were increased to above 50% in 2012. The exponential increase has estimated that by 2030 more than 75% of world population will be in urbanized areas. The term ‘urbanization’ means the accumulative share of a country’s inhabitants living in cities [and thus a declining share living in rural areas]. A country’s urban population can develop from natural growth [births minus deaths].

According to the India, Census is defined an urban area consists of, (a) Statutory Towns are the areas with a Corporation, Cantonment Board, Municipality etc. (b) Census Towns (Srinivasan, 2017) are towns which has the criteria of 5000 minimum population; at least 75% working population (male) occupied in non-agricultural occupation; and a density of four hundred people for every square kilometer.

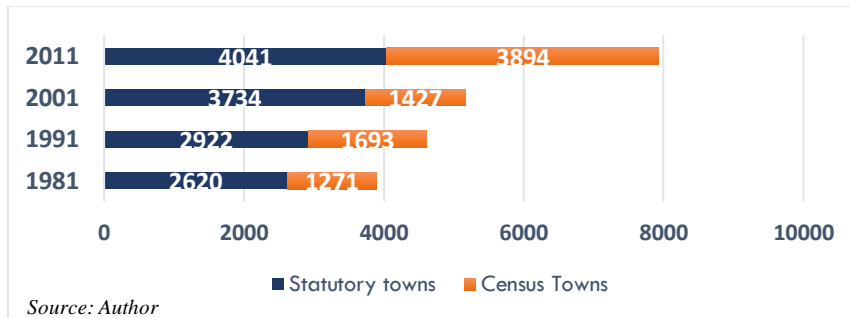
The progress of areas of urban in India is through two ways, one is natural increase in urban population and the second one is through migration, which is result of out migration from small towns/cities to big metropolitan cities. However, in the 1990s, i.e. when the Indian government opened their economy, there seen a rise in swift economic growth of the country. But this economic growth was more of urban growth, which led to rapid immigration of rural population to urban areas. In the year 1951, only five cities were having people more than 10 lakhs, which increased to 52 cities in the last census year (2011) and by 2031 it is believed that, it will be 70 plus cities with more than a million populations. Likewise, there are three cities with more than 100 lakhs population in 2011, and it was projected that six cities will have 100 lakh by 2031. Thus, it was estimated that the overall people who live in areas which are urban by 2030 will be 610 million, which will account for the 40% of the total population of the country. Numerous cities in India, are becoming tremendously congested and if we glance at the 20 most dense cities across the globe, out of which five will be from India including, Kolkata and Mumbai . (JAS, 2016)

Fig. 1: Population growth and increase in number of census towns, (Source: Census of India,2011)

Year	Total Population (in crores)	No. of Towns/UAs	Urban Population (in crores)	Share of Urban Population to Total Population (%)	Decadal Growth of Urban Population (%)
1951	36.11	2,843	6.24	17.3	41.4
1961	43.92	2,365	7.89	18.0	26.4
1971	54.81	2,590	10.91	19.9	38.2
1981	68.33	3,378	15.95	23.3	46.1
1991	84.63	3,768	21.76	25.7	36.4
2001	102.86	5,161	28.61	27.8	31.3
2011*	121.02	7,935	37.71	31.16	31.8

Fig.1 representing the population growth (span of 10 years), number of census towns & urban agglomerations in India, from 1951 – 2011, out of which from the number of towns/urban agglomerations has outgrown commencing from 5161 to 7935 within 2001 to 2012, and 2774 towns/urban agglomeration have increased.

Growth of population and current trend of urbanization of Indian cities shows the evidences of increase in the geographical area of the town adding the surrounding villages or census towns into their administrative regime, which is a factor to think as cities also has to maintain the quality of public life which plays one of the important role at the worldwide scale, as many global cities have started preparation and implementation of policies, strategies and guidelines for maintain high quality public realm and public life of cities to match with the pace of development and growth of their cities. 31% of the population in India are in urbanized areas in 2011. The total towns have leaped from 5,160 to 7,935 amid 2001 & 2011, 2,775 town have increased. Indian metropolitan regions are the cities with high population and economic contribution to the country, which are also at a swift pace of urbanization from past few years. The dynamics of growth in population and densities of these cities are major factor to understand and analyze for attaining overall progress of cities in the field of efficient development and urbanization that includes provision of quality public life for people that make places more functional and socially sustainable. The number (million-plus) cities have increased suddenly, by 18 in number during 2001-2011; amongst which eight are 5-million plus (GoI, 2011).



Source: Author

Fig. 2: Represents the increase in statutory and census towns.

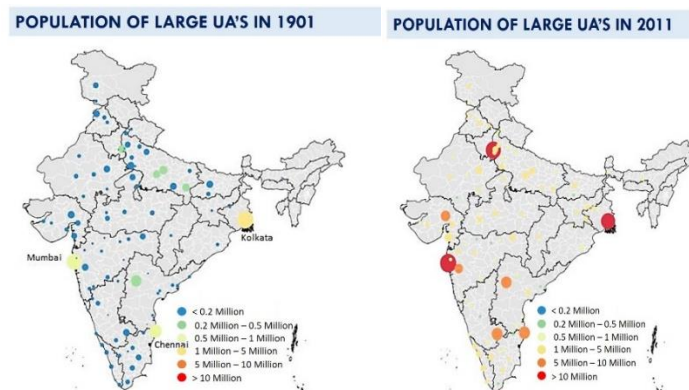


Fig. 3: Illustrates the massive increase in population across India from 1901 to 2011

Out of the complete population 43 percent live in urbanized areas, up from 37.8 percent in 2001. The population growth is being accounted by the natural growth mostly, after which the migration and other reasons fall as a main cause for the population increase in Indian cities. The figure 1 represents the upturn in people from 1901 – 2011 which also shows an evidence for the population explosion majorly in metropolitan cities of India. *The urbanization of Indian metro cities must be catered along with social inclusiveness for social sustainability of cities.* Public realm aspect of social dimension Quality of public spaces can enhance the overall experience of the city and its citizens. Growth rate of metropolitan cities with its current trend of urbanization trends have been compared to infer upon the cities that shows positive rate of growth of population with the change in urbanization trends and densities have been considered for the additional confirmation about the overall status of the city.

Figure 4 representing the population projections made by the census of India and HPEC, the actual urban population registered in 2011 has left all projections way behind.

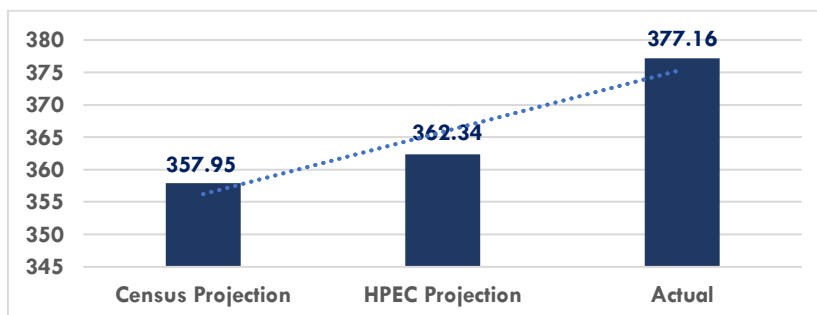


Fig. 4: Representing the population projections

Source: Author

The cities contributing major population to those states were identified out of which the cities with population of above 5 million in 2011 were selected for the analysis. There are 15 cities on total with population above 20 lakhs from the selected states. There are 8 cities from the selected cities above population of 50 lakhs according to the latest census. Out of those three cities are 10 million plus cities namely, *Delhi, Mumbai and Kolkata*. Study of the selected 8 cities with overall statistical data analysis was done to find out the sequential order of the cities based upon its growth and Urbanization trends.

The states that contributed to major population and high density in 1991 were, Andhra Pradesh, west Bengal, Kerala, Tamil Nadu, Maharashtra, Gujarat, Karnataka, Uttar Pradesh, Chandigarh, Delhi, Bihar and Madhya Pradesh (Fig.5)

The top cities of India with population of 5 million plus in the year 2011 were selected and the growth trends were analyzed for sequentially arranging the selected cities by their growth tendencies and rates.

S.NO	STATE	1991	2001	2011
1	Andhra Pradesh	66.50 Lakhs 242 (P/Sq.km)	76.20 Lakhs 277 (P/Sq.km)	84.60 Lakhs 308 (P/Sq.km)
2	Maharashtra	78.93 Lakhs 257 (P/Sq.km)	96.90 Lakhs 315 (P/Sq.km)	1.12 Crore 365 (P/Sq.km)
3	West Bengal	6.8 crore 767 (P/Sq.km)	8.02 Crore 903 (P/Sq.km)	9.13 Crore 1028 (P/Sq.km)
4	Tamil Nadu	5.6 Crore 429 (P/Sq.km)	6.2 crore 480 (P/Sq.km)	7.21 crore 555 (P/Sq.km)
5	Kerala	2.9 Crore 749 (P/Sq.km)	3.1 crore 819 (P/Sq.km)	3.3 Crore 860 (P/Sq.km)
6	Karnataka	4.5 Crore 235 (P/Sq.km)	5.29 Crore 276 (P/Sq.km)	6.10 Crore 319 (P/Sq.km)
7	Bihar	8.6 Crore 497 (P/Sq.km)	8.3 Crore 881 (P/Sq.km)	10.4 Crore 1106 (P/Sq.km)
8	Uttar Pradesh	13.10 Crore 473 (P/Sq.km)	16.62 Crore 690 (P/Sq.km)	19.98 crore 829 (P/Sq.km)
9	Madhya Pradesh	6.60 crore 149 (P/Sq.km)	6.30 Crore 196 (P/Sq.km)	7.27 Crore 237 (P/Sq.km)
10	Delhi	94.21 Lakhs 6352 (P/Sq.km)	1.30 Crore 9340 (P/Sq.km)	1.68 Crore 11320 (P/Sq.km)
11	Chandigarh	6.42 Lakhs 3632 (P/Sq.km)	9.17 Lakhs 7900 (P/Sq.km)	10.50 Lakhs 9260 (P/Sq.km)
12	Gujarat	4.10 Crore 211 (P/Sq.km)	5.70 Crore 258 (P/Sq.km)	6 Crore 308 (P/Sq.km)

Fig. 5: Indian states with their respective population and densities (Source: Author, Census of India)

3.2. Issues related to public realm with Increasing population and density

The present configuration of growth also in turn reciprocates several bi-products which has an impact on the public realm of cities and social life of people. The influence is that urbanization, growth rate, increase in density, etc. have an impact directly or indirectly on the social life of people, which has in turn, decreased the social inclusiveness / the public life of people affecting the overall social structure in a city. Another factor is increase in density of use i.e. a greater demand on the features of public realm are placed by people, which is increase constantly.



Fig. 6: Cities contributing to major % of population (Source: Author, Census of India)

3.3. Public Space – Definition

Any built space or natural environment to which access is not restricted is termed as public space (Almatarneh, 2014 February). (or) These are simple and straightforward definitions that are easily understood, the first focusing on whether space is free and unrestricted to enter, and the second on the Physical (open) nature of that space. **Activity - Definition:** An organizational unit of

performing specific or random function. It has one of the essential roles which is the important attribute of public space, as it enriches or makes the place/space efficient and useful.

3.4. Public Space – Categorization

(a) **External ‘public’ space** – the land between reserved landholdings e.g. squares, forests, highways, parks, streets, water bodies, coastlines etc. These are all spaces that, in principle, are accessible and available to all. This is public space in its actual form.

(b) **Internal ‘public’ space** – various public institutions like museums etc., most public transport facilities.

(c) **External-internal quasi - ‘public’ space** – they are lawfully private but public in nature, like university campuses, grounds, restaurants, cinemas, theatres, nightclubs, and shopping malls. This category also includes privatized external public spaces. As the owners and operators of all these public spaces hold rights to control entry and conduct within these spaces, they are only nominally public (Vranic, 2013).

According to (W.H. Whyte, 1980) the qualities of social place that attract people are weather, eateries present, stimulus, usability, variety of activities, variety of people, streetscape/landscape elements; the factors affecting “people gathering” in public spaces are no proper shade, disturbance by vendors, lack of greenery, lack of safety, lack of gathering spaces, lack of accessibility, lack of connectivity, under trees, parking and ledges, pedestrian pathway, road accessibility; the relationship between physical features and activity: human scale, permeability, landmarks, connectivity and enclosure. According to the high activity level and major efficient use of space can be considered as major contributor of success to a public space.

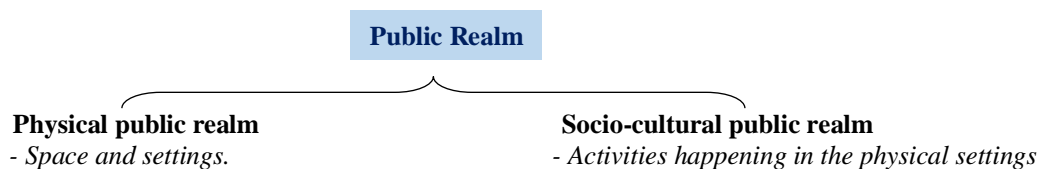
3.5. Public realm

Public realm means the series of spaces and settings – which may be public or private owned – that strengthen the public life and social interaction. The actions and happenings occurring there can be called as the communal and ethnic aspects of the public realm according to (council, 2005).

3.6. The Social dimension

Space and society are visibly related: it is challenging to perceive of ‘space’ as being without community satisfaction and, likewise, of society without a spatial component according to (Římanová, 2010 November). Consideration of the interconnection between people and their surroundings starts with architectural or environmental determinism, where the physical environment has a determining effect on human activities. Social process happens neither in a vacuum, nor against a ‘neutral backdrop’, and the built environment is thus both the medium for and the result of social process and change. According to (Matthew Carmona, 2003) by shaping the built setting, urban designers dominate the patterns of activities and, thus, of social life. For example, social relations can be: (a) **Constituted through space** – where site characteristics influence settlement form; (b) **Constrained by space** – where the physical setting enables or hinders human activity; (c) **Mediated by space** – where the distance enables, or inhibits, the progress of various social practices.

While designers can manipulate functional and cognitive cues to increase the probability of (more) respectful behavior in public spaces, what can be attained through design is inevitably limited. J. Jacobs and W.H. Whyte (supposedly) believed that: ‘**Good streets, sidewalks, parks, and other public spaces highlight the finest in human nature and provide the settings for a civil and civil society. Everything will be fine if the design is right.**’ Public realm can be differentiated into two groups as follows:



There are Five Main Features of Urban Design’s Social Element which are - connection between people and space; interconnected perceptions of the ‘public life’; concept of localities; safety and security problems; accessibility concerns. These aspects cover the overall picture of physical and social characteristics of city and people and space/place, which ultimately delivers the needs, wishes, and aspirations of people towards the place or what city can provide for its people with respect to efficient and quality urban public spaces (Mostafa Behzadfar, 2012). People influence and change the environment; as it influences and changes them. Human behavior is therefore inherently situational; it is embedded in physical and in social, cultural and perceptual contexts and settings. The degree of environmental influence can be categorized and explained as follows: **Environmental Possibilism** - Where people choose among the environmental opportunities available to them, **Environmental Probabilism** - With a change in the environment, behavior of people also changes.

3.7. The Decline of Public Realm

In 1996, Ellin observes that many social functions that happen in public spaces have been shifted to privatized (individualized and private form). Conflict between public spaces and mechanized movement (car) –Private control over public spaces started. Disengagement of public spaces and public facilities. Decline of public realm & end of public culture and factors leading to them like social, Political and economic were documented by ‘The fall of public man’. Excessive intensity of users due to rapid increase in population and urbanization, which in turn affects the quality of public realm in public spaces. Social dimension raises issues concerning values and choices about effects of design decisions on individuals and groups in society.

3.8. Impacts of improving public realm

Improving public realm can create both positive and impact impact on the place and its surroundings, depending on its design. The direct impact is to create quality public spaces to improve the well-being of people and the indirect impacts include creating quality public spaces that will draw different people to the area, boosting social interaction and local economy.

4. LITERATURE CASE STUDIES AND BEST PRACTICES

4.1 Urban Structure, Design & Public Realm Qualities – Dun Laoghaire, Rathdown county

(LAP) Local Area Plan objectives were framed to develop two parcels through a combination site-specific and responsive natural and ethnic assets, architectural diversity, and distinctive public realm with a neighborhood core. To prioritize existing physical elements to bring in a legible order is the base structuring principle. In general Landscape Elements & Greenways; View Corridors; Protected Structures; Neighborhood / Community Hubs; Civic Space were the proposals. The objectives that they framed to achieve the desired goals and visions were, to ensure high quality public realm in conjunction with high density and to establish a coherent urban social structure to promote social inclusiveness and high quality of living.

4.2 Best practices of investing in The Public Realm- Toronto- Jeff Biggar

The focus of the study (Biggar, 2015) was to create a connected public realm surrounding key cultural institutions in the city and concentrating on the execution and management of the projects as City builders are brimming with ideas to catalyse public spaces but in execution encounter constraints. The major factors that they have considered are: Design (Aspirations and Visions), Planning and development (policy & regulation process), Use (context of space), Governance (stewardship, maintenance and funding)

The core reason behind the need for such a kind of study was, due to rapid urbanization and development, citizens find themselves in denser spaces and there is an increase in use of these spaces, “effect of use density: should be considered with far more considerations. Developing strategies for public realm are important for “guiding and directing development to support efficient connectivity between building and streets. The various benefits of improving public spaces anticipated were Environmental (contact with nature), Health (noise and pollution reduction), Social (sense of community, entertainment and leisure), Political (sharing of ideas and debate), and Cultural (exchange of values/traditions/expressions).

The framework followed by them included two main aspects: (a) Cultural planning: Leveraging cultural assets to support cities social and economic benefit. Culture encompasses the physical, natural and intangible manifestation of the way of life of people, (b) Place making: The thrust behind the concept is to enhance the public realm surrounding public realm, so that people will make use of them and to gain identity/vibrancy to place to get more people. (c) Cultural Landscape: It facilitates the interaction between the human population and natural environment, Natural landscape combines with cultural features such as objects, paths and viewpoints.

4.3 Major Parameters of Public Space & Public Realm - Literature Analysis and Inferences

The factors influencing the Public life due to Urbanization, increasing densities and growth rate have been finalized through analysis of various literature study inferences, case studies and survey analysis. The identified parameters are listed below and has been briefly explained:

A. **Diversity:** (*Age Groups / Land Use /Activities / Street Life*)

Diversity refers to variety in general, which here we use for the promotion of social life / public life in cities through diverse activities, provision of diverse user groups, use of diverse land use and may other that can create an interactive environment for public to relish their city spaces.

B. **Accessibility:** (*To Streets, Buildings & Public Transport*)

Accessibility to a place or from a place is one of the most crucial aspects of the city, as it provides the easiness with which people travel or reach any place. Not only longer distances but even accessibility between streets and buildings which in turn promotes efficient walkable precinct.

C. **Massing & Scale:** (*Enclosure & Proportion*)

The comfort aspect of the people is an important factor that depends upon the psychological emotion of people, while using public spaces, massing and scale creates the sense of safety and comfort for people with reference to the surrounding context of the place.

D. **Edge Conditions:** (*Street / Building / Place*)

The edge conditions of any place are important to treat, since they act as a seam between different zones or activities. In creating social inclusive environments, the edges have an significant role.

E. **Pattern:** (*Distribution of Activities / Functions*)

The distribution of activities and functions with regard to the context of the place is equally important to maintain balance in the activity pattern or usage of the place, which is enhanced by the patterns of distribution of activities and spaces.

F. **Open / Green Spaces:** (*Potential Activity Zones*)

These are the Passive relaxing spaces in a place which is most preferred by people in public spaces as it provides a setting that promotes social activities and shading, which provides the most comforting factor in a place.

G. **Pedestrian Movement:** (*Side Walk / Physical Infrastructure*)

Physical infrastructure facilities that provide provision for all users to access and move to the place with ease should be provided at any public spaces that will promote and encourage citizens for better use of public spaces at increased frequency.

H. **Nature of Traffic:** (*Conflict Zones*)

The neighboring character of the place must be considered in case of heavy vehicular movements and the conflict zones must be treated or designed appropriately to safeguard harmless and accessible public realm.

I. Physical Environment: (Buildings)

The physical setting of the place must be considered for promotion of social public activities, as they help in deciding the proposal of activities and their maintenance.

J. Streetscape: (Street Function/ Details/ Multi Use)

Streets, roads are the crucial public spaces of any city that caters to movement of people as a daily routine and the basic function of any street is to promote social interaction which has been completely lost due to replacement of vehicles and unorganized activities on streets and roads, making it undesirable for people to use.

K. Comfort: (Lighting / Security / Activities / Physical Environment)

Comfort factor of people is crucial since influences people to use the place again or not, based on its level of service. It includes safety & security aspects of the place, activity distribution of the place, accessibility to the place and many more.

L. Security: (Surveillance / Unhindered Views)

The safety and security in public place has to be maintained with maximum efficiency as the user groups prefer to spend their time in public places only when ensured with vibrant activities supported with efficient surveillance, either through activities or through technological modes.

The analysis was carried out by categorizing the key elements and words out of the literature studies (books, theories, research journals) best practices and case studies, under which **12 aspects** were listed down as per the comparative analysis and these were categorized under **4 main factors, such as Uses and activities, safety & comfort, built form and Movement.**

5. CONCLUSION

The rapid pace of urbanization catalysed by population explosion is an alarming issues that all the Indian cities are facing, especially metropolitan cities of India which account for having high population compared to other cities of India. This model of development and urbanization trends has an adverse impact on the social aspect of the city that includes the basic facility for a citizen of a city to be able to use the public spaces (Streets, Roads, Parks, Plaza, Religious places...) without external factors that hinders the use of them. In building social inclusiveness public life is central which directly reflects in creating sustainable communities, promoting social life of city that enhances the overall experience and deals with various issues.

Public spaces hold the life of city, as people everyday use it, and these are the places that are supposed to promote social interaction, especially with the present pace of urbanization. The growth of cities should also have a direct relation with the quality of public life of the city, which is an important aspect that must be fulfilled to attain overall advancement in the process of development or urbanization of Indian cities. Thus, cities of India with high population and growth rate have been analysed, from which the cities showing positive rate of growth of population have been inferred out in the sequential order, (Bangalore, Ahmedabad, Chennai and Hyderabad) and factors that binds the public realm have been inferred out with respect to the current trends of growth of Indian metropolitan cities. It's high time that Indian cities must start making plans and strategies for public realm, which will help Indian cities and people for a quality public social life. The findings clearly state that factors like diversity, accessibility, massing and scale, edge conditions, patterns, open spaces, pedestrian movement, nature of traffic, physical environment, streetscape, comfort and security must be considered during the process of development of cities.

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