



AN ECONOMIC PERSPECTIVE OF A CITY: A FOCUS ON SUSTAINABILITY FOR ECONOMIC ADVANCEMENT

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ABSTRACT

Sustainability has been accelerating around the globe due to the urban transformation for economic advancement. Areas of urban development, be it the transition from rural to urban or the land uses at urban/rural edge, require better sustainable designing from both urban and rural perspective to shape, manage and preserve the ecosystems people depend on.

Although the enhancement of architectural quality has been traditionally considered for ages, still a number of urban governments and political elites begin to acknowledge the link between sustainability and economy. One needs to recognize that an improved development can contribute to local economic regeneration. A re-imagined attempt towards it can attract investment and act as a catalyst for economic rejuvenation.

It is important how a city cultivates a new image of urban development that plays a crucial role in the transformation of the city as a service –based urban economy. A city's sustainable urban development is not simply an expression of broader economic and socio-cultural changes, but plays a major role in shaping the external and internal image of the city.

This Study aims to look at economic growth from the perspective of sustainability. This research studies the economic growth at regional level and the sustainable urban factors that influence it. It also studies those technologies that better link sustainability and economic growth. This research concludes by assessing the role of sustainability in economic generation and how it can potentially make a positive contribution to the rejuvenation of a local economy.

Keywords: Economic growth, sustainability, urban development, socio cultural changes, economic rejuvenation

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1. INTRODUCTION

More precisely sustainable urban strategies define or shape the economic development of a city. The way it is shaped, decides if the city is efficient for the economic growth. It is also important to understand the architectural patterns of sustainability to know the economic implications of a city. Why would one expect sustainability to matter from an economic standpoint? To understand how this works, one needs to assess the link between them.

It is often seen that sustainability is not the effect of economic development but it is an integral part of the process. Urban areas contribute to the country's economy in most of the countries. Indian cities home a growing share of the population and are projected to have an increase of population from 282 million to 590 million people. Hence the sustainable urban transformation has larger role in effecting the economic growth of any country.

This study will address "The big changes" in terms of economy with respect to sustainability in India. An assessment on the impact of it will be made to evaluate the framework for economic development through a study on the most economically developed cities of India. Understanding how, promoting an efficient sustainable urban development process can rapidly increase the economy of a country.

2. LITERATURE

2.1. Sustainability and Sustainable Technologies

Sustainability relates to maintaining the existence for the future without compromising on the present needs. A resource efficiency based strategy that serves the future generations.

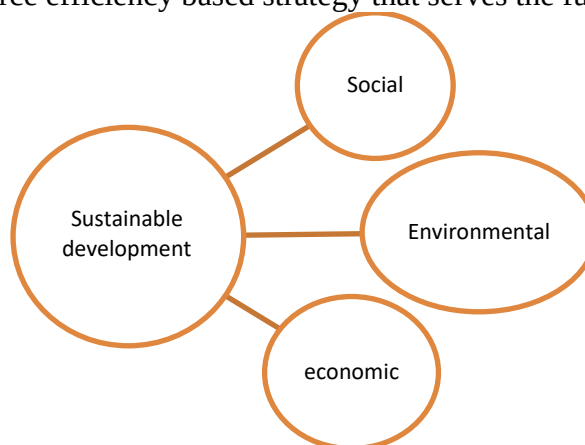


Figure 1 Factors of sustainable development

2.2. Sustainable Urban Development

The definition of this varies with the context and place. This could be sustainable characteristic of a city or pertaining to a city or city life.

2.3. Towards Sustainability

Today the world is facing several environmental issues be it due to rapid urbanisation or the over exploitation of natural resources.

Technology and various industrial-infrastructure advancement play a major role in this concern. To find a solution to this, sustainability has become a tool for the better development. Sustainable technologies like energy efficiency, resource management and maintaining ecological balance have come into picture to make urban development sustainable for the future cities.

2.4. Economy and Economic Growth

The state of a country or region in terms of the production and consumption of goods & services and supply of money can be termed as economy. The increase in the inflation-adjusted market value of the goods and services produced by the economy over time is economic growth.

2.5. Sustainable Urban Development a Economy?

How is the economy of a country on larger scale or city on a smaller scale defined? What are the factors that contribute to the economic growth of the city? The Economy can be defined as a social domain that emphasizes the practises, discourses and material expressions associated with the production, use and management of resources. Hence sustainable practises will definitely play an important role in stimulating local economy

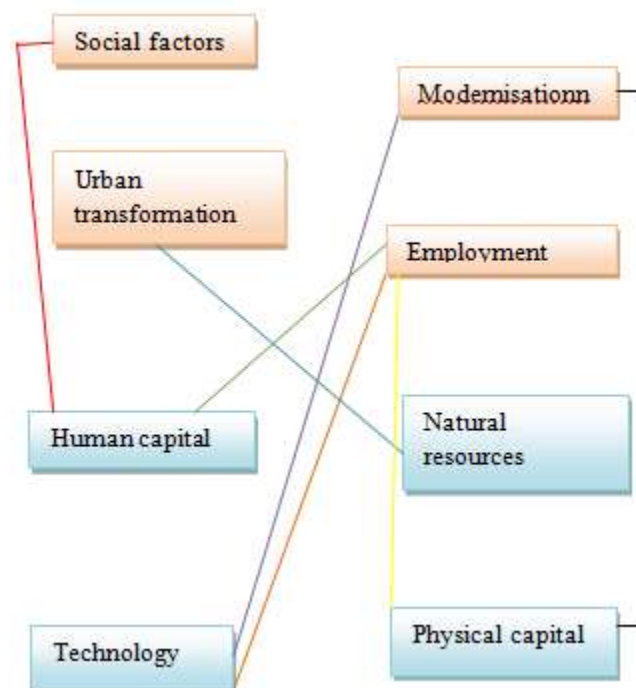


Figure 2 Relation between urban factors and economic factors

2.6. Economic Performance of Urban Impacts across India

- If we closely analyze the growth acceleration from 1991-2003, the growth rate grew at an average of 5.4 percent a year followed by a point more each year for two decades. Then from 2004-2008 GDP grew at an average annual rate of 8.8.
- The deceleration growth to the average rate of 7% is structural. Then a decline below 7% is observed between 2016-17 and 2017-18. Then the growth rate accelerated to 6.5% in second quarter of 2017-2018 and then to 7.2% in third quarter.
- The economic survey states macroeconomic stability reached to the bottom of the graph. So a sustained real GDP growth rate of 8% needed for a 5 trillion economy by 2024-25

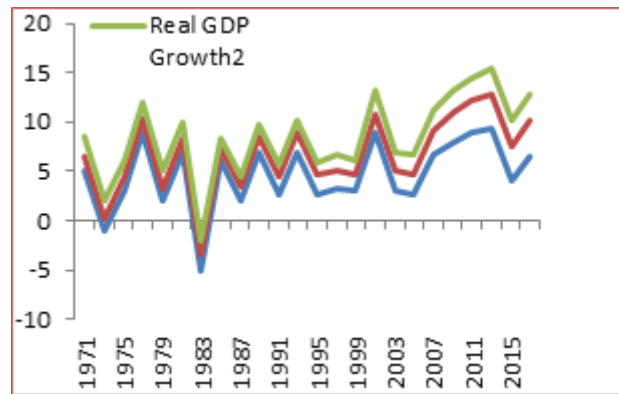


Figure 3 Showing the economic growth rates of India 1971-2017

1. Nourishing Dwarfs to become Giants: Reorienting policies for MSME Growth

- Job creation
- Dwarfs account for >50% with employment – 14%, Productivity-15%
- Large firms account for -75% with employment-90%, productivity-15%.

Actionables:

- Clause of less than 10 years
- Deregulating labour laws
- Re calibrating priority sector lending
- Focus on service sector

2. India's demography at 2040

- Decline in elementary school going children over next 2 decades
- Working age population- 9.7mn during 2012-31 and 4.2mn during 2031-41.
- Sharp slowdown in demographic growth for next two decades.

Actionables:

- Consolidate and merge schools to make them viable rather than build new ones
- Policy for ageing by investing in health care & increasing retirement age.

3. SWATCH BHARAT MISSION

Table 1 Swatch Bharat mission amenities details.

S.No	Amenities	Percentage of the people
1	Access to toilets	93.1
2	Access to toilets in rural India	96.5
3	Individual household toilets(30 states)	100

3.1. Actionable

Environmental and water management issues to be incorporated in SBM for sustainable developments in the long run.

4. GROWTH THROUGH AFFORDABLE, RELIABLE AND SUSTAINABLE ENERGY

- India stands 4th in wind power, 5th in solar and renewable power.
- Rs 50000crores saved and 108.28 million tones of co2 emissions reduced by the energy efficiency programmes.
- Share of renewable power generation increased from 6-10% from 2014-2019.
- Thermal power share is still 60%.

4.1. Actionable

- 2.5 times increase needed for energy consumption for india to enter upper middle income group.
- 4 times increase required to achieve human development index score.

5. INDUSTRY AND INFRASTRUCTUR

- Overall index of 8 core industries have a growth rate of 4.3% in 2018-19.
- Road construction grew at 30km per day in 2018-19 compared to 12kmpd in 2014-15.
- Rail freight and passenger traffic grew
- by 5.33 percent and 0.64 percent in 2018-19.

5.1. Initiatives

Public private partnerships are essential for addressing infrastructure gaps.

Building sustainable and resilient infrastructure has been given due importance with sector specific flagship programmes such as SAUBAGHYA scheme, PMAY etc.

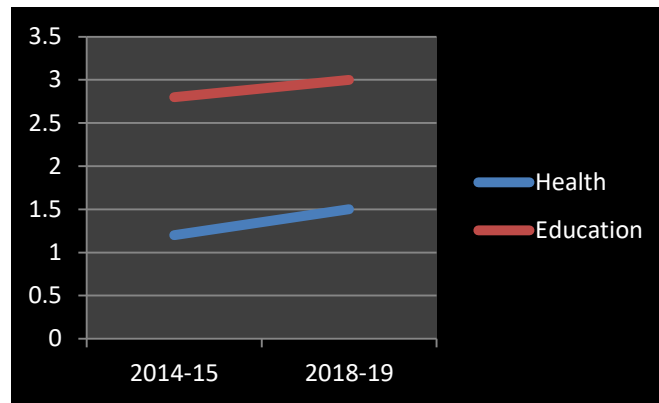


Figure 4 Development of Social Infrastructure

- Net employment generation- 4.87 lakh in 2014 and 8.15 lakh in 2019.
- PMGSY- 1,90,000 km of rural roads construction.
- PMAY- 1.54 crore houses completed.
- NHMABS- Accessible, affordable and quality healthcare
- National AYUSH- cost effective and equitable health care.
- MGNREGA- Employment generation scheme increasing actual expenditure over budgetary allocation.

Actionable

- Sustainable progress in both qualitative and quantitative indicators of education is reflected in the improvements in gross enrolment ratios, gender parity indices and learning outcomes.
- Encouraging skill development by introduction of skill vouchers as financing instrument to enable youth attain training from accredited institutes.

Involving industry in setting up of training institutes in PPP mode.

5.2. Practices and Opportunities for Smarter Economic Growth

- Smart growth strategies can help the city achieve development while maintaining the character and identity of the place.
- Planning where the development should or should not be, can help the city encourage growth .
- Policies that protect and preserve the open space, provide recreation and tourist attractions that bring investment into local economy.
- Provide good mobility, public safety.
- Reducing the environmental impact, efficient city operation in terms of urban development.
- Traffic management, technology development.
- Response to occupier demand.
- Practise of having more usable area.
- Reducing management, maintenance, energy and security costs.
- Practise of more contented and productive workforces.
- Encouraging mixed use elements in developments.

- Creating urban regeneration and place marketing dividend.
- Opening up investment opportunities, raising confidence in development opportunities and attracting grant monies.

5.3. Urban Objects as Parameters for Economic Growth

Urban form generally encompasses a number of physical features and nonphysical characteristics including size, shape, scale, density, land uses, building types, urban block layout and distribution of green space. These are categorised here as five broad and inter-related elements that make up urban form in a given city.

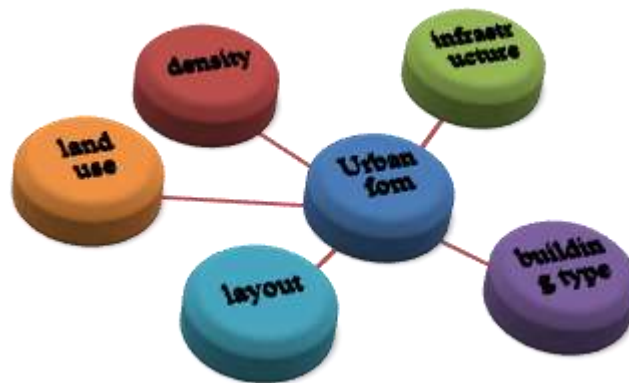


Figure 5 Urban Parameters

Under the notion that the world is heading towards 70% urbanization by 2050, there lies regional differences in demographic, economic and environmental change.

5.4. Demographic Change: Population

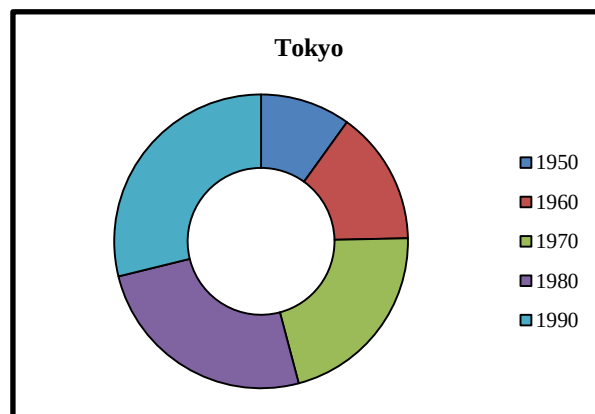


Figure 6 Demographics of Tokyo

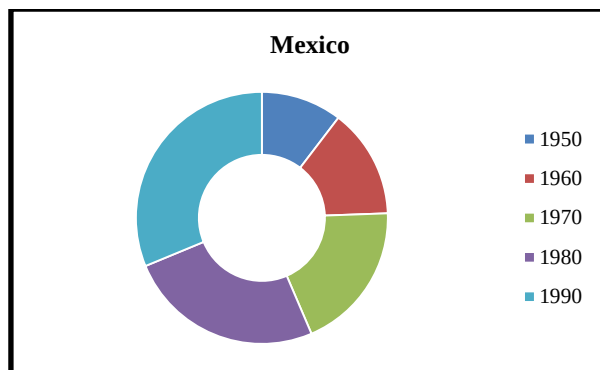


Figure 7 Demographics of Mexico

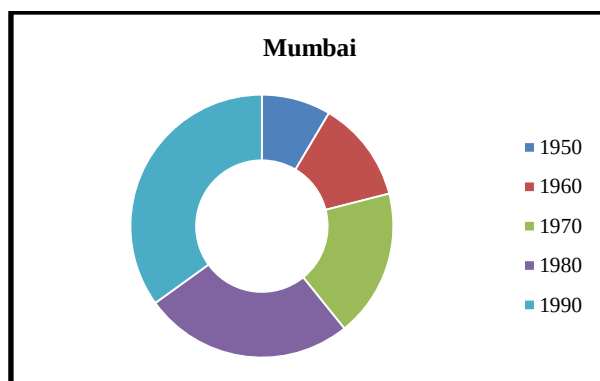


Figure 8 Demographics of Mumbai

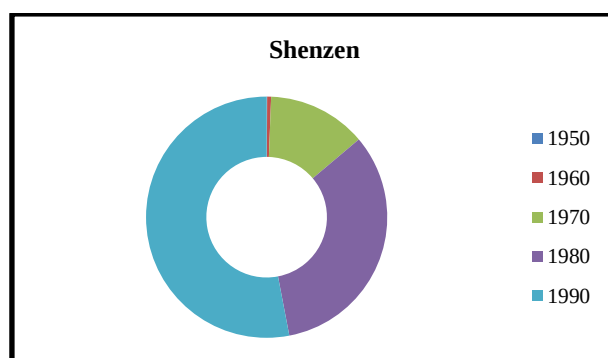


Figure 9 Demographics of Shenzen

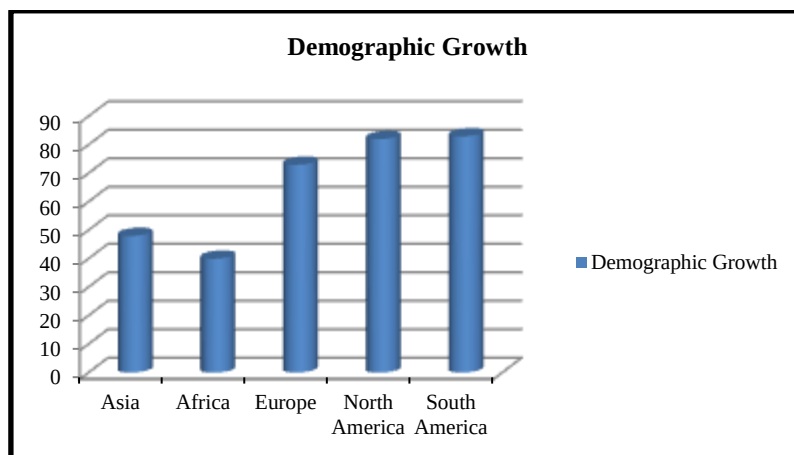


Figure 10 Graph showing the demographic change across the world. Source: www.wikipedia.com

Density is also closely associated with other elements of urban form, such as land use and access to services – for example, for a service or facility to be viable, it needs to serve a population of a particular size.

5.5. Environmental Impact: Energy Consumption as a Parameter; World Statistics



Figure 11 Four continents with highest energy consumption. Source: world.bymap.org

The places that people live and the energy consumed are closely linked. People living in highly concentrated urbanised regions have modest consumption patterns than that of the low urbanised regions. Electricity is a major component of world's energy mix. So it is always ideal to opt for the renewable methods to reduce the consumption. Improving the choices of heating and cooling systems in buildings, so as to reduce the consumption.

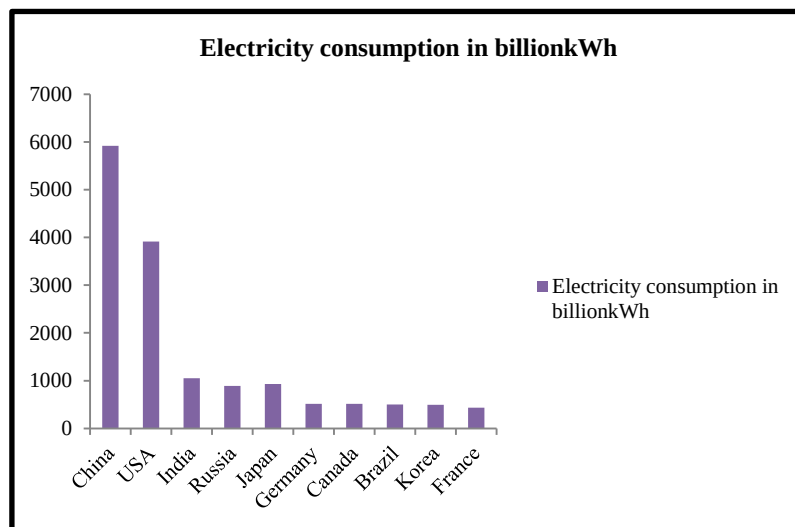


Figure 12 Graph showing the electricity consumption across the world. Source: www.wikipedia.com

5.6. Urban Footprint: Landuse, Layout, Building Typology

Any design is to include the typology of building, landuse and layout at urban level. An effective landuse accomodates fo the better utilisation of spaces fo vaious activities. Within the urban context, the dominant land use tends to be residential but a functional urban area requires industrial, retail, offices, infrastructure and other uses. The characteristics of housing and other buildings in urban settlements can have an important bearing on everyday living: it has already been noted that residents living in low-density detached dwellings with large gardens will have a distinct experience of the urban environment from high-rise city centre apartment dwellers.

5.7. Urban Approaches by the Government of India

These are prepared and implemented by Planning Commission of India.

Urban initiatives by the government of India:

- Smart Cities Mission
- JNNURM
- AMRUT
- HRIDAY
- NULM

5.8. Smart Cities Mission

- Promoting mixed land use
- Housing and inclusiveness
- Walkable localities
- Preserving and developing open spaces
- Promoting a variety of transportation
- Giving identity to the city
- Smart solutions for infrastructure

Challenges

- State and ULB's role in urban development
- Understanding the concepts of retrofitting
- Investments required for development
- Involvement of the citizens

A new initiative to drive economic growth.

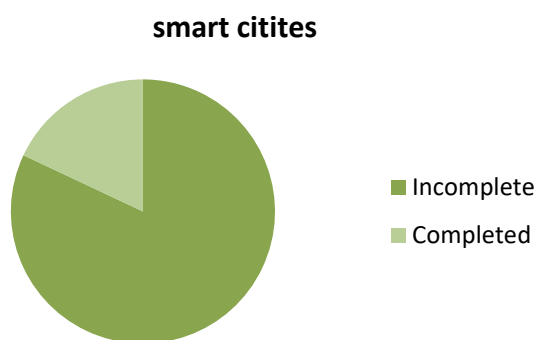


Figure 13 Smart cities mission completion status

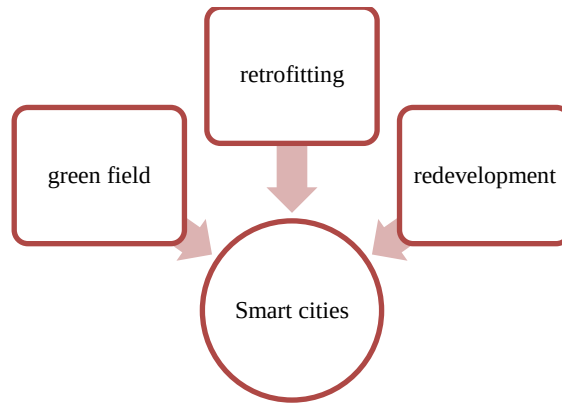


Figure 14 Strategies of smart cities mission

- Completion of 100 cities by 2020.
- 48000 crores over five years
- Conveyance with AMRUT , SBM, HRIDAY.
- 4.5 trillion dollars infrastructure investment by 2040 for six hundred million population in next ten years.
- 700 to 900 million. Sq.m for residential and commercial.
- Selected cities proposed : 5151 projects at a cost of Rs.2.05 lakh crores.
- 933 projects completed as of July 2019.
- 1931: orders issued.
- 829 : Tenders stage.

Inferences

A sustainable urban development is the one with :

- A controlled population from which adequate employment is available.
- A better governance that can provide for sense of identity and equity.
- Provision of efficient basic amenities for an existence.
- Going for a planned colonies with adequate infrastructure facilities.
- A Proper planned transport system as it always has its impact on the environment.
- Having an effective infrastructure that is environmental friendly which can address service amenities.
- An efficient urban private sector and health care system

6. CASE STUDIES: AN INSIGHT INTO ECONOMIC CAPITOLS OF INDIA

6.1. The Urban Sprawl: Ahmadabad Urban Evolution

Ahmedabad, with a population of 5.8 million in the municipal area and 6.3 million in the urban agglomeration area in 2011, is the seventh largest metropolis in India and the largest city of Gujarat State. The municipal area is under the jurisdiction of the Ahmedabad Municipal Corporation (AMC), whose limits were last extended in 2010 to cover an area of 466 sq.km. The city limits have been extended from time to time once the peripheral areas develop, generally on their own.

6.2. Demographics

Table 2 Population growth statistics of Ahmadaba

Year	Population in millions (AMC)	CAGR (AMC)	Population in millions (AUA)	CAGR (AUA)	Gujarat Urban CAGR
1981	2.16	3.1	2.55	3.5	3.5
1991	2.88	2.9	3.31	2.7	2.9
2001	3.52	2.0	4.52	3.2	2.9
2011	5.57	4.7	6.35	3.5	3.1

6.3. The Liberalisation and Global Economy

Over past few decades, processes of liberalisation and globalisation have reshaped. Ahmedabad's economy and labour markets. The economy of the city has changed against the background of Gujarat's political economy, which has impacted the city's economy as well as urban development paradigm, housing for the urban poor and extent of inequalities.



Figure 15 Master plan of Ahmadabad

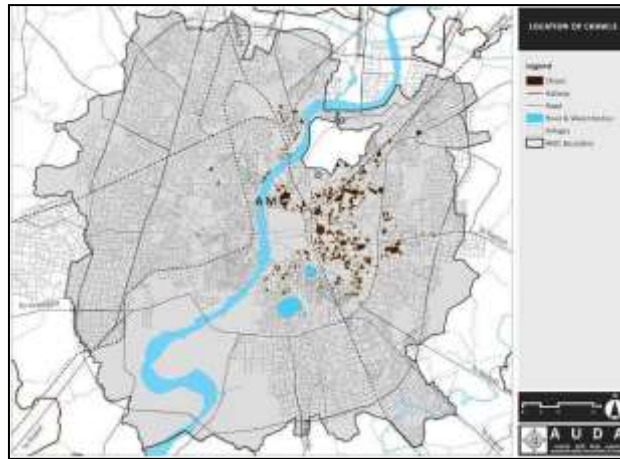


Figure 16 Master plan Source: AUDA 2013

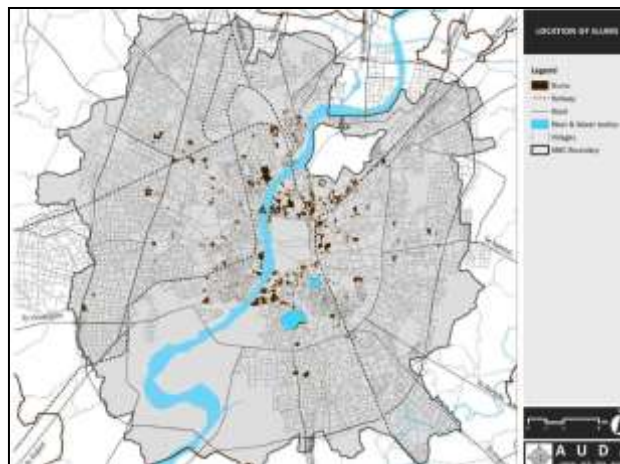


Figure 17 Master plan Source: AUDA 2013

6.4. The Urban Development Paradigm

In 2005, Ahmedabad was declared as a megacity under the Central government's Jawaharlal Nehru National Urban Renewal Mission (JNNURM). This inspired the city government to 20 initiate various projects to transform Ahmedabad into a world-class city.

6.5. Urban Planning: Town Planning Schemes and Urban Projects

Major planning interventions in Ahmedabad are currently designed, planned and implemented in two main ways: through Town Planning Schemes (TPS) and through urban projects. The TPS are part of a two-stage process meant for planning and urban development in a controlled manner. The AUDA, which is the planning authority, draws up a decadal Development Plan (DP) for the AUDA region that includes demarcation of the planning boundary, identifying the expected growth areas of the city, and having broad land use proposals with major trunk infrastructure.

Urban planning has also moved towards a project-oriented approach. Urban projects like the Sabarmati Riverfront Development project, the Kankaria Lakefront project and most recently, the Bhadra redevelopment project, are designed, planned and implemented to redevelop, beautify and / or upgrade infrastructure in existing parts of the city. These are often treated as discrete projects, and planning is often done in the project area without paying

attention to adjacent areas and links of the “project area” to the rest of the city and its dynamics.

6.6. Informal Urban Peripheral Settlements

The communal riots in Ahmedabad, starting from the 1969 riots to the recent 2002 riots, have led to increasing communal divides in the city and the ghettoisation of Muslims. Many Muslims moved out of the old city and mill areas of eastern Ahmedabad to the western periphery of the city to an area commonly known as Juhapura. After the 2002 riots, the communal polarisation and ghettoisation increased. Other smaller Muslim ghettos emerged in different parts of eastern Ahmedabad. One of these is an area in Dani Limbda which is commonly known as Bombay Hotel.

Also understanding the urban local context as well and considering the formal and informal development of the place.

6.7. Inferences

- Government took initiative for urban development in 2005 through JNNURM.
- The growth over various periods has shaped its socio spatial patterns that have transformed over time.
- Using the land for the purpose it is given
- Including the street vendors in the planning
- While Ahmedabad has been cited in best practices and has been awarded for various urban projects, these have been pursued without the consideration of right to shelter and livelihood of the urban poor.
- Class segregation
- High extent of informal expansion
- Shift towards project based urban planning.
- Less of inclusive development.
- Consideration of migrants and their access to the shelter, services, amenities, transport.
- Intervention of urban transport infrastructure by integrated urban transport infrastructure.
- Investment to be done on public transport accessible to urban poor and community participation

6.8. The Tale of Rapid Urbanisation

Introduction

Hyderabad is the state capital of Telangana, a recently formed state of southern India and functions as the central administrative, industrial and commercial hub of the state.¹ From its humble origins as a small town founded in 1591, it has developed to become one of India's fastest growing metropolises with a population of approximately 7.7 million (Census of India., 2011) which is further expected to increase to about 19 million by the year 2041. As per the From its origins as a small town, today Hyderabad surrounds nearly 650 km² and the larger metropolitan region extends up to 7228 km². The advent of globalization in India has opened the door for Hyderabad to brand itself as the popular destination for high-tech industries. In 1999, the entrepreneurial state government-initiated Andhra Pradesh Vision 2020, a strategic document to develop the state by attracting foreign direct investments and developing specific growth engines in order to leapfrog toward the information society.



Figure 18

6.9. Urbanization and its Impact

Asia is home to nearly half of world's population today and major cities in India positively contribute to this. Since 1991, Hyderabad has emerged as one of the most populous capital cities in India. According to the Census of India, 2011 report, Hyderabad's total urban population was 7.7 million, making it the sixth largest metropolitan city in India (Fig. 2). Hyderabad's population has increased steadily over the last half of the century. Recent projected population estimates exceed 9.4 million. It has also been observed that in the last decade, the growth of the city has been much faster in the peripheries than in the core.

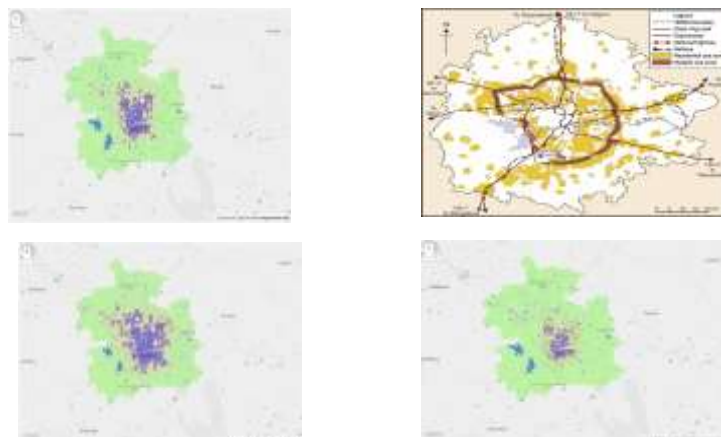


Figure 19

Hyderabad with its varied historical background has continuously been growing in every sense of word – from a princely state in 16th century it has acquired a mega city status in the current century. With almost over four and half centuries of past, Hyderabad had its own administrative arrangements. The present study area of Municipal Corporation of Hyderabad (MCH) has around 172.6 Sq.Kms of area spanning over 23 wards of Hyderabad and 12 wards of Secunderabad. A historical past linked with regional and national levels had transformed the city of Andhra Pradesh into one of the vibrant urban economies of the global order. Hyderabad grew to a tune of 222 percent over five decades of 1951 -2001. As per 2001 Census, MCH has a population of 36.3 Lakhs but Hyderabad Urban Agglomeration (HUA) with other additional suburban municipalities showed a population of 57.52 Lakhs.



Figure 20

7. CONCLUSION

So any urban development should be: Integrated and Inclusive Urban development. The following guidelines to be taken into consideration:

- Mixed use development to be taken into consideration.
- Consideration of shelter and livelihood.
- Avoid unusual expansion of informal settlements.
- When planning, already existing settlements to be taken into consideration
- A project based urban planning to be avoided.
- Consideration of migrants and their access to shelter, services, amenities and transport.
- Housing to be connected through affordable transport of lines.
- Integrating of various aspects in development.
- Investment on public transport access to the urban poor.
- Formation of Ward level committees and community participation.
- Social equality and liveability to be maintained.
- Introduction of economic reforms
- Improving resource efficiency.

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