

GROWTH AT THE FRINGE: A CASE STUDY OF KALWA

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India's economic growth has been matched by rapid urban development in recent years; the urban landscape is being significantly re-modelled. More and more areas are now being urbanised at a much faster pace. One of the features reflected in modern urbanisation is Urban Sprawl. **An Urban sprawl** refers to a rapid expansion of the geographic extent of cities and towns, often characterized by low-density residential housing, single-use zoning, and increased reliance on the private automobile for transportation. It is caused mainly due to the need to accommodate a rising urban population. The other factors include increased affluence, attractive land and housing prices, and the desire for larger homes with more amenities (such as yards, household appliances, storage space, and privacy) at the level of the individual.

To put it up simply, Urban Sprawl is the migration of a population from populated towns and cities to low density residential development over more and more rural land. The end result is the spreading of a city and its suburbs over more and more rural areas. Urban Sprawl is one type of development pattern that has received increasing attention by researchers and policy makers interested in fostering sustainable communities. However, it has been correlated with increased energy use, pollution, and traffic congestion and a decline in community distinctiveness and cohesiveness.

Kalwa falls in Thane district situated in Maharashtra state. It is a bustling town situated at a distance of 4 kilometres from Thane and falls under the Thane Municipal Corporation. The size of the area is about 14.55 square kilometres. The population of Kalwa was 245973 as per the 2020 data.

With substantial progress being made, Kalwa has been a crucial industrial and manufacturing hub and has benefitted massively because of its short distances from various major routes such as the Eastern Express Highway, Navi Mumbai, Thane-Belapur Road, Mumbai-Pune Highway all in just close proximity of 15 minutes. There has been emergence of several Business IT parks which has made it a comparative commercial edge. Access to several reputed schools, top-notch hospitals, shopping malls etc has given Kalwa an additional location advantage. There have been various infrastructural developments such as the Kharegoan rail-over bridge, the Kalwa-bridge, the Kalwa Chowpatty – all aimed at improving existing public facilities in such a way that creates value and opens new opportunities for future growth.

The Maharashtra Housing and Area Development Authority is planning to turn Kalwa into a hub of affordable housing in the state by constructing one of the biggest economically priced complexes. There was once an engineering company spread over 100 acres in Kalwa east which was shut down few decades back. The land is under litigation. However, the authorities are in the process of acquiring the land to convert it into Maharashtra's biggest housing project providing affordable flats for the low, middle and high income group.

Every development comes up with its own pros and cons and an urban sprawl is no different. The growth of the proposed mega township would have its own share of problems evolving over a period of time. Cities and their suburbs are now becoming overcrowded because of urban sprawl, but now it is time to look at the causes and the effects of the urban sprawl

Urban sprawl has many negative consequences for residents and the environment, Some of the environmental consequences which is already experienced include higher water and air pollution, increased traffic fatalities and traffic jams, loss of agricultural capacity, increased dependency on private vehicles, higher taxes, increased runoff into rivers and lakes, increased flooding, loss of natural habitats to list a few; while the harmful effects on human health, include high blood pressure, hypertension and chronic diseases associated with air and water pollution.

Urban sprawl increases traffic by creating longer and more frequent private vehicle commutes, which leads to a major increase in air pollution and ground-level smog. Automobiles contribute to the growing emissions of greenhouse gases and the continued degradation of air quality in urban areas with serious implications for public, wildlife and ecosystem health. Poor air quality increases respiratory ailments like asthma and bronchitis, heightens the risk of life-threatening conditions like cancer, and burdens our health care system with substantial medical costs. Furthermore, air pollution eventually falls out to become water pollution, in the form of acid rains, which harm both the air and the water. The increase of air pollutants from urban sprawl, such as nitrogen oxide, hydrocarbons, ozone and particulate matter, increases respiratory ailments like asthma and bronchitis and heightens the risk of life-threatening conditions like cancer.

Urban sprawl often leads to water distribution issues and lead to water over-consumption as more water is consumed for maintenance of landscape activities, washing automobiles etc which can strain and deplete local water supply systems and lead to water shortages. Another severe problem due to urban sprawl ins the problem of sanitation.

Poor community design, such as poorly planned, low-density, automobile-dependent development, has a direct bearing on human health. It has been observed that there is a clear correlation between urban sprawl and the epidemic levels of obesity and increase of chronic diseases associated with physical inactivity. sprawling dark roadways and rooftops expands the heat island effect by effectively absorbing more heat from the sun and reradiating it as thermal infrared radiation, which increases the temperatures and compromises human health and comfort. Higher air pollution levels and warmer days and nights contribute to general discomfort, respiratory difficulties, non-fatal heat strokes, heat cramps and exhaustion and heat related mortality.

It is therefore necessary to solve the problem of urban sprawl. However, it is human tendency to move to new areas to find better areas to live. As Jamaia Cascio quotes "Human civilization has been changing the Earth's environment for millennia, often to our detriment. Dams, deforestation and urbanization can alter water cycles and wind patterns, occasionally triggering droughts or even creating deserts."

There has been emergence of the concept of New Urbanism as a counter measure towards urban sprawl and as a reaction to the spreading out of cities. New Urbanism is an urban planning and design movement that began in the United States in the early 1980s aimed to reduce dependence on automobiles, and to create livable and walkable neighbourhoods with a densely packed array of mixed housing, jobs, and commercial sites. The idea of New Urbanism thus has four key ideas – i.e., the city is walkable, there is de-emphasise on automobiles, buildings should be mixed both in their style, size, price, and function and a strong emphasis on the community. The new urbanism architecture approach could be implemented to abate the problems of urban sprawl in Kalwa. The focus is on making pedestrian friendly street with grid network to disperses traffic and diversity of housing facilities with a minimal environmental impact of development and its operations adding up to a high quality of life well worth living, and create places that enrich, uplift, and inspire the human spirit. However, there are multiple obstacles to overcome. The town development has already started with haphazard real estate boom and construction of interconnected street grid network will need modification in the planned buildings. This significant remodelling will affect the building architecture and involve diversion of funds which may not be well digested with the builders as well as prospective house buyers who must have already made down payment for their houses. Massive efforts are required to bring about changes in mindset of the people in the area. When people start to enjoy their lifestyle and express a high comfort index living in such urban centres, it becomes an example for other upcoming urban centres to follow. Development of more such urban areas on similar grounds will ease living in the fringe areas and there will be a sense of inclusivity among the people giving them satisfaction of being a part of the community.

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