ORIGINAL RESEARCH PAPER

Geography

SUSTAINABLE URBAN PLANNING AND SMART CITY CONCEPT IN HARYANA

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ABSTRACT

The aim of the present paper is to focus the Sustainable Urban Development or the Smart Cities in relation to Haryana in present Scenario. Sustainability can be defined as the practice of reserving resources for future generation without any harm to the nature and other components. In the recent years, Haryana has seen a natural progression in its development story. As the big villages turning into towns, and towns transforming into cities. But it's the time for the state to transform its cities into smart and sustainable cities for the smart urbanization. Though urbanization brings a lot of challenges that can act as a barrier to growth of urbanization or the smart cities. The people move to urban centers in such of jobs and employments and hopefully the better life. Urbanization is change of residence which is geographically expressed as mobility or migration resulted by a way of life called urbanism. It is the proven fact, that the trend has a straight correlation with growth.

INTRODUCTION –

Sustainability is the study of the concepts of sustainable development and environmental science. There is an additional focus on the present generations responsibility to regenerate, maintain and improve planetary resources for use by future generations. Urbanization refers to growth of the towns and the cities, often at the expense of rural areas. The people move to urban centers in search of jobs and employment and what they hope will be a better life. In most of developing countries the percentage of the total population living in urban areas is continually increasing. In other words, urbanization is change of residence which is geographically expressed as mobility or migration resulted by a way of life called urbanism (Singh and Singh, 2013). It is index of determination of economic growth and development as urbanization itself is a result of type and level of existing economic activities in a region. Urban is to provide a variety of services that small rural areas cannot. These might include a public transportation system, water and sewage services, a greater variety of educational and recreational facilities, and larger and more specialized healthcare facilities in the urban city.

The urban areas are characteristics by diverse economy dominating manufacturing and commercial activities, advance stage of living standard, education and employment opportunities, good medical facilities, entertainment services and extensive transportation and communication network which provide easy availability and accessibility to people for interacting with each other. The persistent speedy urbanization is also connected with diminution of natural possessions and deterioration ambiance in the urban location which demands the proper monitoring to reassure the potential sustainable cities (Kong, 2010).

Haryana is an agricultural state in the northern plain of India which having majority of its population in rural areas yet during the last few decades, the state has witnessed fast and unrestrained urban expansion due to progress in industries, trade and population. There is 34.88% population live in different urban area in the state which is higher than 31.16% population of the country. It is registered as most urbanized state among the sates surrounding the National Capital Region, Delhi with a large number of 88,42,103 urban populations. As the state desires for a new-fangled development system in the coming years, it becomes essential to study the planned and sustainable urbanism.

Pattern of Urbanization in India and Haryana (1971–2011)

Haryana has been predominantly a rural part of North India which is covered by Delhi in three sides. The urbanization trend in state almost follow the pattern of India. With its formation in 1966 and 1st population census after its formation in 1971 showed (Table – 1) that 17.66% of the total population reside in urban areas against the national urban proportion of

19.90% in the same year. In 1981 this proportion has reached up to 21.88% and 28.92% in 2001. In 2011 census, the urbanization share has been recorded 34.88% (88,42,103 persons) that is more than Indian share of 31.16%. It is estimated 2.99 Cores of total population and 65.12% of entire population reside in urban areas as per 24 May, 2023.

Table – 1 Urban Population And Its Growth Rate In Haryana And India 1971 To 2011

Census Year	Urban Population of India (%)	Urban Population of Haryana (%)
1971	19.90	17.66
1981	23.31	21.88
1991	26.10	24.63
2001	27.81	28.92
2011	31.16	34.88

Source: Census of India, Primary Abstract Census 1901, 2001 and 2011, Chandigarh, Haryana

Urban Pattern in Haryana (1971-2011)

The Spatial and temporal urbanization in Haryana from 1971 to 2011 has been shown in below given table-2. The district wise profile reflects that in 1971 there was only 17.66% population was concentrated in urban areas of Haryana. As per 1971 census, the highest level of urbanization has been contained in Ambala district (35.79%) followed by Yamuna Nagar (28.75 per cent), Karnal (22.43 per cent) and Panipat (18.40 per cent) districts whereas in fifteen districts of the Haryana and total number of districts were in 1971. The urbanization has been recorded below state average with lowest level of 7.16% in Faridabad districts followed by districts Kaithal (11.13%), Fatehabad (11.17%), Jhajjar (11.91%) and Mahendergarh (12.07%) district.

Table – 2

Sr. No.	Districts	Census Years				
		1971	1981	1991	2001	2011
1	Ambala	35.79	36.77	35.44	35.20	44.38
2	Bhiwani	14.55	15.89	17.24	18.97	19.66
3	Faridabad	07.16	41.43	48.57	77.80	79.51
4	Fatehabad	11.17	14.87	15.93	17.36	19.06
5	Gurugram	13.81	18.61	20.30	35.58	68.82
6	Hisar	17.63	21.55	23.70	25.90	31.74
7	Jhajjar	11.91	12.77	13.90	22.17	25.39
8	Jind	13.55	15.14	17.18	20.30	22.90
9	Kaithal	11.13	11.94	14.69	19.39	21.97
10	Karnal	22.43	25.94	27.46	26.15	30.21
11	Kurukshetra	16.32	20.71	24.01	26.11	28.95
12	Mahenderagarh	12.07	12.39	12.41	13.49	14.41
13	Mewat	DNA	DNA	DNA	07.51	11.39

14	Palwal	DNA	DNA	DNA	19.18	22.69
15	Panchakula	12.54	19.47	35.82	44.49	55.81
16	Panipat	18.40	62.37	27.15	40.53	46.05
17	Rewari	12.92	12.20	15.59	17.79	25.93
18	Rohtak	16.68	19.27	21.31	35.06	42.04
19	Sirsa	14.29	18.07	21.16	26.28	24.65
20	Sonipat	15.06	21.19	23.58	25.15	31.27
21	Yamunanagar	28.75	29.58	33.69	37.73	38.94
22	Dadari	DNA	DNA	DNA	DNA	DNA
	Haryana	17.66	21.88	24.63	28.92	34.88
	India	19.90	23.31	26.10	27.81	31.16

(I) Census of India 1991, Town Directory, Series-8, Haryana, Part IX-A, Statement- 1, pp. 112-123.
(ii) Census of India 2001, General Population Tables, Haryana (Tables A-1 to A-4), Series-7, India, Statement-4 & Table A-2, Directorate of Census Operations, Haryana, pp. 35, 86 -91.
(iii) Census of India 2011, Primary Census Abstract, Haryana, Series 7, Tables - A5- A8, Directorate of Census Operations, Haryana.

Note: DNA- Data Not AvailableAs per the table – 2, the drastic change has been observed that Faridabad changed its maximum population of 79.51% into urbanism. Besides, Gurugram and Panchkula also converted their population of 68.82 and 55.81% in urbanism and Panipat, Rohtak, Sonipat also urbanized drastically due to high concentration of Industries, Infrastructure facilities and effect of NCR Delhi. This change of urbanism brings various kinds of problems and challenges like Urban Sprawl, Congestion, Accommodation and Settlement, Transport, Sanitation, Environment, Poverty, Unemployment, Water, Waste Disposal and Urban Crimes with growing Ransom by Large Gangsters etc.

Keeping in view, the problems of rapid urbanization of class 1 and Class II cities and their growing problems, Government of India started a new concept of urbanization as Smart Cities. A smart city is a place where traditional networks and services are made more flexible, efficient and sustainable with the use of information, digital and telecommunication technologies to improve the city's operation for the benefit of its inhabitants. Smart cities are sustainable as they are greener, safer, faster and friendlier. It includes smart infrastructure, transportation, energy, health care and technology. As per may, 2023 Indian Govt. declared 100 smart cities in India whether Haryana is listed with two smart cities named Faridabad and Karnal.

Besides, Gurugram is the fastest growing integrated smart city in Haryana as well as India. The Reliance MET City has been offering various kind of services to residents, businessmen, Industrialist and transporters and outcome of NCR is the main beneficiary to its development.

Key Components of Smart Cities
Keeping in view, the rapid growth of urbanization in NCR region of Haryana, the State Government is going to develop 5 smart cities on both sides of Kundli–Manesar–Palwal (KMP) and Kundli–Ghaziabad–Palwal (KGP) expressways. Key areas of focus will be

Water And Sewage
- 24x7 supply of water
- Metering of water connections, billing and collection efficiency
- Online payment facility
- Households connected to the waste
- Treatment of waste water, use of treated water

Solid waste Management
- City population with regular solid waste collection
- Collection and recycling of municipal solid waste
- City solid waste that is disposed in a sanitary Landfill/ open dump/burnt
- Hazardous waste recyclin

Transportation
- Traffic management system
- City parking management
- Access to paratransit
- Availability and frequency of mass transport
- Traffic violation detection/ speed violation detection/ red light violation detection
- Availability of bicycle tracks

Public Safety
- City surveillance
- Online FIR, complaints etc. registration
- Verification/validations/clearance
- Complaint response time

Health
- Number of hospitals based on population density requirement
- Healthcare facilities
- Emergency response facilities
- Ambulance, emergency ward etc and response time

Education
- Primary and secondary education Facilities
- School for specially abled
- Student teacher ratio
- Number of schools and colleges based on population density requirement

Power
- 24x7 quality electricity supply
- Metering, collection and billing
- Low distribution losses
- Energy efficiency, street lightening projects

Fire and Disaster Management
- Fire station basis population density
- Efficient fire fighting systems and special materials
- Disaster prediction system- earthquake etc early warning system, disaster alarm and response System

CONCLUSION
There is low urbanization in districts of north-west, south and south west due to lack of industrial development, economic and cultural backwardness, regrettable infrastructural services in the region. The biasness in policy making at political level is also responsible for regional disparities in urbanization. So there is need to decentralize the secondary and tertiary activities with intentionally focusing on equality in the state to uplift the backward area and to join them in the main stream of development. Urbanization is the physical growth of urban areas as a result of rural migration and it is closely linked to modernization, industrialization, and the sociological process of rationalization. Poverty, unemployment and under employment among the rural immigrants, beggary, thefts, burglaries and other social evils are on rampage.

But with a clear vision and strategic ambitions, we can channelize all resources towards accomplishing the vision of clean and smart cities. The Government and the administrators has to develop multiple internal capabilities. It needs to have the capability to manage its key programmes as well as projects, performance risks and assets, including the human capital employed in performing any of the city's functions. All of these initiatives need to be executed in a sustainable manner, and through collaboration and partnering with citizens, the private sector, academia, non-governmental organizations (NGOs) with the State and the Centre Governments.

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