

Rapidly Populating Cities/ Rapid Urbanisation

Chrisna du Plessis and Kaixun Sha

Rapid urbanisation places economic, social and environmental pressures on cities. These pressures are particularly keen in the low-income countries of Latin America, Africa and Asia where poverty reduces the ability of city management to effectively deal with these problems. International debate is presenting several solutions to the problems of rapid urbanisation in terms of urban form and planning models. However, there is some doubt as to the validity and usefulness of these solutions in cities with different cultural and political contexts, and concern about the disregard for the urban-rural symbiosis, especially in developing countries. This paper briefly outlines the main arguments behind these concerns.

Pace of urbanisation

In 1996, on the eve of the Habitat II Conference in Istanbul, the United Nations Centre for Human Settlement published a report¹ which claimed that soon after the turn of the millennium the majority of the world's population will live in cities. The report further predicted a doubling of the global urban population by 2025. Most of this growth in urbanisation is expected to happen in Asia, Africa and Latin America. A report² prepared by Sir Peter Hall and Ulrich Pfeiffer for the *Global Conference on the Urban Future* (URBAN 21), held in Berlin in 2000, uses terms like “explosive growth” and “exploding cities” to describe the pace of urbanisation in these regions.

But, as David Satterthwaite³ points out, the world is currently less urbanized and less dominated by large cities than predicted; and while the scale of urbanisation is certainly unprecedented, the speed at which most cities in the developing world are growing, still does not measure up to the phenomenal urbanisation experienced in the period of industrialisation in Europe. Furthermore, the most rapid urbanisation is often experienced in countries with strong economies, like Norway, Finland and the USA. It is therefore a misconception to think that rapid urbanisation is only a problem experienced by developing countries.

Satterthwaite further cautions against the assumption that the future is urban, and suggests a number of factors that influence urban growth and which may lead to urbanisation rates lower than predicted. These include global and local economic problems; and factors influencing population growth such as falling fertility levels and rising mortality rates, especially in countries affected by HIV/AIDS. To this can be added two further wild cards. The first is the peaking of world oil production somewhere within the next 5 to 10 years, coupled with the increased demands for oil by countries with fast growing economies and huge populations like China and India. The second is the impact of global climate change. Both of these will change the relationship between large urban centres and their rural hinterlands, and the population flow between them. While climate change may push people off the land, oil scarcity may reduce the accessibility of food and other consumer goods in cities, especially for the poor, who may then invade arable land in rural areas.

However, whether cities are growing as rapidly as predicted is a moot point. The rate of urbanisation experienced is still creating a number of social, economic and environmental pressures in the cities of lower-income countries. These are the subject of our discussion.

Economic pressures

One of the biggest problems facing many cities in low-income countries is that the rate of economic growth, and subsequently of per capita income, does not keep pace with the rate of population growth. A poor population means low payment levels for services. This reduces the rates base of a city, thus reducing the resources available to provide adequate levels of services at a speed that matches the population's growing needs. The operational costs of the city is also increased as basic services will have to be provided for free, while the social and environmental pressures placed on the city by inadequate services and increased inequalities bring associated costs of their own. A rapidly growing, poor population also places pressure on systems not designed for the population densities using these services, leading to badly performing urban environments. A badly performing urban environment discourages investment by the private sector, and so a vicious circle develops which eventually can lead to systems collapse.

Social pressures

When there are more people demanding services than people paying for them, municipalities are unable to provide these services. Even where people can afford to pay for services and infrastructure like housing, the growth in demand often exceeds the ability of local governments to respond to this demand quick enough. This situation forces people to provide their own, often illegal, solutions. The creation of informal settlements, illegal connections to existing services, and occupation of sensitive areas like riverbanks and steep hillsides leads to social tensions and a number of safety concerns such as increased vulnerability to both natural and man-made disasters. Inadequate service provision further leads to health problems caused by indoor air pollution and inadequate access to sanitation and clean water. Furthermore, factors which characterise rapid urbanisation, such as overcrowding, unemployment and increased consumer demands and expectations, are also believed to contribute to high crime rates in urban areas.

Environmental pressures

Urbanisation concentrates and thus compounds the environmental impact of human settlements. Increased water run-off leading to higher flood risks and pollution of groundwater, increased water consumption due to higher standards of services, increased concentrations of air and water pollutants, and the degradation or complete loss of arable land and biodiversity, are but a few of the environmental impacts of urbanisation.

It is often assumed that poverty is the cause of, or at least a major contributor to, environmental degradation. However, this is not generally the case, except in relation to the immediate living environments of the poor.⁴ On a city-wide scale, the environmental impact of the non-poor as a result of their consumption levels and patterns far exceeds that of the poor. Because of their low levels of resource consumption, and their tendency to re-use and recycle, poor communities also have a negligible distal environmental impact, compared to more affluent communities. However, in low-income urban areas, environmental problems are a major cause of disease and death, both because of the proximity of the environmental problem (pollution of drinking water from rivers, indoor air pollution, disease vectors like rodents and fleas, open sewage, etc.) and the lack of accessible health facilities in these areas.

As cities become more affluent, the environmental burdens tend to become more diffuse, delayed and indirect (climate change, ozone depletion, etc.) .

The challenge for cities in low-income countries is how to improve the immediate quality of the living environment for those living in informal settlements, while making sure that the environmental impact of improving these areas is minimised, and the quality of life does not deteriorate for the more affluent parts of the city. The ability of a city to do this is influenced largely through the urban structure and form.

Urban structure and form

Urban structure and form determine both quality of life and resource efficiency, and can be a key determinant of socio-economic equity, as illustrated by the consequences of the apartheid city in South Africa and the world-wide phenomenon of gated communities. Current debates on sustainable urban structure and form are based on two principles: integration and densification⁵.

The integration principle calls for both integration of functions (or mixed-use) and integration of the different classes of society. In theory, integration of functions such as residential, commercial, social services and public space, would bring jobs and other opportunities closer to where people are living, thus reducing transportation needs and multiplying the effect of public and private investment. In practice this seldom happens if the second aspect of integration – socio-economic integration – is not present. Current trends promoting integration include the ‘urban village’ concept and New Urbanism.

Densification combats urban sprawl and provides economies of scale for effective and affordable service delivery for certain types of services. It is an appropriate response in areas where high levels of services, such as waterborne sewage and full electrification, are provided at an affordable rate, and where there is an acceptable ratio between residential density (number of dwellings) and population density (people per square metre). However, if these conditions are not present, densification may actually be detrimental. Current trends that support densification is the Compact City approach, and the setting of urban growth boundaries.

Determining urban structure and form is, however, only one part of the more complex, integrated planning process suggested by sustainable development.

A different planning model

According to *Agenda 21* and the *Habitat Agenda*, integrated planning and sustainable development go hand in hand. Integrated planning is concerned with the overall behaviour of a regional system and its sub-systems, as linked together by fluxes of material and energy. In theory, integrated planning takes all the conditions and circumstances that will play a part in the successful outcome of the plan into account, and involves all the people or organisations who have a role to play or a contribution to make. It should generate ‘optimum’ solutions that give the best overall performance for the environment and the socio-economic system, and enough flexibility to allow for changes to reflect changing conditions.

However, for integrated planning to be successful, it should be based on a good understanding of the make-up of the urban system, and then prioritise actions according to the dynamics of the system. Where integrated planning is based on

strategic planning according to priorities identified early on in the public participation process, critical parts of the system can be left out of the equation, leading to unexpected problems further down the line, or even the collapse of the entire system. Basing decisions on current developmental priorities alone (focusing only on certain parts of the system), and ignoring the system dynamics of settlements, can result in intuitive, feel-good decisions that provide short-term solutions, but undermine the long-term sustainability of these settlements. This is exactly the danger that rapid urbanisation holds for long-term integrated planning.

Pressures of rapid growth lead to the creation of informal settlements that ignore the formal planning process and its decisions, forcing city authorities to crisis manage new development. This often places different sectors of the community in direct competition, with those in informal settlements seen as 'jumping the queue' and diverting resources from rate paying citizens who then do not get the level of service they have paid for.

The different faces of urbanisation

It must be remembered that there is a difference between the kinds of urbanisation and the impacts of urbanisation experienced in already industrialised and mainly urbanised countries, and that experienced in low-income countries with a predominantly rural population. In URBAN 21, Peter Hall confidently predicts that by 2025:

"...the whole world will be one urban network using automatic production, transportation and communication systems to free people to work in soft human services"

However, the kind of urbanisation described above is unlikely to happen in the low-income countries of Africa, Asia and Latin America, or may become a reality for only some of the people living in affluent parts of cities in these countries. It is further worth remembering that the progress of urbanisation is heavily dependent upon the cultural background and regulatory context of the nation concerned. That is why there are widely different modes and approaches of urbanisation in different countries, and different approaches to achieving sustainable cities.

One should also guard against seeing the problems of rapid urbanisation as pertaining only to new urban development and informal settlement. Urban regeneration and the maintenance of inner city and "old city" areas have an equally important part to play in dealing with rapid urbanisation.

Rural-urban relationships

Lastly, it is easy to focus on the impacts of rapid urbanisation on cities, and forget that there is a symbiotic relationship between cities and rural areas. The most visible aspect of this is seen in countries where rapid urbanisation is the result of migration from rural areas. Persistently high out-migration of the economically active (and physically able) population leaves the rural areas predominantly populated with more vulnerable groups like children, the elderly, the disabled and female-headed households who battle to survive on subsistence farming and remittances from family in the urban areas.

A high influx of rural people also adds further pressures on the city. The transformation of a large number of people from farmers into townspeople with little experience of urban living and few skills to help them survive in the city, places a burden on the city administration not only in terms of the provision of shelter and basic services, but also in providing education and skills development to make these new urbanites employable in their new context. Where the links between these new migrants and their rural

origins are still strong, it may be found that the new citizens are reluctant to invest in the city, preferring to send their savings back to rural areas. This may have implications for the types of housing provided, the location of new employment opportunities, and for locating future public and private investment.

Framework for the discussion sessions

The discussion sessions will focus on actions that need to be taken in response to the above pressures, solutions that enable these actions, and examples of good practice, in the pre-design (planning), design (including technology options), and post-design (management) phases of urban development.

¹ United Nations Centre for Human Settlements (UNCHS). 1996. *An Urbanizing World: Global Report on Human Settlements*. New York/Oxford: Oxford University Press.

² Hall, P. and Pfeiffer, U. 2000. *Urban Future 21*. New York/ London: E&F Spon.

³ Satterthwaite, D. 2002. 'The Ten and a half myths that may distort the urban policies of governments and international agencies'. The 21st Century Urban Scenario: Citizens as Agents of Change. CD-Rom prepared for UN Habitat and UNEP. Text available online at http://www.ucl.ac.uk/dpu-projects/21st_Century/myths/myths.htm

⁴ IIED (2001e). "Identifying the Groups Most Vulnerable to Urban Environmental Hazards." In *Urban Environmental Improvement and Poverty Reduction*. Danida, London.

⁵ Du Plessis, C. and Landman, K. 2002. *A Sustainability Analysis of Human Settlements in South Africa*. Pretoria: CSIR Report BOU/ C368. Available online: www.sustainablesettlement.co.za