

# High-density housing that works for all

■ ARIF HASAN

“*In an urbanising world, the way people fit into cities is vastly important – socially, economically, environmentally, even psychologically. So density, or the number of people living in a given area, is central to urban design and planning. Both governments and markets tend to get density wrong, leading to overcrowding, urban sprawl or often both. A case in point are the high-rise buildings springing up throughout urban Asia – perceived as key features of that widely touted concept, the ‘world-class city’. While some may offer a viable solution to land pressures and density requirements, many built to house evicted or resettled ‘slum’ dwellers are a social and economic nightmare – inconveniently sited, overcrowded and costly. New evidence from Karachi, Pakistan, reveals a real alternative. Poor people can create liveable high-density settlements as long as community control, the right technical assistance and flexible designs are in place. A city is surely ‘world-class’ only when it is cosmopolitan – built to serve all, including the poorest.*”

## The changing face of urban Asia

Most of Asia’s major cities are in social and economic upheaval. An industrial and agricultural corporate sector has risen and is growing, along with an increasingly affluent middle class. Both demand urban land to expand and consolidate, and city centres are often seen as ideal for the purpose – but for whom? Much ‘prime real estate’ in Asian cities has long been settled by the poor.

Many of these informal settlements were earmarked for upgrading in the 1980s. However, upgraded informal settlements are not in keeping with the image most Asian cities want to pursue. Increasingly, people living in them are relocated to high-rise apartments (known as ‘ground plus six’ for the number of storeys), often at city margins.

Why high-rises? In Asian cities as in many Northern ones, housing is often high density of necessity. Governments justify the high-rise solution on the grounds that it is the only way to achieve high density while adhering to prescribed bylaws. But in choosing to ‘build up’, liveability for the many is often sacrificed to image-making for the few.

## Brave new world revisited

The image in question is the ‘world-class city’, aggressively promoted by international financial institutions, the national and international corporate sector and other powerful actors in this and the last decade.

The concept has been beautifully described in current development literature. Such a city has to have iconic architecture, be an ‘event city’, and have advanced high-speed communication, world-renowned cultural institutions and influential media with international reach. And it must cater to international tourism. To do all this, it has to seek direct foreign investment and build ‘investment-friendly infrastructure’, epitomised by high-rise buildings, elevated expressways and condominiums for the rich.

All this is rooted in the new paradigm of globalisation, the product of the World Trade Organization, structural adjustment, freedom of capital (but not of labour) to move across national frontiers, decentralisation and much more – all the ingredients of the market economy and its consumer-oriented culture.

## High-rise, high price

In becoming attractive to investors, many cities in Asia are failing their residents – particularly those being forced out of the large informal settlements that grew up at the margins of ‘legality’. There is considerable evidence to suggest that those that ought to have the most to gain from housing improvements are instead the biggest losers. Residents in these ‘ground plus six’ buildings complain that they cannot add to their apartments as their families expand, carry out economic activities at home, or



Arif Hasan is an IIED Visiting Fellow and an expert in development planning and design

supervise their children, who then join gangs and take to drugs. They note that the estates are far away from their workplaces, necessitating costly commuting; and that they have to pay instalments on their apartments and excessive utility charges for common facilities. Evidence suggests that families become poorer as a result of this relocation and that many fall into debt.

It is easy to dismiss such complaints as anti-progress, and to present the available choice as either sprawling 'slums' or a dense settlement conforming to the 'world-class' image. But while 'world-class' is a debatable concept, the notion that high-rise developments are the only means to achieve density, or the best for residents, can be challenged with evidence of actual and hypothetical alternatives.

This is exactly what a study sponsored by IIED and UNFPA (the UN Population Fund) on lower-income settlements in Karachi, Pakistan's largest city and financial centre, seeks to do. It shows that flexible low-rise housing designs don't only work better for the urban poor – they can work well at densities as high as or higher than those of high-rise apartment complexes.

## Four cases of density

The study first looked at four of these settlements to reveal how density has been achieved historically. Plot size and shape, affordability, need for open spaces, flexibility of design and governance issues were all considered.

The Karachi Building Control Authority (KBCA) bylaws stipulate a maximum density for low-income apartments of 1625 persons per hectare (pph), with 55 per cent of the estate area designated for residential purposes. The maximum density for settlements with individual houses on plots is considerably lower, ranging from 375 to 1250pph depending on plot size.

Two older plot settlements (Nawalane and Paposh Nagar) have densities of 3376 and 1195pph, leaving Nawalane in violation of KBCA bylaws. The density of apartment complex Fahad Square is 2329pph, also violating regulations. Khuda Ki Basti, a new plot settlement not now in violation, is projected to have a higher density in 2020, when the current generation will have grown up.

Yet none of these areas have significant social problems or conflicts within families or among neighbours except for one half of Nawalane, which at 4480pph has the highest density. The problems in this area result not just from congestion, but also from a lack of space for incremental additions to housing – key for the accommodation of an expanding population. In fact, studies show that the vast majority of low-income families prefer plots, on which they can build homes incrementally, to apartments. They are more affordable, can cater to the needs of a growing family (including 'extended family' members from several generations as well as children), and allow them to carry out income-generating activities at home.

The main issue is how this incremental growth, generally an *ad hoc* process, can instead be planned for and managed aesthetically and sustainably, with the goal

of achieving high densities as well as better social and physical environments. To find out, the settlements were hypothetically redesigned using computer modelling. The remodelling also revealed a number of important issues related to plot size and affordability.

## What might have been

The three plot settlements were remodelled to hold plots of 47 square metres (m<sup>2</sup>). This is compact, but the houses could be expanded by two and a half storeys. The overall residential area of each settlement was kept at 55 to 58 per cent as against KBCA regulations of 55 per cent. Road space (provided for cars, but never used as such) was integrated with recreational open spaces, creating a better social and physical environment.

In remodelling Fahad Square, the apartments were replaced with terraced houses, each built on approximately 31m<sup>2</sup> with ground plus one and a half floors. In the process, 77 per cent of the plot area was built up. (Social sector facilities did not need to be factored in, as they are provided in the development scheme.)

In the remodelled designs, densities at Khuda Ki Basti, Nawalane, Paposh Nagar and Fahad Square worked out at 1755, 3157, 1653 and 2280pph, respectively. These are much higher than, or approximately equal to, KBCA requirements for low-income community apartment blocks.

These models are important because they show how density might work for a vast percentage of the world's urban population. But there are other factors at play.

Incremental growth can only be managed aesthetically and sustainably if the infrastructure is planned, and if an effective body is created to give advice and managerial guidance to the community for this purpose. Such an organisation can be a part of the local government structure for the area, or an NGO. A residents' organisation that can interact with this body is essential. And any pilot project promoting this concept must be initiated and monitored for at least a decade.

## Next steps

The findings reveal that relatively low-rise, flexible, high-density housing design makes for better settlements, healthier communities, and cheaper homes and infrastructure than high- or medium-rise apartment complexes. And that implies a need to:

- challenge the 'world-class city' image so it can accommodate low-rise, friendly neighbourhoods rather than high-rise apartment blocks
- challenge the developers to invest in the incremental-growth model
- challenge the government by asking what changes would be needed in its House Building Finance Corporation – which supports much developer-built housing by providing loans to individual purchasers – for it to financially support that model.

For more on alternatives to high-rise development that work for poor communities – including photos, a video, 3D graphics, a downloadable report and a working paper (Hasan, A., Sadiq, A. and Ahmed, S. 2010. *Planning for High Density in Low-Income Settlements: Four case studies from Karachi*. Working Paper. London/New York, IIED/UNFPA) – see:

[www.urbandensity.org](http://www.urbandensity.org)

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CONTACT: Arif Hasan  
arifhasan@cyber.net.pk  
c/o IIED, 3 Endsleigh Street  
London WC1H 0DD, UK  
Tel: +44 (0)20 7388 2117  
Fax: +44 (0)20 7388 2826  
Website: [www.iied.org](http://www.iied.org)



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