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MALIK ASGHAR City regions in developing countries are experiencing tremendous urbanization that contributes to sprawled development, a daunting challenge posing a threat to sustainable urban growth. Take the example of Malaysia. Nearly 73% of its total population lives in cities, making it one of the most urbanized countries in Southeast Asia.

NAEEM:

The Kuala Lumpur metropolitan region witnessed a higher rate of increase in its physical area than that of its population over a period of 20 years. During that time, the population approximately doubled, but the area increased by two and 1/2 times.

Urban sprawl is characterized by an inefficient use of land resources. For example, building low-density housing and commercial buildings will lead to the horizontal expansion or sprawl of the city.

Look at the example of two cities-- Atlanta, the capital of the US state of Georgia, and Barcelona, the capital of Catalan in Spain. The same number of people resides in each of these cities, but the built-up area for Atlanta is about 26 times greater than that of Barcelona. This is a typical illustration of sprawl versus compact development.

Urban sprawl leads to the depletion of green area on the urban periphery. It also contributes to lengthier commutes and higher energy consumption for commuting. It makes public transport financially unfeasible, which leads to an enormous increase in private car ownership. This trend results in traffic congestion and increased pollution due to vehicular emissions. Limiting urban sprawl is, therefore, key to reducing greenhouse gas emissions and increasing the overall environmental sustainability of a city.

Compact development is a helpful response to urban sprawl. Let's discuss the concept of compact development. The prominent features of compact development include mixed land use, well-developed public transportation infrastructure, efficient use of land, and strict controls on development outside city boundaries. Now I'll explain these three features of compact development.

Mixed land use-- mixed land-use development means placing residential, commercial, and recreational uses in close proximity to one another. This promotes walking, biking, and helps

reduce commuting for a number of people who find their workplace nearby in the neighborhood.

Emphasis on public transportation-- the most important feature of compact development is having efficient rail and bus-based public transportation. This helps reduce private car ownership. The concept of transit-oriented development promotes having reasonably dense development surrounding mass transit stations as a desirable feature of a compact city.

This kind of development provides easy and efficient access to transport facilities for residents and workers. It can also increase ridership and help make public transport financially viable. It ultimately leads to less energy consumption and less pollution.

Efficient use of land resources and control on development outside the city boundary-- single-story buildings interspersed with patches of undeveloped land wastes precious land resources. Such development patterns also contribute to urban sprawl by creating more demand for development on green fields on the outskirts of cities. Compact development, in contrast, uses land more efficiently by having high-rise buildings that can accommodate more people and by developing vacant land. Demarcation of city growth boundaries also helps promote compact development, thereby optimizing the utilization of available land within the boundary.

Planning departments in KL Metropolitan are committed to achieving compact urban development. Provision of efficient public transport, therefore, is a top priority. Heavy investments in mass transit systems have already been made to increase the public transport ridership rate from the current 20% to 50% by the year 2030.

The rail-based public transport system in KL Metropolitan came into operation about 20 years ago, in 1996, and has expanded incrementally. The central area of the city is served by a light rail transit system and KL Monorail. Together, they provide approximately 60 kilometers of rail network.

A commuter train, namely KTM Komuter, on the other hand, makes the city core accessible for suburban areas of the KL metropolitan area. Similarly, a dedicated express train connects the city center to the KL International Airport.

The mass rapid transit system started in 2011. Once completed, it will comprise of three rail lines connecting suburban areas in the greater KL to the federal territory. The first line to be completed in two years will serve a population of about one and 1/2 million people. A single

train on the line with a maximum capacity of 1,200 passengers can replace 12 buses, or approximately 700 cars.

In addition to improving its rail-based public transport, KL is also increasing the share of public buses. Five bus express transit routes are currently in operation to reduce travel time from outer areas to city center. Moreover, a comprehensive bus rapid transit plan with dedicated bus lanes has also been proposed to make buses a fast and efficient mode of public transportation.

Kuala Lumpur's city government has also started to pay more attention to transit-oriented development and, as a first step, has identified nearly 70 Transit Planning Zones. What is a Transit Planning Zone? It is an area of 250 meter radius around a mass transit station. Its development is characterized by high building density along with mixed land uses. The work on intensification of land use by replacing the single-story buildings with high-rise ones and having mixed land use is in progress in the identified Transit Planning Zones.

Usually, the city center is the focal point of most economic activities. The use of precious land in this area needs to be intensified in order to make room for increased demand for new residential and commercial development. Therefore, vacant and other inefficiently used land parcels need to be identified in order to convert them to productive uses. The KL city government, for example, created an inventory that identified 821 hectares of vacant and abandoned land in the city core and surrounding area that can now be used efficiently. In addition, it is also replacing single-story buildings with multi-story ones.

Similarly, due attention is being paid to rehabilitation of historical buildings and public open spaces. Central Market, Petaling Street, and Masjid Jamek are some of the examples of rehabilitated areas. This effort promotes walking and makes the city center a more attractive and livable place.

So how can city governments in developing countries, such as Malaysia, encourage compact development and tackle the issue of urban sprawl? Here are some of the key strategies to be adopted. Strategy number one-- urban planning authorities in the metropolitan region should establish growth boundaries for their cities, and development should be allowed only within the city boundary to intensify development and use land more efficiently.

Strategy number two-- the proposed policies of one agency need to be planned and implemented in coordination with the relevant federal, state, and local government

departments. The 2006 National Urban Policy of Malaysia emphasized the need for setting urban growth limits for each of its cities and towns. However, this has yet to be translated into practice because of lack of implementation of policies by the concerned state and local level planning agencies.

Strategy number three-- the practice of building new expressways should be discouraged as it promotes sprawl along the highways. Instead, heavy investment should be made in intracity and inter-region rail services that help control sprawl and make compact development sustainable. Similarly, increased taxes on new cars, parking fees, and a road user tax for cars entering the city center could help reduce the increase in private vehicle ownership. Regulating measures such as a ban on single occupancy cars in the city center could be used to avoid traffic congestion and discourage car ownership.

Strategy number four-- special measures discussed earlier also need to be complemented by incentives, fees, and regulatory policies. Incentives could be provided for mixed-use development, multi-story buildings, and for the preservation of historic buildings. However, along with increasing building density, utmost attention needs to be paid to provision of sufficient public open spaces and parks with equal distribution within the city. It also needs to be ensured that open space and public park facilities should be accessible to all residents of the city within walking distance in order to make cities attractive and livable places.

In conclusion, urban sprawl is an undesirable phenomenon taking place in most of the cities, especially in developing countries. It is a threat to sustainable development as it causes a number of problems in cities. The blight of urban sprawl can be controlled by pursuing a compact development approach that leads to making cities sustainable.

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