International Journal of Research in Engineering and Science (IJRES)
ISSN (Online): 2320-9364, ISSN (Print): 2320-9356
www.ijres.org Volume 10 Issue 5 ǁ 2022 ǁ PP. 55-61

Planning and Development of Satellite City

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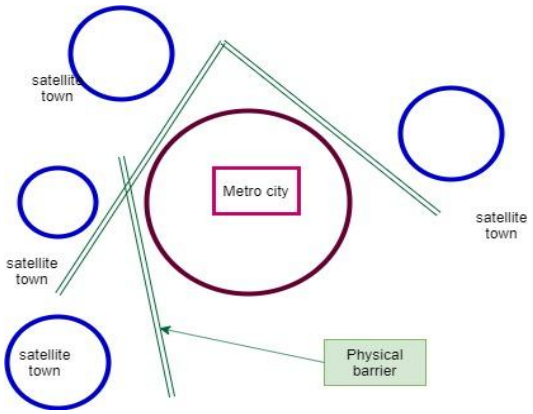
Abstract
The world is changing because of cities. The majority of them are starting to break down. Population growth, degrading infrastructure, and sprawling development are all contributing to this decline. Industrialization occurred in a haphazard and unplanned manner. In today's globalized and privatized world, Indian satellite cities are ignoring inherited traditional design features and planning concepts, environmentally friendly construction work, unemployment, and the city's economic strength, all of which have played a key role in the revival of satellite city culture. Satellite cities are cities that are planned. They're designed to help a major city expand in any way possible by utilizing land, such as by creating a fake tourism theme. Individuals might want the current settlement to be developed into a satellite city. Outside of metro areas, satellite cities are completely self-contained cities that have been planned and developed. They are autonomous, self-contained cities. The main goal of this project is to gather all necessary data in order to control problems that arise in satellite cities, such as Metro blockage, ecology and environment, economy, and unemployment, among others.
Keywords: *Development, Urbanization, Satellite City, Inclusive, Evolution, Green Development policy.*

Date of Submission: 10-05-2022 Date of acceptance: 25-05-2022

I. Introduction

One of the most popular urban planning concepts is the satellite city. It is a small metropolitan area that is close to a larger metropolis. The traditional downtown of the satellite town is surrounded by inner-city neighbour hoods. Because of the satellite city concept, the man-made satellite city was successfully launched. The satellite city or satellite town is in charge of managing urban sprawl. The most effective solution to urbanization issues is the satellite city. The problems that a city faces are caused by urban development in the parent city. The high land value in the central city, for example, makes it expensive for people and businesses to relocate to other areas.



(Fig:-1) Satellite City

Since the turn of the twentieth century, planners have been concerned about how to manage the growing urbanization of large cities. Many experts argue that the problems caused by unprecedented urbanization and population growth in the world's largest cities are qualitatively different from previous urban problems, requiring a new approach to urban planning.

Using current resources while considering future societal needs to avoid resource depletion is what sustainable development entails. It should not interfere with the ecological cycle, thereby protecting the environment.

Land use planning and environmentally friendly construction, along with effective management and development, will help to raise living standards.

Example of Indian satellite cities:

(Fig:- 2) Pimpri-Chinchwad, Satellite City Of Pune, India

II. Objectives

[1] Decongestion :- Because of the large number of vehicles and people, metro congestion is one of the most serious issues. For example, the satellite towns of Gurgaon and Noida are very effective in combating Delhi's metropolitan congestion. Planning and implementation in satellite city to overcome form blockage.

[2] Ecology and Environment :- Climate change and urbanization are intimately connected. As the city grows, the air and water quality will become worse at a faster rate. The primary causes are the loss of green cover and the creation of concrete jungles. Human utilization is more efficient and advantageous. Satellite cities might be a way to address the corruption fixation variables. By implementing a "GREEN DEVELOPMENT POLICY" to protect the environment and ecology.

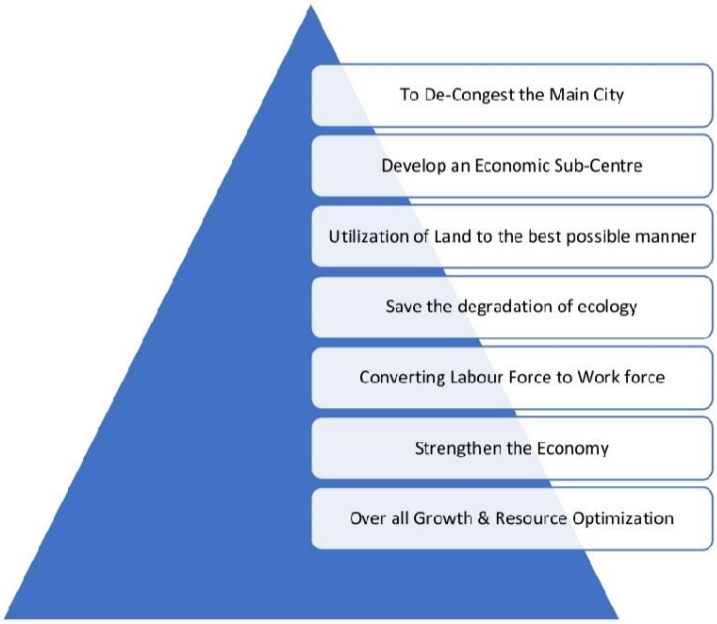
[3] Optimum land utilization:- Land is the most important and insufficient resource available. The pressing need is to maximize the city's assets in order to ensure the city's long-term viability. Parking spaces, libraries, schools, city halls, play grounds, theatre, parks, and zoos, for example.

[4] Economy:- When resources are properly utilized, a satellite town's potential for regional growth is maximized. With the help of the natural environment, the artificial tourism concept aids financial growth of satellite cities.

[5] Converting Labor Force to Workforce:- The comprehensive development of a satellite city necessarily requires equal opportunities for its workforce. The surrounding manufacturing and construction industries require unemployed, poor migrants, and seasonal unemployed agriculture labour. By creating jobs, small and medium-sized businesses can contribute to this goal.

[6] Aesthetic:- Architectural finishes cover a wide range of structure, design elements, and aesthetic appeal. Architectural control over public/semi-public structures, historic, ancient structures, and so on.

Needs of satellite city:



(Fig:-3) Tree diagram of satellite city needs

III. Problem Statement

India's urban areas, regardless of their size, have been under constant pressure from the country's growing population and, as a result, its various social-economic demands. Residential areas, commercial areas, services, infrastructure, and public buildings are being expanded in a haphazard and unplanned manner as a result of this pressure. This type of growth gradually expands and sprawls over the limited spatial extent of urban areas, encroaching on agricultural and open land on the outskirts. These current dynamics in urbanization in all corners of the country are strangely causing most Indian cities to struggle with infrastructure collapse and the impacts for urban dwellers.This type of growth called as urban sprawl, is not of sustaining nature and takes into its grasp the existing green cover and letting the area to become more susceptible to the recent variations of climatic variables that have been observed during the recent decades.

Whereas there the days during Mohenjo-Daro civilization that city planning was so scientific that it formed the fundamental of the modern urban city planning system. Taking this glory, our country treated a history of a planned civilization, but as time passed by, it's started to loss its lustre with growth in urban migration and population pressure on the cities and metros. The cities and metros happened to be landed of up in the haphazard mix as a residence started to mushroom and gave no space and time for plan cities to creep in. Cities are getting crowded because of the variety of business and social opportunities offered to the people. Due to increase in population density and intensive construction, open spaces children can use are decreasing.

IV. Literature Survey

[1] Annapurna Shaw, "Satellite town development in Asia: The case of new Bombay, India (1995)" The original goal of the city in this paper was to create a self-contained counter-management to the old city. With strong commuting link to old city such an outcome is unlikely even in future. Also, should suitable for linking to the old city by railway in future under a development of Gov.

[2] Mr. Ashish Upadhyay, "A real time study for a town planning scheme. (2003)" These Papers deals with the land classification in town. Using RS and GIS can help in following manners:

[3] Computerization of records (through RS and GIS, old surveys) help an easy access to each Govt. Department as well as to common people, as well updating record simultaneously on in conjunction with drawing is possible.

[4] Dr. Avanti Bambawale,"Design Concept of New Urbanism for Planning Second Renaissance in Developing Fringes of Metropolitan Cities: Case Example of Pune, Maharashtra, India. (2017)"

Pune's landscape exposes a mix of kuccha and pucca elements, alternated with authorized and unauthorized structures, as the new country approaches. Modern Pune's urban sprawl and built up development is controlled by theoretical rules or mechanisms of floor space index. However, in practice they are blatantly ignored. The existing planning policies of development rules and implementation need to be modified. The reality is that

there is serious mismatch between socio-economic structure and the speed in which inward migration outgrows infrastructure.

[5] Mr. Isher Ahluwalia,"Planning of Urban Development in India." The study of achievement of rapid growth that is both inclusive and sustainable, presents formidable challenges for urban planning.

Integration of transportation and land use: A good road network, combined with an efficient public transportation system, helps cities improve their "working efficiency" by reducing commuting costs, travel time, traffic congestion, and pollution. Economic planning of town and study of land use planning and transportation.

[5] Shahneez Haseeb, " Satellite Cities Of The Twentieth Century: A Sustainability Analysis Of Milton Keynes And Reston, May 2017.

Infrastructure planning with all technical details is possible using the various base maps. Property details (buildings type, no. of dwelling units, area, density pattern over a particular area, taxation and payment information, etc.) are easily retrievable.

[6] Jerome Pratter, " Legal Implementation of a Satellite City Plan: The Planned Disposition of Public Land, January 1969.

It is hoped that this article has given further impetus to the idea of developing the Penal Farm as a satellite community. In this case study to explore the often neglected, yet critical, problem of implementation of the planner's objectives. Clearly, if programs such as the Penal Farm sub city are undertaken, the legal and governmental systems must be made flexible enough to accommodate completing such developments.

The process planning technique may offer a means of organizing the public-private effort which the Memphis project requires. However, the presentation of this technique in this article is not meant to slight the difficult problems which this method creates for public agencies.

[7] Md. Mehedi Hasnat ,"Developing Satellite Towns: A Solution to Housing Problem or Creation of New Problems, February 2016.

For a densely populated country like Bangladesh scope for new development is very limited. The developed countries with vast open spaces and even the developing countries with much less densely populated areas have the scope of experimenting with new township development. However, in a heavily populated area like Dhaka, finding free land on the outskirts to expand the city is difficult. The government's ongoing projects are a do-or-die situation in the current situation. It would be a complete and irreversible mistake to squander the opportunity.

As a result, it is critical to integrate land use, transportation, urban design, and local plans in order for these projects to serve as models for future development. The open spaces and bodies of water must be protected. Waste water treatment and solid waste management solutions must be implemented immediately in satellite city.

[8] Nan Nan, Li Song, "Research on satellite urban transportation and land spatial planning in big data environment.

Big data important role play in urban traffic division. The accuracy and scale of big data will help designers to design and make decisions more effectively. With the rapid development of information technology, traditional data acquisition methods have been unable to meet society's demands. Big data technology has become an indispensable basic data collection and analysis.

V. Methodology

Based on the fact that satellite cities vary in their characteristics and conditions of development depending on the problems experienced by the mother city and the adopted policy of urban planning, this required to reply on a methodology based on the theoretical references related to urban growth in large cities, as well as published scientific researches to find out the most important case studies on the role of satellite cities in reducing the pressure on the mother city and resolving issues that these satellite cities face

GREEN DEVELOPMENT POLICY

Guiding Principles :- The goal of the Green Development Policy is to ensure that the satellite city develops as a developed with built-in environmental sustainability so that future generations can benefit from it in the long run through participatory and inclusive economic growth based on the green development concept.

"GREEN DEVELOPMENT" is a pattern of development that reduces poverty through an inclusive economy in which resources are used efficiently and without waste, ecosystem services are supported, and greenhouse gas emissions and waste are reduced; "Green industry" is an industrial process that uses energy and resources efficiently, with reduced greenhouse gas emissions, and without harming or risking humans or the environment.

(fig:-4): Green satellite city

Strategic objective :-

Develop and implement a climate-change-aware population settlement strategy that takes into account natural resource availability and regional resilience. Reduce pollution in the air, water, and soil by implementing a better plan for urban land use, construction zoning, and infrastructure provisioning, as well as establishing a legal structure for personal responsibility.

Waste water treatment and solid waste management solutions must be implemented immediately in satellite city.

[1] Land utilization :-

Understanding the rural residential land utilization characteristics in the satellite city In rural residential areas, there are many land use types, with industrial land and warehouse land being the most important, reflecting rural economic activities, particularly in some cities' industrial land areas.

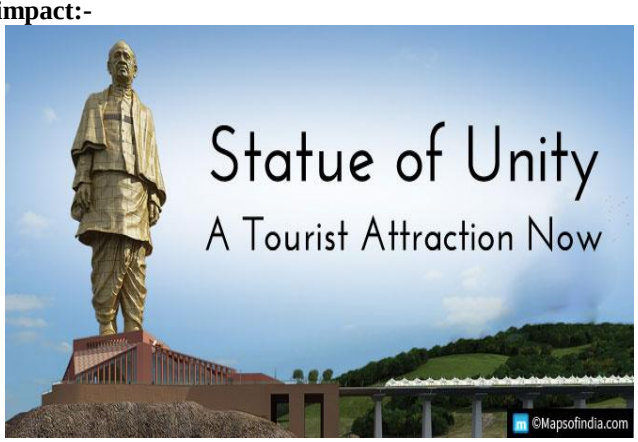
With the growth of the rural economy, there is a need for rural residential land management and planning. Reform and development are intimately connected. In order to optimize land utilization for long-term satellite city growth. For example, parking spaces, libraries, schools, city halls, parks, theatre, and so on.

[2] Importance and benefits of artificial tourist attraction :-

Artificial Tourist attractions contribute significantly to the tourism industry. They typically reap economic benefits of tourism. Some tourist attractions are designed primarily to attract visitors.

A tourist attraction is usually valuable to visitors in one or more of the following areas: historical significance, cultural significance, political significance, nature, natural or built beauty, leisure, amusement, and fun.

Tourism environmental impact:-



(fig:- 5): Artificial Tourism Theme

Artificial tourism themes :-

Artificial Tourist Attraction	Natural attractions
1) A tourist attraction, also known as a visitor attraction, is a tourist destination that is frequently visited by tourists. 2) Generally,artificial there are four main categories of tourist attractions: educational, man-made, sport, events. 3) Examples:- • Entertainment parks • Wildlife attractions • Museums • Unique built attractions	**1)** A natural tourist attraction is one that occurs spontaneously. In other words, it was not constructed by humans. **2)** The various types of natural wonders found around the world. Because of the natural attraction, many areas surrounding natural attractions have been developed for tourism. **3)** Examples:- •National parks • Beaches • Caves • Cliffs

• Historical attractions	• Mountains • Hills • Waterfalls • Islands • Forests

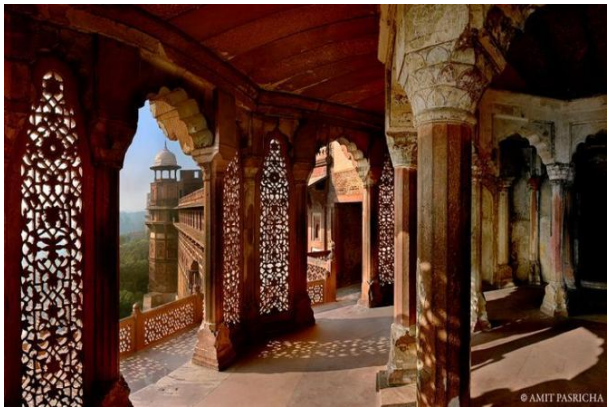
[3] Unemployment :-

Now a days unemployment is a biggest problem of India. sustainable tourism development in solving the problems of unemployment and unbalanced regional growth and inequalities in income and standard of living. This is the opportunity help to overcome from unemployment problems.

[4] Architectural characters :-

Satellite cities have their own unique cultures, histories, and economic infrastructure. The built form has taken on a built-to-edge character, with chabutras, balconies, and verandahs responding to the street and fostering close interaction between occupants and members of the public.

Traditional residential structures are mostly ancient structures from the 18th and 19th centuries, with a few temples, mosques, and dargahs dating from before the 18th century.



(fig:- 6): Architectural Design

SCOPE

1. Satellite cities serve a specific purpose to provide a perfect balance between the population and resources, with respect to environment-friendly development.
2. There is an underlying need to developed satellite cities Accommodation of population growth, Preservation of open space and utilization of land. Supplementing growth of larger cities. satellite cities gives scope to improve economical growth of city.

VI. CONCLUSION

1. For a populated country like India, scope for new development is limited. The developed countries with vast open spaces and even the developing countries with much less densely populated areas have the scope of experimenting with new township development.
2. The government's ongoing projects are critical in the current situation. It would be a complete and irreversible mistake to mismanage the opportunity. Satellite cities, when properly implemented, can help to control urbanization in city centers.
3. Satellite cities, when properly implemented, can help metro cities control urbanization. To use these project methods for future development of satellite city, priority must be given to integrating land utilization, green policy, economic strength of the city, architectural design of the city, and local plans.
4. The preservation of open spaces and water bodies is essential. The satellite city must incorporate a long-term waste water treatment and solid waste management solution.

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