

## URBAN GROWTH AND HEALTH

**Yola L.G. Verhasselt**

*Geografisch Instituut, Vrije Universiteit Brussel, Belgium*

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### Summary

Urban growth is a worldwide phenomenon, but it is more important in the developing world. Not only are the urban population and the number of cities growing, but the size of cities is also extending.

Rapid urban growth has involved an expansion of slums and spontaneous settlements. Poverty is a major problem. Urban health is linked to environmental as well physical as social factors.

As a consequence of the health transition, chronic diseases are still rampant. In the developing countries the proportion of infectious and parasitic diseases is still high, particularly in poor areas. Hence, urban pathology is characterized by a double disease burden.

Improvement of the health situation will contribute to the achievement of urban sustainability

### 1. Urban Development

Urban growth is one of the challenges of the third millennium. Related health problems are a major concern, particularly for the developing world.

### 1.1. Increase of Urban Population

The definition of “urban” is subject to debate. For statistical purposes, administrative subdivisions are mostly adopted. However, the statistical definition varies from country to country.

Urban growth as measured by the urbanization rate is a rather recent phenomenon. In 1800, only 3% of the total world population lived in cities (Table 1). In 1900, this rate reached 14% and in 1950 it went up to 29%. At the start of the twenty-first century, half of the world population may be considered urban. Worldwide, the urban population is growing much faster than the rural population.

Year	Total world population (millions)	Urban population (millions)	Urban population %
1800	906	29.3	3.2
1850	1171	80.8	6.9
1900	1608	224.4	14.0
1950	2400	706.4	29.4
1960	2995	984.4	32.9
1970	3628	1399.0	38.6
1980	4360	2014.3	46.2
2000	6200	3200.0	51.6

Table 1. Evolution of urban population

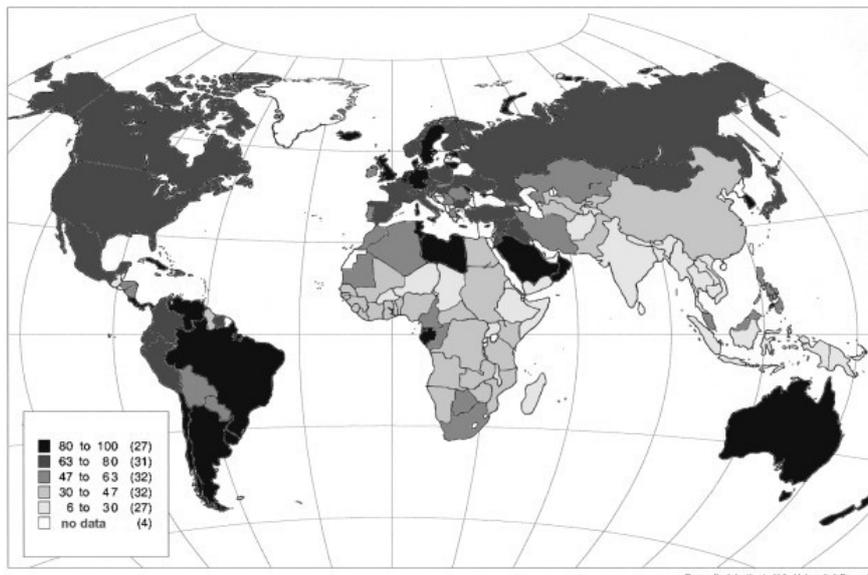


Figure 1. Urbanization rate  
(Source: Geografisch Instituut, Vrije Universiteit, Brussels)

A particular feature of this urbanization rate is its spatial disparity. The map in Figure 1 indicates on a national scale the urbanization rate at the end of the twentieth century. Clearly, very high rates are observed in the industrialized countries (for example, in North America, Europe, Australia, New Zealand, and Japan), whereas intermediate rates exist in the transitional countries. The developing countries show low rates, particularly in Africa south of the Sahara.

The increase of the urban population is taking place, above all, in the developing countries. Here urban expansion is occurring at a high rate (Figure 2). City growth is the result of a complex mechanism, of which several models exist. Putting it simply, in a phase of rapid increase, the migration component is the most significant. In a later stage, natural population increase will become the most important demographically.

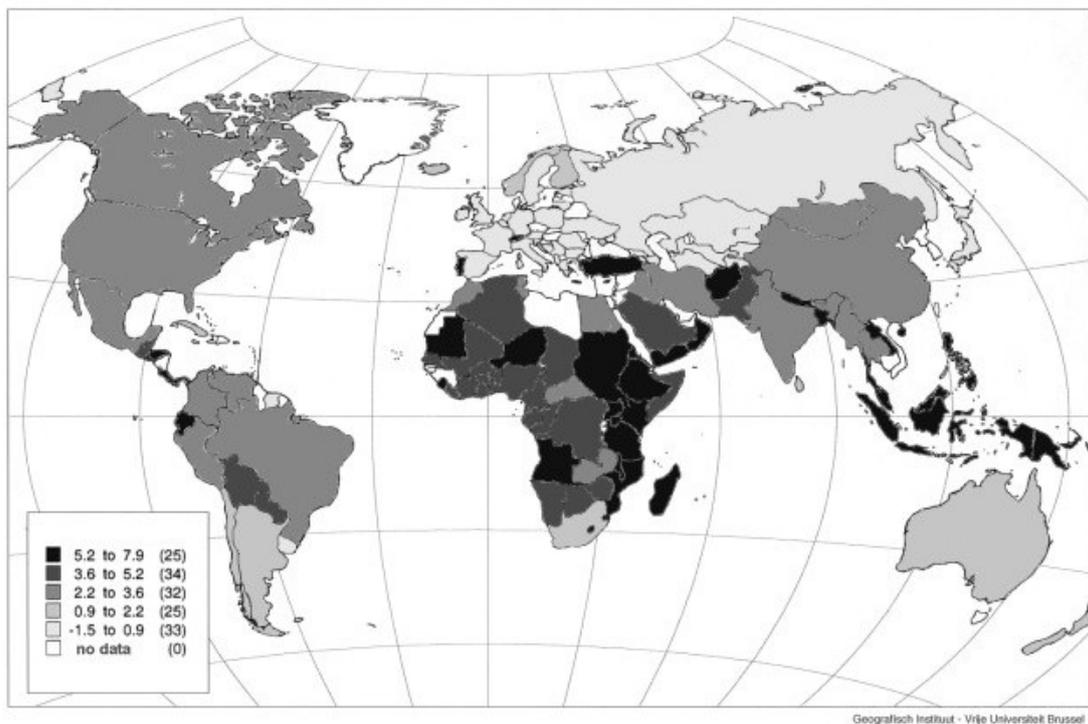


Figure 2. Urban growth rate 1990–1999  
(Source: Geografisch Instituut, Vrije Universiteit, Brussels)

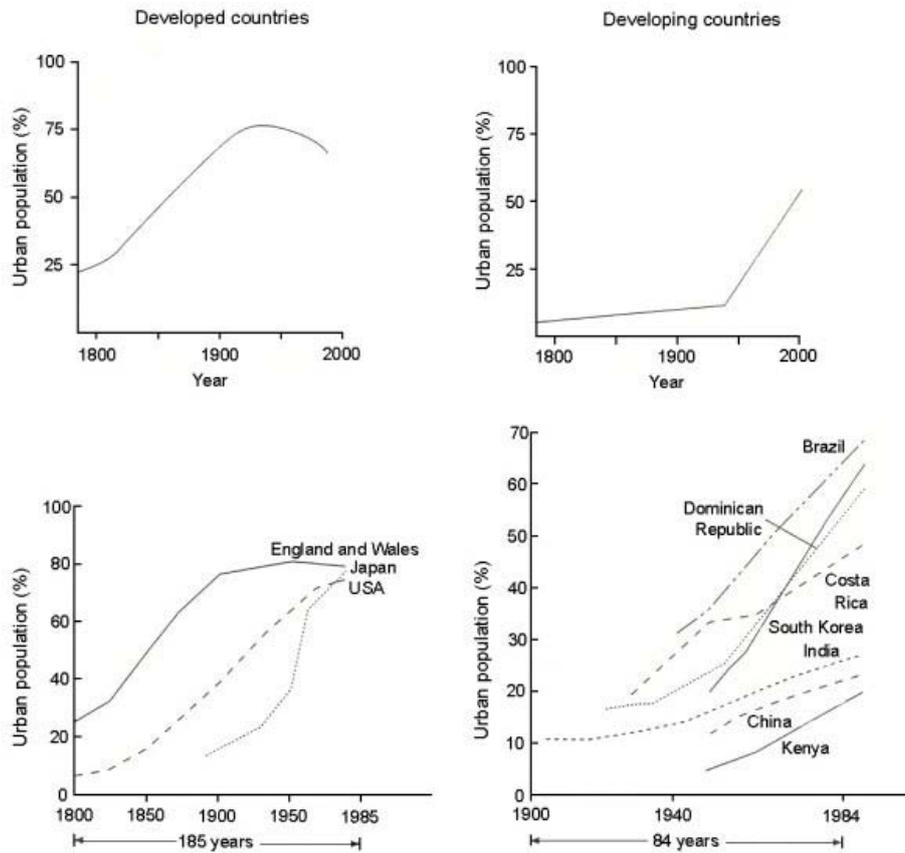
This recent urban explosion in the developing world, in comparison with the much slower urbanization process in the industrialized countries, is well illustrated by the urban transition model, or “cycle of urbanization” (Figure 3).

In the already highly urbanized countries, however, no significant increase in urbanization rate is occurring. The growth of the large agglomerations is much less important, even stagnant. Often, smaller cities grow faster.

Also, in the developing world it is not only the biggest cities that have high growth rates. In Latin America (e.g. Mexico or Brazil) intermediate cities showed a more significant population increase towards the end of the twentieth century.

## 1.2. Size of Cities

Although the current urbanization rate is still low in developing countries, that is where most of the world’s largest cities are located. It is interesting to note that in 1950 six of the ten largest cities in the world were located in industrialized countries while in 2000 this figure had come down to two. A remarkable evolution has taken place in the size of large cities. The average number of inhabitants has increased substantially. The number of megacities has gone up considerably. This rapid increase of the size of large cities, which is particularly meaningful for the developing world, involves an extension of urban problems. These concern health as a whole, transport, pollution, violence, etc.



Source: Potter, R.B. et al.

Figure 3. Cycle of urbanization

(Source: R.B. Potter et al, *Geographies of Development* (Harlow: Longman, 1999), pp. 225–226)

Also, primate cities are more frequent in developing countries. This means a considerable predominance of the largest city (which is usually the capital) and a significant distance to the second city in terms of population and economic importance. Rural-urban migration usually results in a peripheral extension of cities. However, inner-city migration patterns occur as well, for example between central slums and peripheral spontaneous settlements. Moreover, inter-city population movements take place generally from smaller cities to larger ones (this is what is known as “stepwise

migration”).

Lack of equipment and services is a major threat in fast-growing cities. These shortcomings exist not only in the spontaneous settlements, but they even occur in newly built cities. For example, in the Egyptian new cities that have been planned around Cairo, the services and infrastructure (schools, commercial centers, public transport) were implemented after the population had moved in.

The development of parallel cities is another issue of urban growth. Here the situation can differ greatly according to the degree of planning. For example, Pikine in Senegal was originally planned in the early 1950s to receive the slum dwellers of Dakar (*opération de déguerpissement*). On the other hand, El Alto in Bolivia near the airport of La Paz developed spontaneously, settling emigrants from the Altiplano.

The quality of life in cities depends not only upon the size of the city or the growth rate, but also upon the quality of management and governance. It appears that in Latin America the health situation (as measured by infant mortality rates) in smaller cities is better than in big cities, while in Sub-Saharan Africa the figures are better for large cities. In Asia, the differences are less significant.

On the whole, very large cities suffer more from environmental problems such as air pollution. The list of air pollution levels observed in the world’s largest cities reveals the seriousness of the problem in the developing world. Cities like Mexico City, Cairo, Karachi, and Seoul are more polluted than the megacities of the industrialized countries. In several developing countries the presence of heavy industries inside urban agglomerations adds to the pollution of the air, water, and soil.

Indeed, the situation is worst in the biggest cities of the developing countries. Also, in general, violence and crime increase with city size.

At household level, however, environmental problems such as indoor pollution or inadequate sanitation can be as severe in smaller cities.

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### **Biographical Sketch**

**Yola L.G. Verhasselt** has a doctorate in science. She is professor of geography at the Free University of Brussels. Her special field of research is the geography of health. She has wide experience of developing countries.

Professor Verhasselt has been president of the Commission on Health and Development of the International Geographical Union. Currently she is the permanent secretary of the Royal Academy of Overseas Sciences and an officer (treasurer) of the International Council for Science (ICSU). For several years she was director of the WHO Collaborating Center on Spatial Health Modelling. She also collaborated with WHO as a temporal adviser.

Yola Verhasselt is a member of several academies and learned societies, a member of the editorial board of numerous scientific journals, and the author of more than 100 scientific publications. Dr. Verhasselt has been awarded the Prix Rahir of the Royal Belgian Society of Geography and received the Lauréat d'Honneur of the International Geographical Union.