

Exploring the Applicability of Sustainable Development Goals in Fringe Areas of Fast Growing Metropolises

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1 ABSTRACT

The social sustainability of the north-east Asia has been threatened by the rising population and poverty. The unplanned metropolitan and suburban growth endangers the existing systems of social, economic and environmental balance and creates hindrances towards sustainable development. Existing urban infrastructure has become unable to cater services to all citizens resulting poor quality of life. The government is also struggling to pay for new and expanded services. Most of the existing metropolitan cities in the south-east Asia were not planned how to face these kinds of problems when it arise. Contemporary policy problems are to be found in the rural areas of this region which act as hindrances of the city expansion. In most of the cases the existing metropolitan cities expand without any proper guidelines where the cities hardly breathe. The people living in urban fringe areas are contributing to the economy; they are more susceptible to social, economic and environmental shocks generated within the region. The Fringe area Development may be a solution to these growing problems in this region. Urban Fringe is an area that situates between urban and rural system. Fringe is defined as a relation to the city and exists in agriculture hinterland (area around or beyond a major town) where land use is changing .It is the most sensitive, dynamic and swiftly changing area during the urbanization process. However to minimize the growing development pressure of the metropolis emergence of fringe area development has become popular to decentralize the population in this region. But at the same time the development without proper guidelines results poor services in the fringe areas which has become a common phenomenon in the region and it gradually attempts to destroy the overall infrastructure and environment of the metropolis.

In 2015 the UNDP has formed certain global goals known as “Sustainable Development Goals”. The motto of the SDGs is “To provide a better future for everyone of the society”. However it is noticeable that in most of the cases the fringe area development in this region is basically focused to cope up with the present scenario; either focuses on social or economic or environmental benefit. But to achieve the SDG it should be focused on these three perspectives equally. In Indian context the fringe area development is focused to decrease and decentralize the pressure of the mother city. Thus it is hardly seen to achieve the SDG in Indian scenario. In the contrast in the developed countries the fringe area development hardly neglects any of the three perspectives of the sustainability as the cities are already developed in every aspect that the fringe area development does not require to decrease and decentralize the pressure of the mother city. So the fringe area development in developed countries is more likely policy oriented whereas in south-east Asian context it is more likely depends on the nature and characteristics of the mother city. . This paper aims how far is it applicable to induce the SDGs in the fringe areas in Indian scenario so that it may draw sustainability in these metropolitan cities as well as in the fringe area.

Keywords: Fringe Area, Development, Sustainable Development Goals, India, Metropolis

2 INTRODUCTION

Now-a- days with the growing development pressure of the metropolis, emergence of fringe area development has come up as one of the solutions for decentralization. Again at the same time, unplanned haphazard growth in the fringe areas has become a common phenomenon, which consequently attempts to impose a negative change in the overall quality of life in the metropolis.

Factors responsible for the said phenomenon can be explained through the following-

New urban developments usually take place on virgin areas predominantly with rural settlement nearer to an existing metropolis. After completion of the project it goes under a separate urban statutory body where in general case the areas in close proximity of those new urban developments remain under panchayet control. Therefore, a contrast in operation of urban and rural local bodies become prominent creating differences in physical attributes in both regions.

Again the activity zone of the urbanized areas attracts a large number of people, especially people engaged in the informal sector, but it is unable to provide sufficient space for their living. As a consequence, these people tend to clog in the fringe areas. The high price value of the residential plots and apartments of the newly developed areas make it out of reach for a number of people in the society. So these people usually search for cheaper accommodation in the fringe areas. These factors increase the development pressure at the fringe areas where the land value is comparatively less. So the people start gathering at the periphery to get the facilities of the newly developed areas. Again there are no such strict building-by-laws to restrict the growth pattern because these areas remain under the panchayet judiciary in Indian scenario. In this way the population of the peripheral areas goes on increasing. This situation gradually creates pressure on the infrastructure of the mother city as there used to be no planning at the panchayet level to resist the haphazard growth. As a result the situation tends toward formation of slums and unauthorized colonies at the fringe areas, which can be seen in many cases. This hampers the overall environment of the area.

There are several examples of haphazard growth in the fringe areas of developed towns especially in India. In many cases lack of proper infrastructure, services and guidelines the adjacent fringe areas of the newly developed areas gradually converted into slums. The fringe areas of New Delhi and Indore are good examples of this kind of consequences.

3 A CASE STUDY OF INDORE

Indore, the commercial capital of Madhya Pradesh, is home to hundreds of small-scale and large-scale manufacturing and industrial units in areas of automobiles, pharmaceuticals and textiles. It is the 10th fastest growing city in India and the world's 32nd fastest growing urban centre. Being a major trading hub, it also has a rapidly growing presence in software, retail and real estate sectors.

The Bypass road around the Indore City is one of the major development nodes around the city and all the new development is takes place in that area. The growth direction of city is towards south-east periphery of Indore City. Criteria for selecting the fringe area for the study:

- Proximity (Map), within a radius of 5 km
- Population Size
- Growth rate
- Density
- % of Non-Agriculture Worker

3.1 Urbanity index and scale of urbanity

Urban index of the fringe area is calculated by index values of the town, village and fringe unit for which it is to calculate.

For Factors which Decreases as we go close to the town the index value will decrease from town, fringe to the village. So the urban index will be:

- $UI = (F-V) / (T-V) \times 100$

For Factors which increases as we go close to the town the index value will increase from town, fringe to the village. So the urban index will be:

- $UI = (V-F) / (T-V) \times 100$, where

T, V & F are Index Value of Factor for sample Towns, Villages and Fringe respectively and is the weighted sum of the sub variables of that variable.

Scale of Urbanity (SU): $\sum UI$.

3.2 Factors that influenced fringe area development

Low cost & easy availability of land in Indore favors the development of industrial and educational institutions. Huge reservoir of competent skilled manpower readily available in the area favors the good economical growth of the area. Again good communication, Well connectivity with the rest of the states, availability of market facilities etc work as icing on the cake for the fringe area development in Indore.



Fig. 1: Proximity map of peri-urban area within 5km radius of Indore Municipality

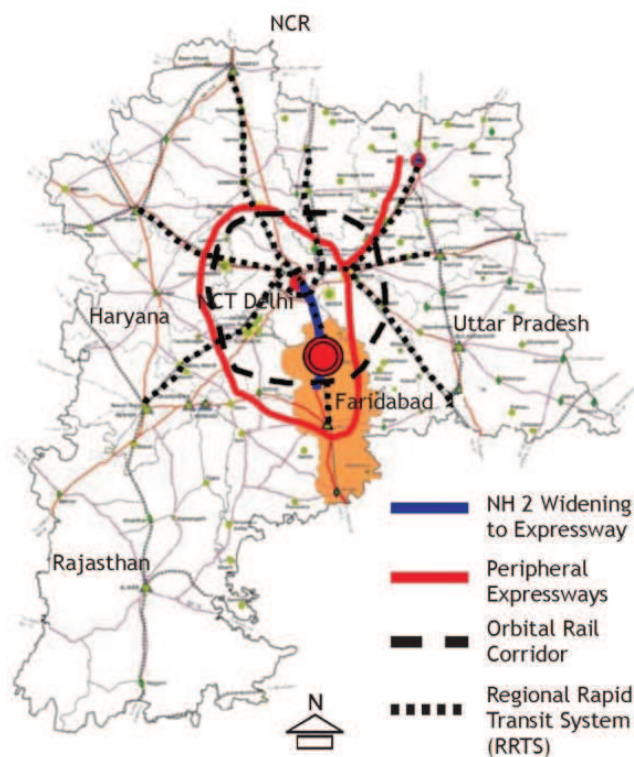


Fig. 2: Ribbon development in the fringe areas of Faridabad

4 A CASE STUDY OF FARIDABAD CITY

It is a leading industrial centre and situated in the National Capital Region bordering the Indian capital New Delhi. Migration is taking place because of adequate infrastructure facilities and proper connectivity to nearby growth centers like Delhi, Gurgaon, and Noida. The people because of higher taxes and livelihood expenses in the core of Delhi prefer to move to suburban areas of the city. So due to all these factors Faridabad is growing at higher rate in last ten years which has resulted in city expansion and given rise to fringe area development with various projects and land use transformations. There are several key points that work in favor of the fringe area development in Faridabad. They are as follows-

- The city has a clearly defined linear shape due to its evolution along linear and parallel transit corridors.
- The city is basically growing on one side towards Agra along NH-2.
- There are large industrial plots lined up along both sides of these corridors.

4.1 Factors that influenced fringe area development

Faridabad has strong linkages with Delhi through railways, metro and road and it has well-developed infrastructure. It has good accessibility with the presence of industrial growth centre. Though 3 national highways pass through the city but the land value is comparatively less than the capital, Delhi. Unplanned Fringe Area is demarcated under the Faridabad control area boundary, so it is facing mixed land use growth including land use transformations from agricultural to commercial land use.

5 INFERENCES DRAWN FROM THE INDIAN FRINGE AREA DEVELOPMENT CONTEXT

- The growth of the fringe area is initiated by the growth of the mother city and depends on the push and pull factor of the mother city.
- Sometimes the growth is natural, sometime it is pre-planned.
- If properly planned the fringe area has the potential to be transformed into a core sub center to balance the population pressure of the mother city.

6 SUSTAINABLE DEVELOPMENT CHALLENGES IN INDIA

6.1 Gap in India

In most of the cases cities expands through the rural areas nearer to any metropolis to decentralize some of its activities and its rural fringe areas experience tremendous development pressure towards urbanism in a rapid way. This leads to urban growth in a haphazard way, as there are no strict planning rules and regulations at panchayat level (73rd Constitution Amendment Act).

6.2 Hindrances towards sustainability

- Lack of financial resources to carry out and plan sustainable development
- Sustainable development is often not possible in war-torn countries like as there are other priorities on hand
- Natural and man-made occurrences may pose a threat to sustainability as they can shift the flow of development and destroy certain elements of infrastructure.
- The governmental conflict between immediate profit and investment towards sustainable technologies
- Corruption
- Lack of efforts at municipal level

Four areas have been identified as areas of concern for India in Achieving SDGs.

- Defining the indicators of SDGs.
- Financing the SDGs.
- Monitoring and Ownership.
- Measuring progress.

7 SCHEMES IN INDIA

India is the 5th largest economy by nominal GDP in the world. Its economy is booming in all sectors especially in the service sector. But India ranks 119th by GDP(PPP), which means there is so much economic contrast in the society, which indicates that it will be very challenging for a developing country like India to achieve all of the SDGs within 2030. Recently World Bank and Government of India Sign \$250 million Agreement to Boost sustainable development in India

However Indian government has specifically focused on the inclusive development to ensure adequate, safe and affordable housing with for all and providing basic services for the poor and upgrade slums through various centrally funded schemes such as PMAY(Pradhan Mantri Awas Yojna) and state funded schemes such as VAMBAY(Valmiki Ambedkar Aawas Yojna in Surat). For the economic betterment of the individuals as well as of the society and to reduce the number of people affected due to global gross domestic product caused by disasters, various schemes have been initiated in India such as PMJDY(Pradhan Mantri Jan Dhan Yojna), SSY(Sukanya Samridhhi Yojna) etc. To decrease the death including water-related disasters, with a focus on protecting the poor and people in vulnerable situations Indian Government has set up new ministries.

8 CONCLUSION

To support the positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening the national and regional development planning, Development Authorities (DA) have been formed and these DA are strictly following the guidelines for the development in any sectors of the development whether it is related to socio-economic or physical improvement. To increase the number of sustainable cities and human settlements by adopting and implementing integrated policies and plans towards inclusion, Fringe Area Development has become an effective and emerging way to mitigate the socio-economic contrast in the developing Countries like India.

9 REFERENCES

- Rjrani Karala: Rural urban transformation in the national capital in the national capital territory of Delhi.
 Dinesh Singh: Planning Strategies for the Development of Peri-Urban Area-The Case of Indore Peri urban Area.
 Arunima Gupta: Measuring Urbanization around a Regional Capital- The Case of Bhopal District.
 Fiona Marshall and Pritpal Randhawa: India's peri-urban frontier: rural-urban transformations.
 B.Thakur, V.N.P Sinha: Urban and regional development in India, vol-1(edited)
 B.K Prasad: Urban development-A new perspective.
 Larry Erickson, Jessica Robinson, Jackson Cutsor, and Gary Brase: Sustainable Development.
 Živanović Miljković¹, Tijana, Crnčević, Igor Marić: Land Use Planning for Sustainable Development of Peri-Urban Zones.
 Adriana Allen: Environmental planning and management of the peri-urban interface: perspectives on an emerging field.
 R. Tornqvist, A. Norstrom, E. Karrman and P.A. Malmqvist: A framework for planning of sustainable water and sanitation systems in peri-urban areas.
 M. Prabhakar Christopher David: Sustainable Development Goals (SDGs) - Challenges for India.