

Limit urban sprawl

BY DR ZALINA SAHARI

THE world is increasingly urban. In 1900, only 10% of the world's population lived in cities. In 2010, the figure was more than 50% and by 2050, it is expected that two out of every three people will live in cities.

In Malaysia, rapid urbanisation has been experienced over the past 30 years and the Statistics Department projects that, by 2020, 70% of the population will be living in urban areas.

This phenomenon in itself is not a bad thing, as more people will be living within roughly 5% of the country's land area, freeing the rest of the land for agricultural activities and the preservation of nature.

The problem is that many old urban centres are not designed to absorb so much urban migration in such a short time. Without sufficient strategic planning, very soon these urban centres will start to sprawl uncontrollably.

SPRAWL VS. SMART GROWTH	
Sprawl	Smart growth
Car dependent	Walkable
Scattered subdivisions of single-family homes	Diversity of housing types in many neighbourhoods
Cul de sacs and wide roads that funnel traffic into few highways that are choked with traffic	Connected street network that distributes traffic throughout the system
Low density	Higher average densities around commercial centres
Little public open space	Networks of parks, greenways and natural areas
Spread out	Compact centres
Single-use office parks and shopping centres surrounded by parking lots	Mixed-use centres (shops, offices, housing, restaurants, schools) served by transit
Limited or no public transit service	Frequent and convenient transit service

Source: adapted from the Chattanooga Climate Action Plan, 2009 http://www.chcrpa.org/Divisions_and_Functions/Design_Studio/Projects/Climate_Action_Plan/Final_CAP_adopted.pdf

An uncontrolled sprawl imposes greater pressure on planners to open up what were once virgin green fields to satiate the increasing demand for housing. This is generally a worldwide problem, and when virgin green fields are violated indiscriminately, the resulting problems are worse than the original.

The Klang Valley, especially Kuala Lumpur, has recently experienced a significant growth in population which could not be contained within its urban confines. This has resulted in both the clearing of land within the city and the movement of people to the suburbs and the lesser populated outlying towns in Selangor.

The majority of the population who moved out commute long distances daily into the city to work, explaining the huge traffic congestion along arterial roadways leading into Kuala Lumpur during rush hours.

The out-migration is clearly not a result of employment opportunities but is partly due to the shortage of affordable housing. Who can still afford to live in the city, especially in those multimillion ringgit high-rises?

While the suburbs grew rapidly (suburbanisation), the city itself experienced slower population growth.

In parallel with the decline of the residential population in the city centre, there has been a commensurate drop in residential land areas. Residential land and buildings have high commercial values and are quickly taken over by commercial uses.

Pressures will remain on these remaining pockets of residential land to be converted to more profitable land use, which in turn could lead to a further reduction in the inner city residential population.

The steady suburbanisation of jobs and residences has resulted in a more widely dispersed urban form with more new developments located further out from the original urban core.

Successive townships or housing estates tend to be built with little consideration on connections between facilities provided locally and those in their immediate neighbourhood.

As a result, efficient bus routing is hindered; hence, commuters have no choice but to use the main road (artery) even for short trips. The places where people live, work, shop, and lounge are far from one another, to the extent that walking, public transit and cycling are impractical.

The poor public transportation network has further worsened traffic problems. A number of shortcomings of the rail networks in Kuala Lumpur include the poor integration between different lines that form the networks, poor accessibility to stations, bad planning of the lines where some major population centres are not served, insufficient parking bays and the poor integration with land use patterns since rail lines do not coincide with many important activity centres.

All of the aforementioned have resulted in increasing dependence on the use of private vehicles. This pattern of growth is called "sprawl". Studies on Kuala Lumpur, George Town and Johor Baru show that the process of sprawling is already taking place.

Sprawl is associated with a host of environmental impacts, including loss of green space, species habitat, and agricultural land in the wake of low-density sprawling development; increased impermeable surfaces that lead to flash flooding and large discharges of polluted and contaminated water that overwhelm drainage systems and damage ecosystems; the heavy use of vehicular traffic that leads to increased air pollution; and global warming.

In order to avoid such phenomena from continuing to happen, towns and cities need to have a planning policy that limits urban growth to within a certain area.

Another planning response to sprawl is the "smart growth" initiatives that stress on usage of mixed land and building designs that create high densities with lower environmental impacts.

Provisions for more affordable housing in the city centre are also emphasised to improve the quality of life and economic viability of the city centre.

Among the notable efforts in encouraging smart growth and urban greening in Malaysia has been the institution of Green Building Index (GBI) Township rating tool that considers sustainability for entire communities, neighbourhoods, or districts, which are smaller than a city scale.

The anticipated increase in the Malaysian population by an additional 10 million people over the next 25 years with the majority again in urban centres, will stimulate an enormous building boom to accommodate the growth.

But can Kuala Lumpur be turned into a carbon neutral and fully sustainable city?

Economist Matthew Kahn in his book *Green Cities, Urban Growth, and the Environment*, said a green city is a healthy place that has "clean air and water, pleasant streets and parks." It is "resilient in the face of natural disasters and faces little risk of infectious disease. Its residents have strong, green behavioural habits, like taking public transit, practising recycling and water conservation, using renewable energy".

So, are we there yet? Well, based on "The Living Planet Report" by the World-Wide Fund for Nature International, we each have an ecological footprint of 2.2 global hectares. This means each Malaysian requires 2.2ha of land annually to support our lifestyle. Indeed, Malaysians are consuming more resources and producing more waste than what the planet can support.

On the positive side, Kuala Lumpur has led the way in progressing toward green growth with 95 buildings or projects within the city achieving GBI certification of either Design Assessment (DA) or Completion and Verification Assessment (CVA), or 35% out of the national total of 265.

Out of the 95, about 56% are residential buildings, while the remaining 44% are non-residential. Kuala Lumpur City Hall (DBKL) is also leading the way in urban development initiatives with many green programmes being rolled out in 2015.

With lofty aspirations to turn Kuala Lumpur into a major green city on the world map, DBKL will do well to recognise that many initiatives and policies must be founded on long-term principles of sustainable design and planning.

Actions by all levels of government, private sector and individuals, on individual initiatives or groups, are required to innovate the green behaviours necessary for achieving the green city.

"Business as usual" is long considered not an acceptable option anymore, and all players in Malaysia's own building and construction business value chain need to cooperate and collaborate more to build future green cities.

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