



International
Institute for
Environment and
Development

Human Settlements Discussion Paper Series

Theme: Urban Change –1

The scale of urban change worldwide 1950-2000 and its underpinnings

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This is an updated and expanded version of two previously published papers, *The Scale and Nature of Urban Change in the South*, an IIED working paper published in 1996, and *Coping with Rapid Urban Growth*, RICS International Paper Series, Royal Institution of Chartered Surveyors, London, published in 2002.

Part of the reason for this updated version is the availability from the United Nations Population Division of a new global dataset on urban populations and on the populations of the largest cities. Unless otherwise stated, the statistics for global, regional, national and city populations in this paper are drawn from United Nations (2004), *World Urbanization Prospects: The 2003 Revision*, Population Division, Department for Economic and Social Affairs, ESA/P/WP.190, New York, 323 pages. The author is particularly grateful to the UN Population Division for making this data available.

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This paper can be downloaded free of charge from http://www.iied.org/urban/Urban_Change.html

ISBN: 1 84369 560 X

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SUMMARY

The world's urban population multiplied ten-fold during the 20th century and most of the world's growth in population between 2000 and 2020 is expected to be in urban areas. However, the world was less urbanized and less dominated by large cities by 2000 than had been expected, and most of the world's largest cities had several million fewer people than had been predicted one or two decades earlier. There were also fewer "mega-cities", with 10 million or more people, and the year when the world's urban population is predicted to exceed its rural population has been put back to 2007.

This paper discusses the reasons for this and also why the long-term trend to an increasingly urbanized world has not changed. Lower urbanization levels and fewer large cities than expected also does it alter the fact that many aspects of urban change in the last 50 years are unprecedented in their scale and speed - including the size to which many cities have grown and number of very large cities. But this review of urban change shows some surprises, including:

- many of the largest cities now have more people moving out than moving in;
- Asia has most of the world's largest cities (but this only returns to what has generally been the case); Northern America and sub-Saharan Africa have the most "new" large cities; and
- rapid urban change is not confined to low- and middle-income nations, since Northern America has some of the world's fastest growing cities over the last 50 years.

This paper also outlines what has underpinned the trend towards an increasingly urbanized world, and the economic logic behind it – for instance, how most of the world's largest cities and fastest growing cities are in the largest national economies. The ending of colonial empires after World War II also had profound effects on urban trends in Africa and much of Asia – and although political changes are still important in underpinning urban change, they are now less important than economic change for most nations. The paper also describes the costs generated by rapid urban growth, and suggests that most are not caused by the urban growth itself but by "poor governance" – the inability of national and local institutions to adapt to the new challenges that rapid urban growth presents. It also describes some of the exceptions – the national and city governments that have managed to adapt.

Finally, the paper stresses that there is no automatic link between rapid urban growth and urban problems. Some of the world's fastest growing cities are also among the best governed, with some of the best quality of life in their nation. In addition, by concentrating people and enterprises, cities present many opportunities for better services and environmental management. There is no reason why well-governed large cities should not achieve the highest standards in terms of quality of life – and also set high standards with regard to the environment, through efficient resource use, low waste volumes and low per capita greenhouse gas emissions.

1. Background – an urbanizing world

Introduction

The world's urban population today is around 3 billion people¹ – the same size as the world's total population in 1960. During the 20th century, it increased more than ten-fold, and close to 50 percent of the world's population now lives in urban centres, compared to less than 15 percent in 1900.² Many aspects of urban change during the period 1950–2000 were unprecedented, including not only the world's level of urbanization and the size of its urban population, but also the number of countries becoming more urbanized and the size and number of very large cities. During these same 50 years, many urban changes were dramatic – with the populations of dozens of major cities having grown more than ten-fold, and many having grown more than twenty-fold; many cities now sprawl for thousands of square kilometres. Most of the world's largest cities are now in Asia, not in Europe and Northern America. Table 1 shows how the time needed for one billion people to be added to the world's urban population has fallen.

Table 1: The declining time needed for one billion additional urban dwellers

World's total urban population	Years taken
0 to 1 billion urban dwellers	10,000 years? (c.8000 BC–1960)
1 to 2 billion urban dwellers	25 years (1960–1985)
2 to 3 billion urban dwellers	17 years (1985–2002)
3 to 4 billion urban dwellers	15 years (2002–2017)

But these urban statistics tell us nothing about the very large economic, social, political and demographic changes that have underpinned them – including not only the growth in the world's population but also the multiplication in the size of the world's economy, the shift in economic activities and employment structures from agriculture to industry, services and information, and the virtual disappearance of colonial empires. In 1900, the aeroplane, television, cinema, computers and the internet had not been invented, and the automobile and other motor vehicles and telephones had made hardly any impact on the world economy. This paper seeks to combine a description of urban change with some explanation of its causes.

Aggregate urban statistics can also be interpreted as implying comparable urban trends across the world, but they obscure the great diversity in urban trends between nations. They also hide the very particular local and national factors that influence these trends. Aggregate urban statistics may suggest rapid urban change, but a very large proportion of the world's urban centres are not growing rapidly, and a significant proportion are actually losing population.³ Many of the world's largest cities, including Mexico City, São Paulo, Buenos Aires, Calcutta and Seoul have more people moving out than in.

¹ Unless otherwise stated, the statistics for global, regional, national and city populations are drawn from United Nations (2004), *World Urbanization Prospects: The 2003 Revision*, Population Division, Department for Economic and Social Affairs, ESA/P/WP.190, New York, 323 pages.

² Graumann, John V. (1977), "Orders of magnitude of the world's urban and rural population in history", *United Nations Population Bulletin* 8, United Nations, New York, pp. 16–33.

³ See United Nations (2004), which has many examples of cities with 750,000 or more inhabitants losing population during the 1990s. Forty-five such cities are reported to have had declines in their populations during the 1990s; 32 of these were in low- and middle-income nations (mostly in East Europe or the Russian Federation, but also including six cities in China). See also Table 11. Analyses of the growth rates of all urban centres in a nation

The increasing number of “mega-cities” with 10 million or more inhabitants may seem to be a cause for concern but there are relatively few of them (18 by 2000); also, they concentrate less than 5 percent of the world’s population and, as described later, they are heavily concentrated in the world’s largest economies. Also, taking a longer-term view of urban change, it is not surprising that Asia has most of the world’s largest cities. The growing number of large Asian cities reflects the region’s growing importance within the world economy (and Asia has many of the world’s largest national economies). In addition, historically, Asia has had most of the world’s largest cities for most of the last three millennia.

Box 1: Potential confusions between urbanization and urban growth

In statistical terms, urbanization is an increasing proportion of a population living in settlements defined as urban centres. The immediate cause of most urbanization is the net movement of people from rural to urban areas. There are usually extensive urban-to-rural migration flows too, but it is when there is more rural-to-urban than urban-to-rural migration that urbanization takes place.

Care is needed not to confuse “growth in urban population” and urbanization (i.e. increase in the proportion of the population living in urban centres). Virtually all changes in the level of urbanization (the proportion of the population living in urban centres) is caused by movements of people in or out of urban centres. Natural increase in population (i.e. the excess of births over deaths) does not contribute to increases in urbanization levels, except where the rate of natural increase in urban centres is higher than that in rural areas, or where natural increase brings a rural settlement’s population over a threshold so it becomes reclassified as “urban”. Where the rate of natural increase is higher in urban areas, it is often the result of high proportions of rural-to-urban migrants being of child-bearing age, and their movement to urban centres changes urban centres’ rate of natural increase. But within most nations, rates of natural increase are generally lower in urban areas than in rural areas. Part of a change in a nation’s level of urbanization between censuses is often due to rural settlements growing to the point where they are reclassified as urban (and thus added to the urban population in the new census when, in the previous census, they had been part of the rural population, and obviously natural increase contributes to this), or boundaries of cities or metropolitan areas being extended to include people that were previously classified as rural. But in general, a nation’s level of urbanization is not influenced much by population increases. Most of the nations with among the world’s highest population growth rates remain relatively unurbanized; most of the nations with the lowest population growth rates are among the world’s most urbanized nations.

Although rapid urban growth is often seen as “a problem”, it is generally the nations with the best economic performance that have urbanized most in the last 50 years (see Section 3). In addition, perhaps surprisingly, there is often an association between rapid urban change and better standards of living. The mega-cities may appear chaotic and out of control, but most have life expectancies and provision for piped water, sanitation, schools and health care that are well above their national average – even if the aggregate statistics for each mega-city can hide a significant proportion of their population living in very poor conditions. Some of world’s fastest growing cities over the last 50 years also have among the best standards of living within their nation.⁴ If our concern is to improve urban conditions, especially for the 700 million or so urban dwellers who live in very overcrowded dwellings in tenements or shacks lacking basic infrastructure and services,⁵ a considerable part of our efforts should focus on relatively small cities or urban centres. And these include thousands of urban centres that are not growing rapidly.

between censuses usually shows a significant proportion with low growth rates, and often many with declining populations.

⁴ See, for instance, Curitiba and Porto Alegre, both among the most rapidly growing cities in Latin America over the last 50 years, both with relatively high standards of living; Menegat, Rualdo (2002), “Environmental management in Porto Alegre”, *Environment and Urbanization*, Vol.14, No.2, October, pp. 181–206; also Rabinovitch, Jonas (1992), “Curitiba: towards sustainable urban development”, *Environment and Urbanization*, Vol.4, No.2, October, pp. 62–77.

⁵ Hardoy, Jorge E., Diana Mitlin and David Satterthwaite (2001), *Environmental Problems in an Urbanizing World: Finding Solutions for Cities in Africa, Asia and Latin America*, Earthscan Publications, London, 470 pages.

It is also important not to overstate the speed of urban change. Recent censuses show that the world today is also less urbanized and less dominated by large cities than had been anticipated. For instance, Mexico City had 18 million people in 2000⁶ – not the 31 million people predicted 25 years ago.⁷ Calcutta had around 13 million by 2000, not the 40–50 million that had been predicted during the 1970s.⁸ São Paulo, Rio de Janeiro, Seoul, Chennai (formerly Madras) and Cairo are among the many other large cities that, by 2000, had several million fewer inhabitants than had been predicted. In addition, the actual number of “mega-cities” with more than 10 million inhabitants in 2000 is much less than had been expected.⁹

The regional distribution of the world’s urban population

Most of the world’s urban population is now outside Europe and Northern America (Table 2). Asia alone contains close to half the world’s urban population, even if more than three-fifths of its people still live in rural areas. Africa now has a larger urban population than Northern America or Western Europe, even though it is generally perceived as overwhelmingly rural. The urban population of Africa, Asia, and Latin America and the Caribbean is now nearly three times the size of the urban population of the rest of the world. UN projections suggest that urban populations are growing so much faster than rural populations, that 85 percent of the growth in the world’s population between 2000 and 2010 will be in urban areas, and nearly all this growth will be in Africa, Asia and Latin America.

Table 2: The distribution of the world’s urban population by region, 1950–2010

Region	1950	1970	1990	2000*	Projection for 2010
Urban population (millions of inhabitants)					
World	733	1330	2273	2857	3505
Africa	33	83	199	295	417
Asia	232	486	1,012	1,367	1,770
Europe	280	413	516	529	534
Latin America and the Caribbean	70	163	314	393	472
Northern America	110	171	214	250	286
Oceania	8	14	19	23	26
Percentage of population living in urban areas					
World	29.1	36.0	43.2	47.1	51.3
Africa	14.9	23.2	31.9	37.1	42.4
Asia	16.6	22.7	31.9	37.1	42.7
Europe	51.2	62.9	71.5	72.7	74.2
Latin America and the Caribbean	41.9	57.4	71.1	75.5	79.4
Northern America	63.9	73.8	75.4	79.1	82.3
Oceania	60.6	70.6	70.1	72.7	73.7

⁶ Garza, Gustavo (2002), *Urbanization of Mexico during the Twentieth Century*, Urban Change Working Paper 7, IIED, London.

⁷ United Nations (1975), *Trends and Prospects in the Population of Urban Agglomerations, as assessed in 1973–75*, Population Division, Department of International Economic and Social Affairs, ESA/P/WP.58, New York.

⁸ Brown, Lester (1974), *In the Human Interest*, W. W. Norton and Co., New York.

⁹ The United Nations Population Division had predicted that there would be 27 “mega-cities” by the year 2000 in its 1973–75 Assessment (United Nations 1975, op. cit.), and 23 in its 1984/85 Assessment – United Nations (1987), *The Prospects of World Urbanization, Revised as of 1984–85*, Department of International Economic and Social Affairs, ST/ESA/SER.A/101, New York.

Percentage of the world's urban population living in:					
World	100	100	100	100	100
Africa	4.5	6.2	8.7	10.3	11.9
Asia	31.7	36.5	44.5	47.8	50.5
Europe	38.3	31.0	22.7	18.5	15.2
Latin America and the Caribbean	9.5	12.3	13.8	13.8	13.5
Northern America	15.0	12.9	9.4	8.8	8.2
Oceania	1.1	1.0	0.8	0.8	0.7

* The statistics for 2000 in this table are an aggregation of national statistics, many of which draw on national censuses held in 1999, 2000 or 2001 – but some are based on estimates or projections from statistics drawn from censuses held around 1990. There is also a group of countries (mostly in Africa) for which there are no census data since the 1970s or early 1980s, so all figures for their urban (and rural) populations are based on estimates and projections.

Levels of urbanization in certain regions increased dramatically between 1950 and 2000 (Table 2) – for instance, in Africa from 15 to 37 percent and in Asia from 17 to 37 percent. Particular sub-regions had even larger changes – for instance, Western Asia going from 27 to 64 percent urban in these 50 years, or Eastern Europe going from 39 to 68 percent. However, the rates of increase in levels of urbanization are not unprecedented; many countries in Western Europe – and also the USA and Japan – had periods when their level of urbanization increased just as rapidly.¹⁰

There were also significant changes in the distribution of the world's urban population between regions. In 1950, Europe and Northern America had more than half the world's urban population; by 2000, they had little more than a quarter. Africa had 10 percent of the world's urban population in 2000 compared to only 5 percent in 1950. Asia increased its share of the world's urban population from less than one-third to nearly a half in these same five decades.

Some caution is needed when comparing urban trends between nations because of deficiencies in the statistical base. Box 2 describes the large gaps in available data about the size of urban populations in some nations and the uncertainties with regard to cities' populations and nations' urbanization levels that arise because of different definitions.

Box 2: Urban comparisons that can mislead and confuse

Uncertain city populations: The current population of most of the world's largest urban areas, including London, Los Angeles, Cairo, Shanghai, Beijing, Jakarta, Dhaka and Bombay/Mumbai can go up or down by many million inhabitants, depending on which boundaries are used to define the area within which their population is counted. City boundaries are not set according to universally agreed criteria but according to local and national criteria, and these differ from nation to nation. In addition, most large cities have at least three different figures for their populations, depending on whether it is the city, the metropolitan area or a wider planning region (or administrative region) that is being considered – or whether the city population includes the inhabitants of nearby settlements with a high proportion of daily commuters (see Table 4 for some examples).

Varying urbanization levels: The urbanization level for any nation is the proportion of the national population living in urban centres. So it is influenced by how the national government defines what is an "urban centre". For instance, Mexico can be said to be 74.4 percent urban or 67.3 percent urban in 2000, depending on whether urban centres are all settlements with 2,500 or more inhabitants or all settlements with 15,000 or more inhabitants.¹¹ India appears

¹⁰ Preston, Samuel H. (1979), "Urban growth in developing countries: a demographic reappraisal", *Population and Development Review*, Vol.5, No.2, pp. 195–215; also Satterthwaite, David (1996), *The Scale and Nature of Urban Change in the South*, IIED Working Paper, IIED, London, 29 pages.

¹¹ Garza 2002, op. cit.

to be a predominantly rural nation. But most of India's rural population lives in villages with between 500 and 5,000 inhabitants and that are classified as rural. If these were classified as "urban" (as they would be by some national urban definitions), India would suddenly have a predominantly urban population.

Each nation uses its own criteria for defining urban centres (or for distinguishing them from other settlements). In virtually all nations, official definitions ensure that urban centres include all settlements with 20,000 or more inhabitants, but governments differ in what smaller settlements they include as urban centres – from those that include as urban all settlements with a few hundred inhabitants, to those that only include settlements with 20,000 or more inhabitants. This limits the accuracy of international comparisons of urbanization levels because most nations have a large part of their populations living in settlements with populations in this range of 500 to 20,000 inhabitants.

By 1996, 17.5 percent of Egypt's population lived in settlements with between 10,000 and 20,000 inhabitants and that had many urban characteristics including significant non-agricultural economies and occupational structures. These were not classified as urban areas – although they would have been in most other nations. If they were considered as urban areas, it would make Egypt much more urbanized and would bring major changes to urban growth rates.¹² In Pakistan, 8.3 percent of the urban population lived in urban centres with fewer than 25,000 inhabitants in 1998 – and a very considerable proportion of the rural population lived in over 1,000 settlements with more than 5,000 inhabitants. The level of urbanization in Pakistan in the 1998 census would have been much higher if the definition of what constitutes an urban centre had not been changed for the 1981 and 1998 censuses. In the 1972 census, a settlement with 5,000 plus inhabitants was considered as urban. This definition was changed so that in the 1981 and 1998 censuses, urban centres were settlements that had municipal governments. As a result, 1,483 settlements with over 5,000 inhabitants in the 1981 census were not considered "urban" – and also not considered as urban in the 1998 census – unless they had municipal governments. In addition, the administrative boundaries of most urban centres do not include many "urban" developments that fall outside their boundaries, including some industrial satellites, many "dormitory towns" from which most of the workforce commute, developments on their peripheries which, in physical, economic and social terms are part of the urban centre, and the ribbons of urban development that often occur along roads or highways between urban centres.¹³

Thus, the scale of the world's urban population is strongly influenced by the urban criteria used within the largest population nations. If the Indian or Chinese governments chose to change the criteria used in their censuses to define urban centres, this could increase or decrease the world's level of urbanization by several percentage points – and there are good reasons for thinking that the current criteria used in China considerably understate the size of its urban population.¹⁴ Revisions by, for instance, the Nigerian or Brazilian census authorities could significantly alter Africa's or South America's level of urbanization. In some nations, revisions in their urban definitions are responsible for part of the changes in their urban growth rates and levels of urbanization – for instance, in Pakistan, as described above, and in Bangladesh.¹⁵ **Thus, the world's level of urbanization is best understood not as a precise figure (48.3 percent in 2003) but as being between 40 and 55 percent, depending on what criteria are used to define what is an urban centre.**

Absence of census data: Accurate statistics on the population of all urban centres in a nation depend on censuses, but in virtually all nations, censuses are only taken every ten years and, in some, there has been no census for the last 15–20 years. For some nations, the urban population data from censuses held in the last three years are still not available, so all the statistics used for these nations in this paper are based on projections from data from censuses held between 1989 and 1993. For these nations, "urban growth trends" for the 1990s are created by the assumptions that went into the methods used in making the projections. The lack of recent census data is particularly notable in sub-Saharan Africa, in part because censuses are seen as expensive, and international donors have been reluctant to support them. There are also obvious problems with the manipulation of census data to serve the interests of the groups in power. But this means that urban statistics for some sub-Saharan African nations for 1990 and 2000 are based on projections from census data from the 1970s, when there were various economic, political and demographic factors underpinning rapid urban growth (as described in more detail in Section 3). Circumstances changed so much during the 1980s and 1990s that there are good reasons to believe that urban trends would also have changed – but there is no census data to see if this is so. The World Bank and various other commentators have claimed that sub-Saharan Africa was unusual because it urbanized rapidly without economic growth during the

¹² Denis, Eric and Asef Bayat (2002), *Egypt; Twenty Years of Urban Transformations*, Urban Change Working Paper 5, IIED, London.

¹³ Hasan, Arif and Mansoor Raza (2002), *Urban Change in Pakistan*, Urban Change Working Paper 6, IIED, London.

¹⁴ UNCHS (Habitat) (1996), *An Urbanizing World: Global Report on Human Settlements, 1996*, Oxford University Press, Oxford and New York.

¹⁵ See Afsar, Rita (2002), *Urban Change in Bangladesh*, Urban Change Working Paper 1, IIED, London for Bangladesh.

1990s;¹⁶ however, this was not based on any census data for urban populations for 2000 but on figures derived from projections from urban trends in the 1970s and 1980s. There was no reliable urban population data available for 2000 when the World Bank published this claim. Even today, there is no reliable urban population data for some nations for 2000. There are also indications that much of sub-Saharan Africa is less urbanized than the projections suggested, and that the nations which urbanized most are also generally those with the best economic performance (so sub-Saharan Africa is not urbanizing rapidly without economic growth).¹⁷

2. The world's largest and fastest growing cities

The world's largest cities

Two aspects of the rapid growth in the world's urban population over the last 50–100 years are the increase in the number of large cities and the historically unprecedented size of the largest cities (see Table 3). Just two centuries ago, there were only two “million-cities” worldwide (i.e. cities with one million or more inhabitants) – London and Beijing (then called Peking). By 1950, there were 85; by 2000, 387. A large (and increasing) proportion of these million-cities are in Africa, Asia and Latin America (see Table 3).

The average size of the world's largest cities has also increased dramatically. In 2000, the average size of the world's 100 largest cities was around 6.3 million inhabitants. This compares to 2.2 million inhabitants in 1950, around 725,000 in 1900 and 187,000 in 1800.¹⁸ While there are various examples of cities over the last two millennia that had populations of one million or more inhabitants, the city or metropolitan area with several million inhabitants is a relatively new phenomenon – London being the first to reach this size in the second half of the 19th century.¹⁹ By 2000, there were 42 cities with more than 5 million inhabitants.

Table 3 also shows the dramatic changes in the distribution of the world's largest cities. In 1900, Europe and Northern America had 69 of the world's 100 largest cities, but by 2000 this had shrunk to 30. By 2000, Asia alone had 44 of the world's 100 largest cities, compared to 22 in 1900. This growing proportion of the world's largest cities in low- and middle-income nations in Africa, Asia and Latin America is often highlighted as a particular concern. However, this is not so much a dramatic shift in the geographic distribution of the world's largest cities but rather a return to what was apparent prior to the industrial revolution.²⁰ Throughout most of recorded history, Asia has had a high proportion of the world's largest cities; in 1800, it had 65 of the world's 100 largest cities.²¹ South and Central America and North Africa have also long had large cities.

New and old large cities

Despite the speed of change in urban populations, there is a (perhaps surprising) continuity in the location of important urban centres. Most of the largest urban centres in Europe, Latin America, Asia and

¹⁶ See Box 6.4, page 130 of World Bank (1999), *Entering the 21st Century: World Development Report 1999/2000*, Oxford University Press, Oxford and New York, 300 pages; also Fay, Marianne and Charlotte Opal (2000), *Urbanization without Growth: A not so uncommon phenomenon*, World Bank, Washington DC, 31 pages.

¹⁷ See Potts 2001, op. cit.; also Potts, Deborah (1995), “Shall we go home? Increasing urban poverty in African cities and migration processes”, *The Geographic Journal*, Vol.161, Part 3, November, pp. 245–264.

¹⁸ This re-does the analysis in Satterthwaite 1996, op. cit., drawing on the most recent UN publication of urban statistics (United Nations 2004, op. cit.).

¹⁹ Chandler, Tertius and Gerald Fox (1974), *3000 Years of Urban Growth*, Academic Press, New York and London.

²⁰ Bairoch, Paul (1988), *Cities and Economic Development: From the Dawn of History to the Present*, Mansell, London, 574 pages.

²¹ Obviously, the statistical base for assessing which were the world's 100 largest cities in 1800 is less robust than for recent decades – but the concentration in Asia of most of the world's largest cities prior to the industrial revolution is not in doubt.

North Africa today have been important urban centres for centuries, and many have been urban centres for millennia. For the 387 “million-cities” in 2000, nearly three-quarters were already urban centres 200 years ago,²² while more than two-fifths have been urban centres for at least 500 years.²³ One in five of the world’s 387 largest cities in 2000 had already been founded 2000 years ago.

Table 3: The distribution of the world’s largest cities by region over time

Region	1800	1900	1950	2000
Number of “million-cities”				
World	2	17	86	387
Africa	0	0	2	35
Asia	1	4	31	194
Europe	1	9	30	62
Latin America and the Caribbean	0	0	7	49
Northern America	0	4	14	41
Oceania	0	0	2	6
Regional distribution of the world’s largest 100 cities				
World	100	100	100	100
Africa	4	2	3	8
Asia	65	22	37	44
Europe	28	53	34	15
Latin America and the Caribbean	3	5	8	16
Northern America	0	16	16	15
Oceania	0	2	2	2
Average size of the world’s 100 largest cities	187,000	725,000	2.2 m	6.3 m

Some figures for city populations for 2000 are based on estimates or projections from statistics drawn from censuses held around 1990. There is also a group of countries (mostly in Africa) for which there is no census data since the 1970s or early 1980s, so all figures for their city populations are based on estimates and projections. The regional distribution of cities in 1950 and 2000 is, in part, influenced by the way that cities/urban agglomerations are defined within nations (see Box 2).

SOURCES: This is an updated version of a table in Satterthwaite, David (1996), *The Scale and Nature of Urban Change in the South*, IIED Working Paper, IIED, London. For 1950 and 2000, the data are drawn only from United Nations 2004, op. cit. For 1900 and 1800, data came from an IIED database with census data and estimates for city populations drawn from a great range of sources, including Chandler, Tertius and Gerald Fox (1974), *3000 Years of Urban Growth*, Academic Press, New York and London; Chandler, Tertius (1987), *Four Thousand Years of Urban Growth: An Historical Census*, Edwin Mellen Press, Lampeter, UK, 656 pages; and Showers, Victor (1979), *World Facts and Figures*, John Wiley and Sons, Chichester, 757 pages. For Latin America, it also drew on a review of 194 published censuses.

²² 281 of the 387 “million-cities” were urban centres by 1800 AD. There were also 34 “million-cities” for which no population data was found for 1800, and a proportion of these were likely to have been urban centres in 1800.

²³ These statistics almost certainly considerably understate the extent to which the world’s largest cities today have long been important urban centres. This is related to the incompleteness of historic records for city populations, despite the efforts of scholars such as Tertius Chandler and Paul Bairoch to fill this gap.

One of the most dramatic changes in the distribution of the world's largest cities over the last two centuries is the appearance in the list of cities from Northern America and Oceania – related to the appropriation of the USA, Canada and Australia by immigrants and the urban/industrial economies they developed. In 1800, neither of the USA's two largest cities (Philadelphia and New York) were large enough to be one of the world's 100 largest cities. Within regions, the shift within Africa is notable, as a growing proportion of its largest cities are in sub-Saharan Africa whereas, historically, most of its largest cities have been in North Africa.

There is also a, perhaps surprising, comparison in that it is Northern America and sub-Saharan Africa that have most “new large cities”, i.e. cities that now have more than one million inhabitants but which had not been founded or did not exist as urban centres by 1800. Table 3 also highlights how Europe had few of the world's 100 largest cities by 2000, unlike by 1900 when it had more than half. In part, this reflects the growing economic importance of other continents. But it also reflects the way in which urban form has changed in Europe, with more dispersed urban systems and with large sections of cities' working populations commuting from outside city boundaries. If the population of European cities is measured in ways that include settlements where much of the working population commutes to the city, the number of European “million-cities” increases very considerably.

The difficulties in comparing city populations and their growth rates

In 2000, the population of New York City was 8 million; for New York Metropolitan Area, the figure was 9.3 million; for New York–Northern New Jersey–Long Island consolidated metropolitan statistical area, 21.2 million,²⁴ and all these are valid population statistics for “New York”. In 2000, Manila could be said to have 1.6 million inhabitants (the population of the city) or 9.9 million (the population of the national capital region). The populations of Bangkok, Cairo and Jakarta in 2000 vary by several million, depending on whether the figure is for the city or the larger “urban agglomeration” or city-region. Table 4 illustrates how large cities can have three or four different figures for their populations.

Table 4: Examples of how the populations of urban areas change with different boundaries²⁵

City or metropolitan area	Date	Population	Area (km ²)	Notes
Beijing ²⁶ (China)	1990	2,336,544 c. 5,400,000 6,325,722 10,819,407	87 158 1,369 16,808	Four inner-city districts, including the historic old city “Core city” Inner-city and inner-suburban districts Inner-city, inner- and outer-suburban districts and 8 counties

²⁴ US Census Bureau, quoted in http://212.204.253.230/cd/us_agg2.php

²⁵ Drawn from Satterthwaite 1996, op. cit.

²⁶ Information supplied by Richard Kirkby based on data from the 1990 Census, in *Zhongguo renkou tongji nianjian 1992* (Yearbook of Population Statistics, 1992), Beijing, Jingji guanli chubanshe (Economic Management Press), page 448; also (for area) Beijing Municipal Statistics Bureau (1988), *Beijing Statistics in Brief*, Beijing, China Statistical Publishing House, page 1. Apart from the educational quarter in the Haidian District (northwest) and the steel works and heavy industrial area of Shijingshan (west), prior to the 1980s economic boom the city proper could be broadly defined as that area within the *san huan lu* – the Third Ringroad. This encircles an area of just 158 km² in a total municipality spanning almost 17,000 km². Its population comprises all of the four inner-city districts and parts of the four inner-suburban districts. In total, this “core city” comprises only around half of the 10.82 million official residents of the capital in 1990.

Dhaka (Bangladesh)	1991	c.4,000,000 6,400,000 <8,000,000	6 363 780 1,530	Historic city Dhaka Metropolitan Area (Dhaka City Corporation and Dhaka Cantonment) Dhaka Statistical Metropolitan Area Rajdhani Unnayan Kartripakhya (RAJUK) – the jurisdiction of Dhaka’s planning authority
Mexico City (Mexico)	1990	1,935,708 8,261,951 14,991,281 c. 18,000,000	139 1,489 4,636	The central city The Federal District Mexico City Metropolitan Area Mexico City megalopolis ²⁷
Tokyo (Japan)	1990	8,164,000 11,856,000 31,559,000 39,158,000	598 2,162 13,508 36,834	The central city (23 wards) Tokyo prefecture (Tokyo-to) Greater Tokyo Metropolitan Area (including Yokohama) ²⁸ National Capital Region. ²⁹
Toronto (Canada)	1991	620,000 2,200,000 3,893,000 4,100,000 4,840,000	97 630 5,583 7,061 7,550	City of Toronto Metropolitan Toronto Census Metropolitan Area Greater Toronto Area Toronto CMSA equivalent ³⁰
London (UK)	1991	4,230 2,343,133 6,393,568 12,530,000	3 321 1,579	The original “city” of London Inner London Greater London (32 boroughs and the city of London) ³¹ London “metropolitan region” ³²
Los Angeles (USA)	1990	3,000,000 8,700,000 8,863,000 14,532,000	752 10,635 6,526 88,000	Los Angeles City Los Angeles County Los Angeles–Long Beach Primary Metropolitan Statistical Area Los Angeles Consolidated Metropolitan Statistical Area

Although the list of “the world’s largest cities” compiled by the UN Population Division seeks to base the population statistics for each city on the same criterion of urban agglomeration, inevitably, differences in the way that each government defines city boundaries, and differences in the spatial structure of large cities limit the validity of inter-city comparisons. The population figures for some large

²⁷ Garza, Gustavo (1996), “Dynamics of Mexican Urbanization”, Background paper for the UN Global Report on Human Settlements 1996.

²⁸ This ensures the inclusion within Tokyo of the vast suburban areas, and includes Tokyo-to (including the islands) and Chiba, Kanagawa and Saitama Prefectures.

²⁹ Includes Greater Tokyo Metropolitan Area plus Yamanashi, Gunma, Tochigi and Ibaraki Prefectures.

³⁰ This is what Toronto’s population might be if it was defined according to the methodology used in the United States for defining Consolidated Metropolitan Areas. This would include Toronto Metropolitan Area, the adjacent Hamilton CMA (0.6 million), Oshawa CMA (0.24 million) and the rest of York County.

³¹ Note that these figures for the City of London, Inner London and Greater London are census figures; official estimates for 1991 for Inner London were 2,627,400 and for Greater London 6,889,900.

³² UNCHS 1996, op. cit, drawing on a background paper by A.G. Champion.

cities is for the people living within long-established city boundaries enclosing areas of only 20–200 square kilometres while, for others, it is for regions with many thousands of square kilometres and a significant proportion of the population living in rural settlements and working in agriculture. The population figures that are usually given for the largest Chinese cities such as Shanghai, Beijing and Tianjin are actually for the populations in large local government areas that include significant proportions of people living in rural areas and working in forestry and agriculture. Shanghai municipality encompasses ten counties, of which Shanghai City is one, and includes large rural areas within its total area of over 6,000 square kilometres. Beijing municipality covers 16,800 square kilometres. In China, statistics for city populations also vary depending on how people are registered – for instance, in Shanghai, the population can vary by several million depending on whether the “floating” population is included. This confusion between local government area and city area explains why the city of Chongqing sometimes appears as the world’s largest city, with a population of 30 million, but this is the population in the municipality, which covers 82,400 square kilometres (about the size of Austria or of all of the Netherlands and Denmark combined); the city population is around 6 million.

Some cities have boundaries that greatly understate their real populations because they do not include large, dense settlements that have developed just outside the official city boundaries. For instance, the population of Colombo in Sri Lanka is often given as around 642,000, but this was the population in 2000 in “Colombo municipal council”; the urban agglomeration of which this municipal council is the centre has a much larger population. London could easily re-establish itself among the world’s largest cities if the Greater London Authority was able to convince the national government to create a new London municipality incorporating neighbouring counties such as Surrey, Kent, Essex, Hertfordshire, Buckinghamshire and Berkshire – as happened for Shanghai – although one suspects a certain reluctance among most of those living in these counties for such a reform.

Finally, different boundaries also mean different population growth rates – so London, Los Angeles, Tokyo, Buenos Aires or Mexico City can be stated correctly as having had either declining or expanding populations in recent decades, depending on which boundaries are used for urban population growth calculations. Cairo and Shanghai are reported as having had shrinking populations during their last inter-census period – although whether or not they did also depends on which boundaries are used. In addition, large increases in a city’s population between two censuses are often partly due to an expansion of boundaries which suddenly incorporate many settlements that had not been part of the city in the earlier census. For instance, this in part explains the rapid growth in Dhaka and some other cities in Bangladesh during the 1980s and early 1990s.³³ In South Africa, some of the large increase in the urban population shown by the 1996 census was due to the inclusion in 1996 of the African urban population living in the “independent” states created by the apartheid regime, and which had been excluded from censuses in 1980 and 1991.³⁴

The world’s most rapidly growing large cities

The speed with which a city’s population grows is usually measured by its annual average population growth rate. But for city and national governments, the absolute change in population each year is also important. Very large cities can have population increases of several hundred thousand persons a year and still have relatively low annual growth rates. Table 5 shows the large differences in the list of the world’s most rapidly growing large cities³⁵ using these two different criteria: annual average increment in population and annual average population growth rate.

³³ Afsar 2002, op. cit.

³⁴ Crankshaw, Owen and Susan Parnell (2002), *Urban Change in South Africa*, Urban Change Working Paper 4, IIED, London.

³⁵ This only considered cities that, according to United Nations (2004), had 750,000 or more inhabitants by 2000.

Table 5: The world's fastest growing cities 1950–2000 according to two different criteria

Urban centre	Country	Population ('000s)				Compound growth rate 1950–2000	Annual average population increment 1950–2000
		c.1800	c.1900	1950	2000		
The world's fastest growing large cities 1950–2000 according to annual average increment in population							
Tokyo	Japan	492	1497	11,275	34,450	2.3	464
Mexico City	Mexico	137	415	2,883	18,066	3.7	304
São Paulo	Brazil		240	2,313	17,099	4.1	296
Mumbai (Bombay)	India	174	776	2,981	16,086	3.4	262
Delhi	India	125	209	1,390	12,441	4.5	221
Dhaka	Bangladesh	110	90	417	10,159	6.6	195
Jakarta	Indonesia	92	115	1,452	11,018	4.1	191
Karachi	Pakistan	14	136	1,028	10,032	4.7	180
Seoul	Republic of Korea	190	201	1,021	9,917	4.7	178
Calcutta, Kolkata	India	200	1085	4,446	13,058	2.2	172
The world's fastest growing large cities 1950-2000 according to population growth rates							
Karaj	Iran (Islamic Republic of)			7	1,063	10.5	21
Brasilia	Brazil			36	2,746	9.1	54
Abidjan	Côte D'Ivoire			59	3,057	8.2	60
Lusaka	Zambia			26	1,307	8.1	26
Faridabad	India			22	1,018	8.0	20
Dubai	United Arab Emirates			20	893	7.9	17
Kaduna	Nigeria			28	1,194	7.8	23
Riyadh	Saudi Arabia		30	111	4,519	7.7	88
Las Vegas	United States of America			35	1,335	7.6	26
Dammam	Saudi Arabia			22	759	7.4	15

The world's largest cities never appear in lists of the world's most rapidly growing cities when their growth is measured by annual average population increases – although they inevitably did so when they were smaller. The larger a city's population at the beginning of any period for which population growth rates are being calculated, the larger the denominator used to divide the increment in the city's population to calculate the growth rate. In any nation undergoing rapid urbanization, an analysis of inter-census population growth rates for all urban centres usually highlights some small urban centres with population growth rates of between 7 and 15 percent a year. It is very rare for any city with one million or more inhabitants to achieve population growth rates of 7 percent a year between two censuses. Within the UN's dataset of city populations, all but two of the 387 "million-cities" in 2000 had population growth rates of less than 7 percent a year during the 1990s and most (72 percent) had annual average growth rates of between -1 and 3 percent during the 1990s.

However, if we consider the absolute number of people added to city populations each year, then many of the largest cities figure prominently as the most rapidly growing cities. For instance, Tokyo grew by more than 400,000 persons a year between 1950 and 2000 (see Table 5); another four cities grew by more than 200,000 a year. Among the 20 cities with the largest annual average increments in their populations between 1950 and 2000, nine had annual average population growth rates of under 3 percent (including Tokyo). For the 1990s, for the 11 cities whose populations grew on average by more than 200,000 inhabitants a year, five had annual average growth rates of less than 3 percent (Mumbai, Mexico City, São Paulo, Istanbul and Calcutta). Mexico City, Calcutta and São Paulo actually had more people moving out than moving in during the 1990s, yet because of their very large size and rate of natural

increase, they still had very large annual average increments in their population. However, some caution is needed when comparing increments in population between cities, because boundary extensions or changing city or metropolitan government systems (which produce different boundaries) often include large populations that previously were not considered part of that city.

Although it is often assumed that the world's most rapidly growing cities are concentrated in Latin America, Asia and Africa, this is not entirely true. Las Vegas, Phoenix-Mesa and Orlando were among the world's most rapidly growing large cities for the period 1950–2000. Nairobi, Kenya's capital, is often held up as an example of a particularly rapidly growing city – but both Miami and Phoenix in the United States had larger populations than Nairobi in 2000, although all were small settlements in 1900. The population of Los Angeles was around one-tenth that of Calcutta in 1900, yet in 2000, it had about the same number of people in its metropolitan area. This should not be taken to imply that the underpinnings of rapid change are comparable. In addition, these and other examples of rapidly growing cities in high-income countries do not alter the fact that most of the large cities in the world with the fastest population growth rates in recent decades are in low- and middle-income countries.

Of the 387 “million-cities” in 2000, 26 had populations that grew more than twenty-fold between 1950 and 2000 – including Abidjan, Campinas, Conakry, Dar es Salaam, Dhaka, Jeddah, Kaduna, Khartoum, Khulna, Kinshasa, Lagos, Las Vegas, Lusaka, Nairobi, Niamey, Ouagadougou, Riyadh, Santa Cruz, Tijuana, Toluca, Ulsan and Yaounde. Brasilia, the federal capital of Brazil, did not exist in 1950 and by 2000, it had more than 2 million inhabitants. Three points to note from this list:

- just over half (14) are national capitals or former national capitals (Dar es Salaam and Lagos³⁶);
- most of the national capitals in this list are in sub-Saharan Africa; most of the non-national capitals are in Asia and Latin America and include cities that successfully competed with larger cities within their nation for new investment (for instance, Campinas, Khulna, Santa Cruz, Tijuana, Toluca and Ulsan); and
- one city in the list is in the USA – a reminder that rapid city growth over the last 50 years has not been confined only to low- and middle-income nations.

A further 32 of the “million-cities” in 2000 grew between ten and twenty-fold between 1950 and 2000. Of these, 13 were national capitals. Again, there are many secondary cities in the list that are there because they successfully attracted new investment in competition with the largest cities in their nation. They include Curitiba, Grande Vitoria and Belo Horizonte in Brazil, and Bhopal, Visakhapatnam and Surat in India. The list includes two cities from the USA that have also successfully attracted new investment in competition with larger cities, namely Phoenix-Mesa and Orlando.

It is worth noting the high concentration of most rapidly growing “million-cities” that are not national capitals in the world's largest economies. The high number of national capitals from Africa within the fastest growing “million-cities” is linked to decolonization and the removal of apartheid-like controls on the rights of their people to live in cities. These are both points explored in more detail later.

Table 6 gives more details with regard to the distribution of the world's fastest growing large cities between regions and nations. It is a reminder of how most of the world's fastest growing large cities are not national capitals – and this was also the case for the period 1900–1950 as well as for 1950–2000. What is also notable is the extent to which the non-national capitals among the largest cities and the fastest growing large cities are heavily concentrated in the world's largest economies (as discussed in more detail in Section 3). Many of the world's fastest growing large cities are successful secondary cities

³⁶ A large part of Lagos's very rapid growth during the second half of the 20th century relates to its role as the federal capital of Nigeria, even though the national capital moved to Abuja. Dar es Salaam is officially no longer the capital of Tanzania (the capital shifted to Dodoma), but much of the apparatus of central government remains in Dar es Salaam.

that have helped produce economies and urban systems less dominated by very large cities in nations such as the USA, China, India, Brazil, Mexico, the Russian Federation and South Korea.³⁷

Table 6: The geographic distribution of the largest and fastest growing large cities, 1900–2000

	Africa	Asia	Europe	Northern America	Latin America & Caribbean	Oceania
The 100 fastest growing large cities, 1900–1950						
National capitals (18) ³⁸	11	4	1		2	
Non-national capitals (82)	4	43	13	13	8	1
The nations with the most non-national capitals are China (25), USA (9), Russian Federation (5), Mexico (4), India (3) and Germany (3)						
The 100 fastest growing large cities, 1950–2000						
National capitals (35) ³⁹	21	10			4	
Non-national capitals (65)	6	34		4	21	
The nations with the most non-national capitals are India (11), Brazil (9), Mexico (5), South Korea (4), Nigeria (4), USA and Saudi Arabia (3).						
The world's 100 largest cities in 2000						
National capitals (32)	4	17	4	1	6	
Non-national capitals (68)	4	28	8	16	10	2
The nations with the most non-national capitals among the world's 100 largest cities are: USA (15), China (11), India (8), Brazil (7), Germany and Japan (4) and Mexico (3)						

Note: The data for this table were drawn from the United Nations Population Division's database on the world's largest cities, and this only includes cities that had 750,000 or more inhabitants by 2000.

3. What drives urban change?

Although urbanization is acknowledged as one of the most significant changes taking place within low- and middle-income nations, there is surprisingly little detailed study of what causes or influences its scale and nature within each nation. Urban population statistics can show which urban centres grow rapidly (or grow slowly, stop growing or shrink), but they tell us nothing about why.

³⁷ L.S. Bourne, in discussing the emergence of large new cities in the USA, noted that this is usually seen as de-metropolitanization – but it may be that these new large cities continue to grow and so form a new generation of very large cities. See Bourne, L.S. (1995), *Urban Growth and Population Redistribution in North America: A Diverse and Unequal Landscape*, Major Report 32, Centre for Urban and Community Studies, University of Toronto, Toronto. This may also be the case in many of the largest economies in Asia and Latin America.

³⁸ One, Alma Ata or Almaty, was later to lose this role, as Astana (formerly known as Akmola) was designated the national capital in 1997.

³⁹ Included two former national capitals: Lagos and Dar es Salaam.

Understanding what causes and influences urban change within any nation is complicated. Consideration has to be given to changes in the scale and nature of the nation's economy and its connections with neighbouring nations and the wider world economy; also to decisions made by national governments, local investors and the 30,000 or so global corporations who control such a significant share of the world's economy. Urban change within all nations is also influenced by the structure of government (especially the division of power and resources between different levels of government), and the extent and spatial distribution of transport and communications investments. The size of the population in each of the 50,000 or so urban centres in the world⁴⁰ and its rate of change are influenced not only by such international and national factors but also by local factors related to each very particular local context – including the site, location, natural resource endowment, demographic structure, existing economy and infrastructure (the legacy of past decisions and investments) and the quality and capacity of public institutions.

But what are the main causes underlying the fact that virtually all nations in the world have “urbanized” in most or all of the last 50 years – from the poorest to the richest nations?⁴¹ Why did the proportion of the world's population living in urban areas grow from a minority (15 percent in 1900) to nearly half by 2000? The immediate cause is the net movement of people from rural to urban areas. The main underlying cause is the concentration of new investment and economic opportunities in particular urban areas. *A nation's urban system (the network of urban centres and their interconnections) is best understood as the “geography” of its non-agricultural economy and government system. It is also in effect a map of where profit-seeking enterprises have concentrated and of where people working outside of agriculture make a living.*⁴²

In low- and middle-income nations, rural-to-urban migration is overwhelmingly the result of people moving in response to better economic opportunities in the urban areas, or to the lack of prospects in their home farms or villages. The scale and direction of people's movements accord well with changes in the spatial location of economic opportunities. In general, it is cities, small towns or rural areas with expanding economies that attract most migration.⁴³ Although it is often assumed that most migration is from rural to urban areas, in many nations, rural-to-rural migration is on a larger scale than rural-to-urban migration, and most nations also have significant urban-to-rural migration flows.

That much of the migration in low- and middle-income nations over the last 50 years has been from rural to urban areas is hardly surprising in that most of the growth in economic activities in all regions of the world over the last 50–100 years has been in urban centres. Whether one reviews changes in the distribution of the labour force between agriculture, industry or services, or changes in the distribution of GDP between these sectors, in virtually all low- and middle-income nations, there have been very large

⁴⁰ This figure of 50,000 urban centres in the world is a very rough estimate, based on an extrapolation from many censuses reviewed that gave the total number of urban centres in that particular country. For instance, Colombia in its 1993 census had more than 1,000 urban centres; India more than 5,000 in its 2001 census; and Brazil more than 8,000 in its 1990 census. Of course, the number of urban centres in any nation depends not only on the level of urbanization and the spatial distribution of the urban population but also on the official definition for an urban centre. India would have tens of thousands of urban centres if it changed its urban definition to be “settlements of 2,500 or more inhabitants”. The figure of 50,000 urban centres is given only to stress the very large number of urban centres worldwide, each of which has its own unique pattern of growth (or decline).

⁴¹ There are exceptions, but not many; in addition, where there appears to be some “de-urbanization” in high-income nations, this is generally more the movement of industry and service enterprises to rural areas or the movement of people who work in industry and services to rural areas.

⁴² There are exceptions – for instance, urban growth in places where retired people chose to live, or in tourist resorts; but even here, their growth is largely because of the growth in enterprises there to meet the demand for goods and services generated by the retired people and/or the tourists. Advanced telecommunications systems and the internet also allow some spatial disconnect between people employed in urban-based enterprises or institutions who do not actually work in these enterprises (including working from homes that are not in urban areas), and although these may have growing importance, they are not yet significant in low- and middle-income nations.

⁴³ There are important exceptions, such as migration flows away from wars/conflicts and disasters.

increases in the relative importance of industry and services (most of which are located in urban areas) and very large decreases in the relative importance of agriculture (most of which is located in rural areas⁴⁴). By 2001, agriculture generated less than one-quarter of the value-added within the GDP of low-income nations; for middle-income nations, it generated only 10 percent.⁴⁵

Virtually all the nations that have urbanized most over the last 50 years have had long periods of rapid economic expansion and large shifts in employment patterns from agricultural/pastoral activities to industrial, service and information activities. The internationalization of world production and trade (including the very rapid expansion in the value of international trade) has been an important part of this, and has influenced urban trends in most nations. Many cities owe their prosperity to their roles within this increasingly internationalized production and distribution system. International, national and local tourism have also proved important underpinnings of urban development in many cities and smaller urban centres.

Agriculture is often considered as separate from (or even in opposition to) urban development, yet prosperous high value agriculture, combined with prosperous rural populations, has proved an important underpinning to rapid development in many cities. Many major cities first developed as markets and service centres for farmers and rural households, and later developed into important centres of industry and/or services.⁴⁶ Many such cities still have significant sections of their economy and employment structure related to forward and backward linkages with agriculture.⁴⁷

Urban centres also concentrate public service provision. Most secondary schools and higher education institutions are located in urban areas; so too are most hospitals and higher order medical services (although not necessarily primary health care centres). Over the last 50 years, there has also been a large growth in the scale and range of public services and bureaucracies in low- and middle-income nations, and these are overwhelmingly concentrated in urban areas and are part of the reason for increased urbanization – not only related to education and health care but also to local government staff, the police, the armed forces, post and telecommunications and the judicial system.⁴⁸ Although this may be judged to be “urban bias”, there is nothing inherently “biased” about this in that these urban-based secondary schools, hospitals and many government services are mostly in small market towns and administrative centres, and serve both rural and urban populations. The most cost-effective way of providing both rural and urban populations with access to education is to have primary schools (and, where possible, pre-school services) in most villages and urban neighbourhoods, secondary schools in urban areas, and universities or other higher education institutes in district or state capitals. Similarly, the most cost-effective way of providing both rural and urban populations with access to health care is to have primary health care centres in most villages and urban neighbourhoods within a hierarchy of health centres where the more specialized services are in district capitals and larger cities, and these act as the referral centres to which are sent the cases that the primary health care centre or the small district hospital cannot

⁴⁴ In many nations, a significant proportion of the total value of agricultural production is within urban areas, but this is in large part due to city boundaries encompassing areas of agricultural land around the city, so the produce grown there is counted as urban. More details of this will be given later, especially for Bangladesh and China.

⁴⁵ World Bank (2002), *Sustainable Development in a Dynamic World; Transforming Institutions, Growth and Quality of Life; World Development Report 2003*, World Bank and Oxford University Press, New York, 250 pages.

⁴⁶ Hardoy, Jorge E. and David Satterthwaite (1989), *Squatter Citizen: Life in the Urban Third World*, Earthscan Publications, London, UK, 388 pages; see also Garza 2002, op. cit.; Afsar 2002, op. cit., and Satterthwaite, David and Cecilia Tacoli (2003), *The Urban Part of Rural Development: The Role of Small and Intermediate Urban Centres in Rural and Regional Development and Poverty Reduction*, Rural–Urban Working Paper 9, IIED, London, 64 pages.

⁴⁷ See Satterthwaite and Tacoli 2003, op. cit.; also Benjamin, Solomon (2000), “Governance, economic settings and poverty in Bangalore”, *Environment and Urbanization*, Vol.12, No.1, April, pp. 35–56.

⁴⁸ In many nations in the last 15 years, there have been significant cuts in public bureaucracies and public expenditures on salaries for public employees, often associated with structural adjustment, and this is one important factor in slowing the increases in urbanization or, on occasion, halting or reversing it.

manage. In many nations, especially those without large urban economies, the list of urban centres and their relative sizes usually corresponds quite closely to the hierarchy of local government capitals, from the national capital to the state or provincial capitals to district capitals to sub-district capitals.

Analyses of urban change within any nation over time serve as reminders of the diversity of this change, of the rising and falling importance of different urban centres, of the spatial influence of changes in governments' economic policies (for instance, from supporting import substitution to supporting export promotion), of the growing complexity of multi-nuclear urban systems in and around many major cities – and of the complex and ever shifting patterns of in-migration and out-migration from rural to urban areas, from urban to urban areas and from urban to rural areas. International immigration or emigration have strong impacts on the population size of particular cities in most nations. But it is not only changing patterns of prosperity or economic decline that explain these vast flows of people. Many cities have been impacted by war, civil conflict or disaster, or by the entry of those fleeing them. There are also the large demographic changes apparent in all nations over the last 50 years that influence urban change, including rapid population growth rates in much of Latin America, Asia and Africa after the Second World War (although for most these have declined significantly), and changes in the size and composition of households and in age structures.

Analyses of urban change within most low- and middle-income nations also show the diversity in urbanization levels and urban trends within different sub-regional units (for instance, in provinces or states). For example, in Colombia in 1993, the urbanization level of *departamentos* varied from under 25 percent for two *departamentos*, to more than 80 percent for several *departamentos* and more than 90 percent for two others.⁴⁹ In Pakistan, in 1998, the level of urbanization varied from 48.9 percent in Sindh to 16.9 percent in North West Frontier Province (if we discount the 80.5 percent in Islamabad, which is inevitably predominantly urban because this is a special region for the national capital – see Table 7). Analyses of inter-regional or inter-city differences in urban change show that it is not unusual for particular regions to de-urbanize, or for particular urban centres to lose population; the extent of this “de-urbanization” in parts of Ghana was sufficient between 1970 and 1984 for some settlements that were defined as urban in the 1970 census to be reclassified as rural settlements in 1984.⁵⁰ Some Colombian *departamentos* were less urbanized in 1993 than they had been in 1985.⁵¹

Table 7: Contrasts in urban indicators between different regions in Pakistan

Region	% of total population 1998	% of population in urban areas 1998	Number of urban localities with 100,000+ inhabitants 1998	% of Pakistan's urban population 1951	% of Pakistan's urban population 1998
Pakistan	100	32.5	54	100	100
NWFP	13.4	16.9	3	8.4	6.9
FATA	2.4	42.7			
Punjab	55.6	31.3	36	59.8	52.7
Sindh	23.0	48.9	13	29.4	34.1
Balochistan	5.0	23.3	1	2.4	3.5
Islamabad	0.5	80.5	1	–	1.2

SOURCE: Hasan, Arif and Mansoor Raza (2002), *Urban Change in Pakistan*, Urban Change Working Paper 6, IIED, London.

⁴⁹ Dávila, Julio (2002), *Urban Change in Colombia*, Urban Change Working Paper 3, IIED, London.

⁵⁰ Songsore, Jacob (2002), *Towards a Better Understanding of Urban Change in Ghana*, Urban Change Working Paper 2, IIED, London.

⁵¹ Davila 2002, op. cit.

Urban change shaped by local factors

All low- and middle-income nations have undergone very large economic, social, demographic and political changes over the last 50–100 years, and these are inevitably reflected in the changes in their urban systems. It is also important that the scale and nature of their influence on urban change is given more attention. This will be illustrated by examples from four nations: Pakistan, Mexico, South Africa and Ghana.

In Pakistan,⁵² the current size and spatial distribution of its urban population has been greatly influenced by India's Partition in the late 1940s (which created Pakistan and which also caused very large migration flows to particular locations, especially to Karachi); by Pakistan's division (as what was formerly East Pakistan became Bangladesh); by the civil war in Afghanistan; by the Green Revolution (and the locations where it was concentrated); and by Pakistan's political structure. Migration from India as a result of Partition increased Pakistan's population by 1.8 million, and most moved to urban areas in Sindh and Punjab provinces (especially Karachi and Hyderabad). Many urban centres in Pakistan experienced population declines during this period – as Hindus and Sikhs fled to India – and this explains the drop in the urbanization level in North West Frontier Province, and the decline in population in many towns and cities there between 1941 and 1951. During the Afghan Civil war, 3.7 million Afghans came to Pakistan and, although most were in refugee camps in peri-urban areas of North West Frontier Province and Balochistan, some 600,000 settled in Karachi. The population growth rates of both Quetta and Peshawar were also boosted by Afghans during the 1970s, but much less so during the 1980s. Inevitably, these huge population movements brought many political conflicts – including those between long-term city dwellers and immigrants from India, between Pakistanis and Afghans, and between urban interests and rural interests.

Urban change in Mexico⁵³ (and the spatial distribution of its major cities) can only be understood in terms of the very large economic changes that the nation has undergone. The influence of different economic phases can be seen within the current urban system: the agro-exporting period up to 1940 (with the rapid growth of urban centres that were key market and service centres for agriculture – and many of the nation's largest cities first grew to prominence from this); the import-substitution period from 1940 to 1970 (with Mexico City expanding rapidly because most new industry located here); and the period from 1970 to 1990, with the slowing of economic growth and then a period of economic decline, with a shift in economic policy from import-substitution industry to export-oriented industry (with the deceleration of Mexico City's growth and the rapid urban growth concentrated in the cities close to the US border that were the centres for export-processing zones). During the 1990s, the rapid growth of these northern cities continued, but their rapid economic growth has not stimulated much development further south because their main functional linkages are with cities in the USA. There was also the rapid growth of some ports (reflecting the new economic emphasis on exports) and of certain successful tourist centres. The growth rate of all the largest cities declined; in 2000, Mexico City proved to have half the population that had been anticipated 20 years previously. But if the boundaries of Mexico City are extended to include the wider metropolitan region, the population is substantially higher. Emigration to the United States is also an important influence on slower urban growth rates in recent decades; much of this is rural-to-urban migration, but across the Mexican–US border, as Mexican rural dwellers move to urban areas in the United States. (This is also a reminder of the importance of international migration flows in shaping urban trends in Mexico, as they are in most other nations). In addition, an understanding of urban change in Mexico also needs consideration of changes within each city. To give one example of how particular circumstances can change a city's prospects, rapid population growth in Tijuana in the 1930s was, in part, a response to visitors from the USA seeking entertainment and drink (during the period when alcohol was prohibited in the USA). Tijuana must have lost business when prohibition ceased, although in the longer term it managed to keep and greatly enhance its role as a tourist centre for US citizens.

⁵² This paragraph is drawn from Hasan and Raza 2002, op. cit.

⁵³ This paragraph is drawn from Garza 2002, op. cit.

Urban change in South Africa⁵⁴ over the last few decades can only be understood in relation to the racial discrimination that was formally embedded in the structure of government and the law against most of its population until the first majority government in 1994. This discrimination included strict controls on the black majority's right to live in or move to urban centres. This limited the scale of urban growth although, as the South African economy industrialized, this did not stop urbanization (the industries needed a cheap workforce) but displaced much of it to settlements within 60 kilometres of the large cities that were in the "bantustans" or "homelands" to where much of the African population were moved. The current urban system was also shaped by the development of gold and diamond mines from the late 19th century. Now, they are influenced by immigration flows from neighbouring nations and the decline in the white population since 1991 (although this may be overstated because of an undercount in the 1996 census). The very large increases in the urban population in the 1996 census are in part related to an administrative change – the exclusion from South Africa's urban population of the African population living in urban areas in the so-called independent states, in the censuses of 1980 and 1991.

Urban change in Ghana is best analyzed within at least six periods: the pre-colonial phase prior to links with Europe, when the main urban centres were inland and linked to capitals/administrative centres and the main trade patterns (mostly linking Ghana to western Sudan); the pre-colonial phase, when the focus of trade centres switched to the coast and became more oriented to trade with Europe; the colonial period, when the urban system was much influenced by the hierarchy of administrative centres and by the centres that served the exploitation and export of cocoa, timber and mineral production; the early post-colonial phase, with the expansion of import-substitution industry, and successful cocoa production; the period of economic crisis and structural adjustment, which slowed rural-to-urban migration; and the most recent period, with some recovery of economic growth and the development of tourism. The pre-colonial urban history might be considered irrelevant to understanding modern urban change, yet there is a surprising continuity in Ghana (and in many other nations) regarding cities which first came to prominence many centuries ago and that have managed to retain their prominence despite very large economic and political changes.⁵⁵ In addition, good locations for ports were important for pre-colonial trade with European powers and post-colonial economic change, whether for import-substitution or for export promotion.⁵⁶

Associations between economic change and urbanization levels

Within any nation, differences in the scale of urban change among sub-national regions usually reflect the large differences in economic change there. Sub-national regions' urbanization levels are likely to reflect the large variations in the size of their industrial and service production (including their success or lack of it in concentrating enterprises that are part of the increasingly globalized world economy). But detailed studies of the economic underpinnings of these variations in urbanization levels within nations are rare.

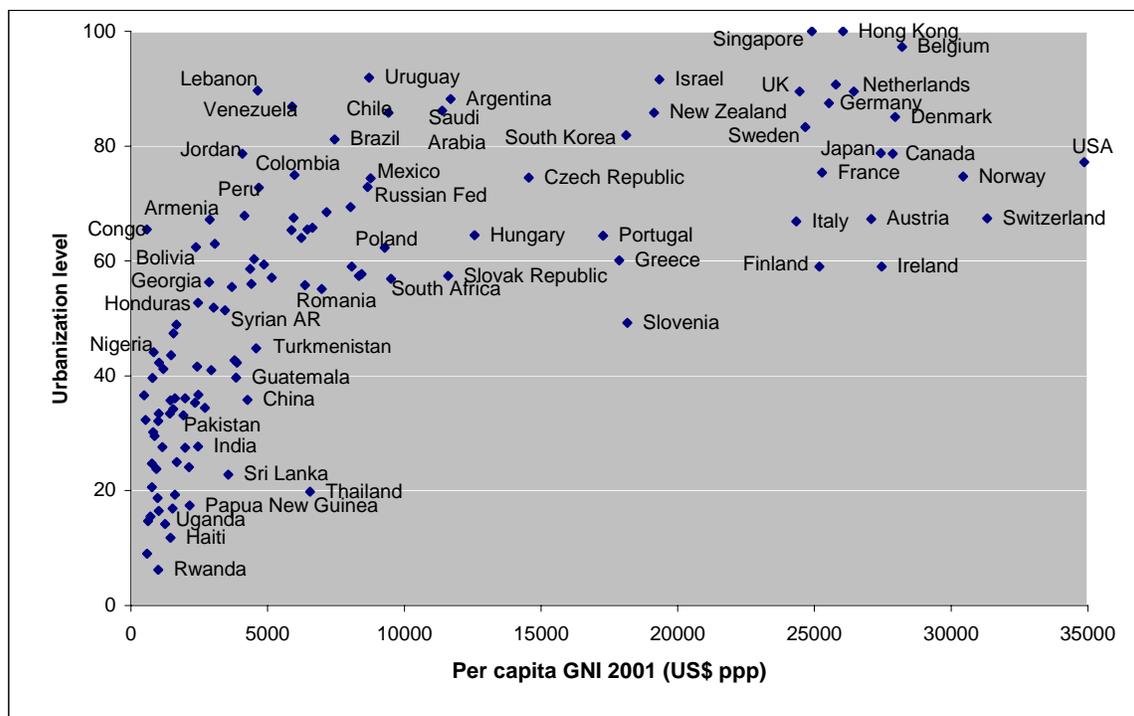
It is possible to consider the extent of the association between urbanization levels and economic change for nations. For instance, as Figure 1 shows, there is an obvious association between levels of urbanization and average per capita incomes, as nations with high per capita incomes are among the most urbanized, and most nations with low per capita incomes are among the least urbanized. Figure 1 also shows that there are considerable variations in urbanization levels between nations with comparable per capita incomes. But a large part of these variations is likely to be the result of different criteria used by national governments in defining their urban population, as already noted in Box 2. For instance, in Figure 1, India, Pakistan and China have low urbanization levels relative to their per capita incomes but, as Box 2 describes, these nations have urban populations that are defined in ways that probably understate their urbanization levels.

⁵⁴ This paragraph is drawn from Crankshaw and Parnell 2002, op. cit.

⁵⁵ Section 2 noted how most of the largest cities today in low- and middle-income nations have been important cities for at least 200 years; many have much longer urban histories than this.

⁵⁶ Songsore 2002, op. cit.

Figure 1: The association between nations' level of urbanization and their average per capita income, 2000/2001



Notes for Figure 1: Country names were added for outliers, large population nations and places where space allowed. Care is needed in interpreting this Figure because of the different criteria used by governments to define urban areas – see Box 2. Sources: UN Population Division 2004, op. cit. for urbanization levels; World Bank 2003, op. cit. for per capita GNI.

There are figures for levels of urbanization from 1950 to the present for all nations. Large variations between nations in the extent of the change in urbanization levels over the last few decades, and the speed at which it took place, would be expected to reflect differences in the scale and nature of their economic growth. This was borne out in an analysis covering the period from the 1950s to the 1980s, which showed that, in general, the nations whose economies had grown the most also had the largest increases in levels of urbanization, and the nations with poor economic performance had the smallest increases.⁵⁷ Box 2 noted a World Bank source that suggested that sub-Saharan Africa had continued to urbanize during the 1990s without economic growth – but also noted that this source did not draw on any census data for 2000. Many nations in sub-Saharan Africa may appear to have “urbanized rapidly” during the 1990s, but only because estimates and projections for their urban populations in 2000 (in the absence of census data) assumed that they would do so.

Cities and the global economy

There is an economic logic underlying the distribution of the world’s urban population, including its largest cities. This can be illustrated by the concentration of the world’s “million-cities” and “mega-cities” in its largest economies (see Table 8). In 2000/2001, the world’s five largest economies (USA, China, Japan, India and Germany) had half of the world’s 18 “mega-cities” and 46 percent of its

⁵⁷ This analysis was undertaken by Diana Mitlin at IIED; it only looked at nations for which there were census data for their levels of urbanization. A summary was published in UNCHS 1996, op. cit.

“million-cities”. By 2000, all but three of the world’s 18 “mega-cities”, and more than two-thirds of its million-cities, were in the 20 largest economies. Similarly, within each of the world’s regions, most of the largest cities are concentrated in their largest economies – for instance, Brazil, Mexico and Argentina in Latin America, and China, Japan, India, Indonesia and the Republic of Korea in Asia.

Table 8: The distribution of the world’s largest cities among the world’s largest economies and between nations classified by their per capita incomes in 2000

Nations	Number of “million-cities”	Number of cities with 5–9.99 million inhabitants	Number of mega-cities (with 10 million plus inhabitants)
The world’s five largest economies			
USA	37	2	2
China	90	3	2
Japan	6	0	2
India	32	3	3
Germany	13	1	0
The next five largest economies (France, UK, Italy, Brazil and Russian Federation)	40	3	3
The next five largest economies (Mexico, Canada, Republic of Korea, Indonesia, Australia)	31	1	2
The next five largest economies (Turkey, Argentina, Netherlands, South Africa, Iran)	21	2	1
The world’s other 207 nations and territories	117	9	3
TOTAL (for the world)	387	24	18
The distribution of large cities between nations classified by their average per capita incomes			
Category	No of “million-cities”	No of cities with 5-9.99 million inhabitants	No of “mega-cities” (with 10 million plus inhabitants)
Low-income nations	92	5	6
Middle-income nations	195	11	8
High-income nations	100	8	4
World	387	24	18
“Least developed” nations	20	0	1

SOURCES: This is an updated and expanded version of a table in Satterthwaite 1996, op. cit. For population statistics, United Nations 2004, op. cit. For the size of nations’ economies, World Bank (2001), *Building Institutions for Markets*; World Development Report 2002, Oxford University Press, Oxford, 249 pages.

There is a comparable association between the world’s largest economies and the cities that are projected to join the “million-cities” group by 2010. The United Nations Population Division estimates that there will be 77 new “million-cities” between 2000 and 2010 (i.e. cities whose population comes to exceed one million inhabitants between 2000 and 2010). Twenty-five of these are in India and China alone, six are in the USA. Overall, 64 percent of these are in the 20 largest economies in 2000/2001.

There is an obvious association between the world's largest cities and globalization. Growing cross-border flows of raw materials, goods, information, income and capital, much of it managed by transnational corporations, have underpinned a network of what can be termed "global cities" that are the key sites for the management and servicing of the global economy.⁵⁸ Most international investment is concentrated in a relatively small proportion of the world's cities. It is no coincidence that Tokyo, New York and London, the three most important global financial centres,⁵⁹ are also among the world's largest cities, and this also helps explain reports of renewed population growth in London during the 1990s, after several decades of population decline. Many of the world's fastest growing cities are also the cities that have had most success in attracting international investment. There are also large international migration flows, and remittance flows that they create, that are associated with globalization and that also have profound impacts on many cities.

However, the association between globalization and large cities is moderated by two factors. The first is that advanced telecommunications systems and corporate structures allow a separation of the production process from those who manage and finance it. The economies of London and New York may depend heavily on growing markets for industrial goods, but they have very little industrial production themselves. The second, linked to this, is the more decentralized pattern of urban development that is possible within regions with well-developed transport and communications infrastructure. Many of the most successful regions have urban forms that are less dominated by a large central city and have new enterprises developing in a network of smaller cities and greenfield sites – as in Silicon Valley and Orange County in California, and Bavaria in Germany,⁶⁰ or among the dynamic network of cities in south-east Brazil that have attracted much new investment away from São Paulo. In all high-income nations and many middle- and low-income nations, there has been a growing capacity by cities outside the very large metropolitan areas to attract a significant proportion of new investment. In the nations that have had effective decentralization (where local governments' capacities and accountability to citizens were increased), urban authorities in smaller cities have more resources and capacity to compete for new investment.⁶¹

Trade liberalization and a greater emphasis on exports have also increased the comparative advantage of many smaller cities. Meanwhile, advances in inter-regional transport and communications have reduced the advantages for businesses of locating in the largest cities. However, there are also large cities whose population growth rates remained high during the 1980s and 1990s – for instance, Dhaka (Bangladesh) and many cities in India and China – and strong economic performance by such cities seems the most important factor in explaining this. China has many examples of cities with very rapid population growth rates, which is hardly surprising given the very rapid economic growth rates sustained over the last two decades. For instance, the city of Shenzhen close to Hong Kong has grown from a small border town to a major metropolis in the last 20 years. But China also has many cities that have grown slowly in recent decades.

The list of the world's largest cities includes many that articulate large national economies into the global system (such as Paris, Madrid and São Paulo) or sub-national (regional) economies (Chicago).⁶²

⁵⁸ Sassen, Saskia (2002), "Locating cities on global circuits", *Environment and Urbanization*, Vol.14, No.1, April, pp. 13–30.

⁵⁹ Sassen, Saskia (1994), *Cities in a World Economy*, Pine Forge Press, Thousand Oaks, London, New Delhi, 157 pages.

⁶⁰ Castells, Manuel and Peter Hall (1994), *Technopoles of the World: The Making of 21st Century Industrial Complexes*, Routledge, London and New York, 275 pages.

⁶¹ Although most nations have had some form of decentralization over the last 10–15 years, the extent to which decentralization helps to underpin more decentralized patterns of urban growth depends on the extent of this decentralization, including the extent to which resources and capacity to raise revenues and invest in infrastructure have been decentralized from national or provincial/state authorities to urban authorities.

⁶² Friedmann, John (1993), "Where we stand: a decade of world city research", Paper prepared for the Conference of World Cities in a World System, Center for Innovative Technology, April, 37 pages.

However, some cities with key roles within the global economy are not so large – for instance, Zürich and Singapore – and several of the world’s largest cities do not owe their size and economic base to their role within global production or management but to being national capitals in more populous nations, with a high concentration of political power there – for instance, Delhi and Cairo and, before the Nigerian capital was shifted to Abuja, Lagos.

One reason why the world was less urbanized in 2000 than was expected is the slow economic growth (or economic decline) that many low- and middle-income nations experienced for much of the period from 1980. This also helps explain slower population growth rates for many cities in Africa and Latin America. This is also partly related to structural adjustment policies, which brought declines in employment, falling real incomes and declining urban welfare, and which proved to be less successful than had been hoped in stimulating economic growth.⁶³

It is tempting to compare urbanization trends across the world’s nations, not least because the datasets showing each nation’s level of urbanization and each major city’s population from 1950 to 2000 (with projections to 2015) are easily available. But doing so is fraught with dangers. First, there are the limitations in the data, as outlined in Boxes 1 and 2. Second, the factors underlying urban change often differ greatly between nations (as illustrated by examples from Pakistan, Mexico, South Africa and Ghana in an earlier section). The desire for generalizations and cross-national comparisons has produced many myths – see Box 3. It is rare to find careful analyses of urban change within any nation or region over time that recognize the limitations in the urban data (for instance, how changes in some urban boundaries between censuses have affected urban trends) and that can link the urban changes with the underlying economic, political, social and demographic changes.⁶⁴ Where these do exist, they discourage international comparisons because they show the diversity evident across any national territory and across different inter-census periods. For many nations, it is impossible to produce such a national review because there are too few censuses available to do so.

Box 3: Common myths about urban development

“More than half the world’s population live in cities.” The terms “city” and “urban centre” are often used interchangeably – but they are not the same. The proportion of people living in cities is considerably lower than the proportion living in urban centres, as a significant proportion of the urban population lives in urban centres that are too small to be called cities. There are thousands of settlements in all inhabited regions of the world that are classified by their national governments as urban, which lack the economic, administrative or political status that would normally be considered as criteria for classification as a city. Thus, the proportion of the world’s population living in cities is significantly less than the proportion living in urban centres. However, not even half of the world’s population lives in urban centres. According to the most recent UN statistics, the world’s urban population will only come to exceed its rural population in around 2007. But, as described in Box 1, changes in urban definitions could increase or decrease the proportion of the world’s population living in urban areas.

“Secondary cities are growing faster than large cities.” Many documents claim that secondary cities or small cities are growing faster than large cities⁶⁵ – but any review of the inter-census population growth rates of all urban centres within a nation usually shows great variety – with some urban centres’ populations growing rapidly, some growing slowly and, often, some not growing, or even shrinking. There is usually a group of “secondary cities” (however defined) that are the most rapidly growing cities; as noted earlier, it is rare for the largest cities to be among the nation’s most rapidly growing cities. But as well as secondary cities (or other urban centres) with rapidly growing populations, there are also those with slow growth. In aggregate, the population of secondary cities (however defined) may be growing faster than those of large cities (however defined), but the aggregate statistics mask large variations.

“The poor live in peri-urban areas.” It has become common for reference to be made to the poor living in “peri-urban areas”, yet in virtually all cities, particular peri-urban areas are also the chosen location for middle- and upper-income groups. In addition, mapping the locations that have a predominance of low-income groups in any city

⁶³ For sub-Saharan Africa, see Potts 2001, op. cit.

⁶⁴ See, for instance, the section on Northern America by Larry Bourne, and the chapter on Europe by Tony Champion in UNCHS 1996, op. cit.; also Garza 2002, op. cit.

⁶⁵ See, for instance, World Bank 1999, op. cit.

usually produces a diverse patchwork of locations, including some in the inner-city (including tenements and areas with cheap boarding houses), and many that are not “peri-urban” (however peri-urban is defined). Many of the world’s rapidly growing cities do have many illegal or informal settlements developing on their periphery but it is incorrect to assume that most of the poor live in peri-urban areas, or that it is only the poor that live in peri-urban areas.

“Migrants are a disadvantaged group.” It is often assumed that migrants are a “disadvantaged group” within city populations. This probably originates from the myth that many “poor migrants” are foolishly attracted to cities’ “bright lights” – rather than a recognition that migrant flows are logical responses to the changing spatial pattern of economic opportunity (unless people are displaced by civil conflict or disaster). But it is difficult to generalize about migrants. Many come to cities with good contacts (or come to join other family members). Many have above average education levels. Many come because they can get good jobs with above average incomes. In many nations, or in particular cities, a high proportion of migrants come from other urban centres, not from rural areas. It is often assumed that it is mostly migrants who live in squatter settlements, but many case studies show a high proportion of city-born residents, or migrants who have been in the city many years, living in squatter settlements. It is generally inadequate incomes that explains who lives in squatter settlements, not being a migrant or a non-migrant. In most cities, there are particular foreign immigrant groups (and perhaps some migrant groups) that face discrimination in, for example, labour or housing markets or access to basic infrastructure, but this does not apply to all migrants. A focus on who within city populations faces serious discrimination is likely to show that this arises much more from gender, age, class or caste than from being or not being a recent in-migrant.

Cities and political structures

Perhaps the most important political influence on urban change in most nations in Africa and Asia over the last 60 years has been the dissolving of the European powers’ colonial empires. One example of the influence of political change on urban change is the very large increase in the populations of Karachi, Calcutta, Mumbai and Dhaka from the time of Partition of India with the departing British powers in 1947 (and the large increases and decreases in population in many other places in India, Pakistan and what later became Bangladesh). The growing concentration of urban population in Dhaka from 1950 to 1980 is best explained by its increasingly important political and administrative role, first as capital of East Pakistan, then as capital of Bangladesh. But the influence of economic change on urban change is generally greater than political change, once a nation-state has become established. For instance, Dhaka owes much of its rapid growth over the last two decades to the rapid expansion of the ready-garments industry in Bangladesh, which has absorbed 1.5 million workers, and with a high concentration of these in Dhaka.⁶⁶

In Africa, one of the reasons why urban change was so rapid from the 1950s onwards was because in most nations, it began from such a small base, as the European colonial powers had kept down urban populations by imposing restrictions on the rights of their national populations to live and work in urban centres. Thus, one of the reasons why urban populations grew so rapidly just before or after the ending of colonial rule was the removal or weakening of the colonial *apartheid*-like controls on population movements.⁶⁷ In some nations, a considerable part of the migrant flows to cities was women and children joining their partners (which had not been permitted under colonial rule).⁶⁸ Another reason for rapid urban population growth was the achievement of political independence. Newly independent governments had to build the institutions of governance that nation-states need and also expand the education system that had been so undeveloped under colonial rule. This obviously boosted growth in the urban centres, which were the main political and administrative centres.

Urban growth dynamics over the last 40 years in South Africa, Namibia and Zimbabwe (formerly Rhodesia) cannot be understood without taking into account the profound impact of controls on people’s

⁶⁶ Afsar 2002, op. cit.

⁶⁷ Potts 1995, op. cit.

⁶⁸ Bryceson, Deborah (1983), *Urbanization and Agrarian Development in Tanzania with Special Reference to Secondary Cities*, IIED, London.

movements imposed by white minority regimes on the composition and growth of cities.⁶⁹ In South Africa, with the lifting of long-applied restrictions on African urbanization in 1986 and the ending of the apartheid government, the country became an increasingly popular destination for refugees and migrants from other African nations, which also had profound impacts on urban change.⁷⁰ Many commentators view the rapid growth of sub-Saharan African cities over the last 50 years as a serious problem – but if a considerable part of the rapid change in urban populations is related to the achievement of political independence and the removal of highly discriminatory controls on population movements (which also means that families are now allowed to live together), it suggests that this rapid change also has positive aspects. Political changes since independence also influence urban trends. For instance, in Uganda, urban growth was slower than expected during the early post-independence period, when violence and political instability rendered economic development impossible, but then became more rapid when political stability was restored in most of the country (and the economy expanded).⁷¹

In South Africa, the dramatic increase in urban population in the 1996 census compared to the two previous censuses was, in part, due to the exclusion of the African population living in urban areas that, in the apartheid era, were designated as the “independent states” of Transkei, Bophuthatswana, Venda and Ciskei in the censuses of 1980 and 1991. One reason why South Africa still appears relatively un-urbanized in relation to its per capita income is the legacy of the apartheid regime that had imposed strict controls on the right of the African population to live in urban areas – although the impact of this legacy has been eroding since the mid-1980s when the pass controls and other controls on people’s movements began to loosen.⁷²

The removal of apartheid-like controls on people’s right to move to or live in cities produces large-scale impacts, but concentrated in time; once women and children have joined their husbands in the cities from which they had previously been excluded (and in so doing boosting a city’s growth rate), they do not go on doing so – so this movement will usually drive very rapid population growth in urban populations for one inter-census period but not for the next.

Political and economic changes have had profound impacts on urban change in many other regions. For example, the dissolving of the Soviet Union and its economic bloc and the breaking up or reshaping of many nations in Eastern and Southern Europe have brought about major changes in urban trends. Another example is China, with its very rapid economic growth and rapid urban change since the late 1970s. In much of Latin America, urban systems and trends were reshaped during the 1980s and 1990s, with the introduction of or return to democratic rule, the shift in economic policies from import substitution to export promotion, serious economic problems and, in many nations, decentralization and stronger democracy within city and municipal governments.

Wars and civil conflicts in parts of Europe and Africa have also brought major shifts in populations. For instance, millions of people fled to urban areas in Angola, Mozambique and the Sudan during civil wars there in the 1980s and 1990s, just as they had done in Zimbabwe during the liberation struggle of the 1970s.⁷³ It is difficult to know the exact dimensions of these movements – for instance, Angola has had no full census since 1970.⁷⁴ Yet during the 1980s, there were huge population displacements in Angola as many rural areas were insecure and people fled to small towns and inland cities as well as main cities near the Atlantic coast. The post-election war from 1992 to 2002 affected the inland cities more, so displaced populations headed more to the cities on the Atlantic coast.⁷⁵ There is also the changes brought

⁶⁹ Potts 1995, op. cit., and Crankshaw and Parnell 2002, op. cit.

⁷⁰ Crankshaw and Parnell 2002, op. cit.

⁷¹ Potts 2001, op. cit.

⁷² Crankshaw and Parnell 2002, op. cit.

⁷³ Potts 1995, op. cit.

⁷⁴ Cain, Allan, Mary Daly and Paul Robson (2002), *Basic Service Provision for the Urban Poor; The Experience of Development Workshop in Angola*, IIED Working Paper 8 on Poverty Reduction in Urban Areas, 40 pages.

⁷⁵ Cain et al 2002, op. cit.

about when conflicts cease – for instance, in both Mozambique and Zimbabwe, there was significant out-migration from some cities when conflict ceased.⁷⁶ The number of international refugees in Africa and Europe rose to unprecedented levels during the 1990s and a considerable proportion came to live in cities, for refuge or seeking new bases for their livelihoods.⁷⁷ Famines have also influenced urban trends in many African nations over the last 50 years, especially where urban centres provide rural populations with more chance of survival.

Thus, while reviews of tables showing urban population statistics for different nations may show broad trends towards increasingly urbanized societies in much of the world, the scale and nature of such trends and their underlying causes differ greatly from country to country, and even within each country, regionally and over time. Even if globalization and the legal and institutional changes it brings are an increasing influence in virtually all urban centres, it is important not to forget how unique social, economic, political and demographic structures are influencing urban change within each location. Or how different the impact of globalization is on each city.⁷⁸

The tables listing levels of urbanization for all the world's nations may be giving a false impression of urban change in many nations in that the figures for their levels of urbanization in 2000 (and for some, even for 1990) are estimates. Some nations have had no census for 10–20 years, so all figures for national urban populations, or for the populations of individual cities, are estimates or projections that are usually based on extrapolating trends for the 1970s or 1980s. But the drivers of urbanization during the 1970s and 1980s were often much more powerful than they were during the 1990s. For instance, the economic performance of most nations in sub-Saharan Africa was worse during the late 1980s and 1990s than it had been during the 1970s and early 1980s (in many nations, the economy shrank), and this generally means less rural-to-urban migration. In addition, the strong “urbanizing” influence of decolonization and political independence, that was such a powerful driver of urban change, was no longer acting in most nations during the 1990s. In most sub-Saharan African nations, and in many others, death rates from Aids began to become a significant influence on national demographic structures during the 1990s. These death rates may be higher in urban than in rural areas, or many of those with Aids may be going to rural areas, and both would contribute to reducing the levels of urbanization. There are also good reasons to question the UN projections that suggest that virtually all population growth up to 2020 and beyond will be in urban areas. Whether or not this happens depends mainly on the economic performance of the nations with the largest rural populations.

4. The potential costs of rapid urban expansion⁷⁹

Few large cities had their initial urban expansion guided by a rational plan – or if it was, it only applied to parts of the expansion, or its guidelines, rules and norms were only partially applied. The many factors that influenced the location and initial development of cities were noted earlier, including the availability of water, good location on transport routes (where river or sea transport may be important), the location of government (government agencies and employees as potential sources of demand for goods and services), a healthy climate, rich agricultural lands and, especially in the past, defence. But the main driver of growth for most rapidly growing cities over the last two decades has been private enterprises choosing to concentrate there. Most cities initially developed and expanded with little government attention given to planning in the expanding urban periphery (for instance, to protect watersheds or agricultural land or ensure sufficient land for housing), or to ensuring the provision of infrastructure

⁷⁶ Potts 2001, op. cit.

⁷⁷ Castles, Stephen and Mark J. Miller (1993), *The Age of Migration: International Population Movements in the Modern World*, MacMillan, London and Basingstoke, 306 pages.

⁷⁸ See the special issue of *Environment and Urbanization* on globalization and cities (Vol.14, No.1, April 2002).

⁷⁹ This section draws on Hardoy, Mitlin and Satterthwaite 2001, op. cit.

there. Over time, many cities have acquired structures of governance⁸⁰ that addressed these issues and, as the competence, capacity and accountability of urban governments developed (usually backed by national reforms and more democratic systems of government), so urban expansion became less chaotic and provision for urban infrastructure and services greatly improved. In cities in high-income nations, it is taken for granted that there are planning controls on urban expansion and on new developments, that all new buildings will meet official building standards, and that there are piped water, sewer and drainage networks to which new developments can connect. It is also accepted that the staff of urban governments are answerable to elected representatives. Yet it is only in the last 100 years or so that the governance structures to achieve this began to be accepted and developed.

Most cities and smaller urban centres around the world still do not have governance structures that fulfil many of these key roles. This is especially so in low-income nations and most middle-income nations. Many city governments are unrepresentative, so any agreement negotiated between them and an enterprise (or other government agency) will not be recognized as legitimate by most of the locality's population. There are often problems with corruption (although this is often driven as much by the behaviour of external agencies as by local practices). Where city authorities have elected representatives, it is common for local politicians to use patron–client relationships with their constituents, which undermine democracy and accountability. Government investment in the basic infrastructure that all businesses and households need – all-weather roads and paths, piped water supplies, provision for waste water removal and storm drainage – falls far behind the growth in population and enterprises. So too does the provision of basic services, including provision for schools, health centres and garbage collection.

The result is that hundreds of millions of urban dwellers today live in homes and neighbourhoods with little or no government provision for infrastructure and services.⁸¹ It is common for cities to have half or more of their population unserved by water taps in their homes or yards, and for more than three-quarters to have inadequate provision for sanitation. Most cities in Africa have less than 10 percent of their population connected to sewers; many have no sewers at all. Some cities have privatized some infrastructure provision but, at least for water, sanitation, drainage and garbage collection, this has rarely meant the extension of provision to unserved populations. Thus, hundreds of millions of urban dwellers in Africa, Asia and Latin America have to rely on water sources that are unsafe, unreliable and often difficult to access.⁸² They have great difficulty getting sufficient water for washing, laundry and personal hygiene. At least 850 million urban dwellers lack adequate provision for defecation.⁸³ At best, they have pit latrines – and often they have to share these with so many other people that getting access to them is difficult, as is ensuring that the latrines are kept clean. Or they have no provision at all and have to defecate in the open or into cardboard boxes, newspapers or plastic bags. Probably as many as one hundred million urban dwellers have no toilet facilities they can use (or can afford), and have to rely on open defecation.⁸⁴ Inadequate investment in drainage and watershed management means that storms or heavy concentrations of rainfall regularly cause serious flooding. In poorly managed cities, it is common

⁸⁰ The term governance is used in preference to government, because it includes not only the political and administrative institutions of government (and their organization and inter-relationships) but also the relationships between government and civil society – see McCarney, Patricia L. (1996), “Considerations on the notion of ‘governance’ – new directions for cities in the developing world”, in Patricia L. McCarney (editor), *Cities and Governance: New Directions in Latin America, Asia and Africa*, Centre for Urban and Community Studies, University of Toronto, Toronto.

⁸¹ Hardoy, Mitlin and Satterthwaite 2001, op. cit.; also UN–Habitat (2003), *Water and Sanitation in the World's Cities; Local Action for Global Goals*, Earthscan Publications, London, 274 pages.

⁸² Hardoy, Mitlin and Satterthwaite 2001, op. cit.

⁸³ UN–Habitat 2003, op. cit.

⁸⁴ UN–Habitat 2003, op. cit.

for one child in four to die before the age of five, with most of the deaths related to the lack of infrastructure and services.⁸⁵

The absence of effective governance structures also means little planning, little development control and little investment in trunk infrastructure in the expanding urban periphery – or if there are planning controls, these can be ignored or subverted by powerful political or economic interests.⁸⁶ In the absence of any effective land use plan or other means to guide and control new developments, cities expand haphazardly. This produces a patchwork of different developments, including businesses and high density residential settlements, interspersed with land that remains undeveloped, held by their owners in anticipation of speculative gain. Land development occurs as a result of legal and illegal action by various landowners, builders, developers and real-estate firms in an ad-hoc way. There are usually many legal sub-divisions around the city for houses or commercial and industrial buildings that have been approved without reference to any city-wide plan. Many major cities have no city-wide plan because the built-up areas fall into different local jurisdictions, and no governance structure has developed to allow coordinated planning between them. Many cities have a considerable range of new factories and other businesses developing in surrounding “rural” areas, although their functioning and the markets they serve are intimately tied to the city.⁸⁷ In more prosperous cities, many new low density, high-income residential neighbourhoods often develop around the city, along with some commercial developments and leisure facilities for higher-income groups (for instance, country clubs and golf courses). In many cities, especially those with high levels of violence and other crimes, there are often many walled residential developments (usually close to major highways) that are protected 24 hours a day by private security firms – the “gated communities”, or closed neighbourhoods, the *barrios cerados*.⁸⁸ There are also usually many unauthorized residential developments and, where regulation is lax, these may cater for middle- and upper-income developments as well as low-income developments. There are usually illegal squatter communities too, who originally located here because the site’s inaccessibility, lack of infrastructure and poor quality gave the inhabitants more chance to avoid eviction; choosing too valuable or visible a site means more likelihood of eviction. In many cities (including Buenos Aires, Delhi, Santiago, Seoul and Manila), the urban periphery also has settlements that were formed when their inhabitants were dumped there after being evicted from their homes by “slum” or squatter clearance. It is now common for between a quarter and half a city’s population to be living in squatter settlements or in other land developments that never received official approval.

Uncontrolled physical growth impacts most on what might be termed an immediate hinterland around a city; much of this cannot be described as urban or suburban, and yet much of it is no longer rural. If the city has been designated a “metropolitan centre”, much or all of this hinterland may fall within the metropolitan boundaries. New developments are usually most intense either side of major roads or highways – especially where these link the city to other nearby urban centres.

⁸⁵ Hardoy, Mitlin and Satterthwaite 2001, op. cit.; also Satterthwaite, David (2004), *The Under-estimation of Urban Poverty in Low and Middle-Income Nations*, IIED Working Paper 14 on Poverty Reduction in Urban Areas, IIED, London, 69 pages.

⁸⁶ See Kelly, Philip F. (1998), “The politics of urban–rural relationships: land conversion in the Philippines”, *Environment and Urbanization*, Vol.10, No.1, April, pp. 35–54.

⁸⁷ Jones, Gavin W. (1983), “Structural change and prospects for urbanization in Asian countries”, *Papers of the East West Population Institute*, No.88, East–West Center, Hawaii, 46 pages; also McGee, T.G. (1987), “Urbanization or Kotadesasi – the emergence of new regions of economic interaction in Asia”, Working Paper, Environment and Policy Institute, East–West Center, Honolulu, June.

⁸⁸ These have been noted as major elements in changing urban patterns within many cities, including São Paulo, Buenos Aires and Cairo – see Caldeira, Teresa P.R. (1996), “Building up walls: the new pattern of spatial segregation in São Paulo”, *International Social Science Journal*, No.147, March, pp. 55–66; also Pérez, Pedro (2002), “Buenos Aires: Fragmentation and privatization of the metropolitan city”, *Environment and Urbanization*, Vol.14, No.1, April, pp. 145–158; and Denis, Eric and Asef Bayat (2002), *Egypt; Twenty Years of Urban Transformations*, Urban Change Working Paper 5, IIED, London; see also various papers in *Environment and Urbanization*, Vol.16, No.2 (October 2004), as this issue is on urban violence and insecurity.

The unregulated physical expansion of a city's built-up area has serious social and environmental consequences, including the segregation of low-income groups in the worst located and often the most dangerous areas. Illegal or informal settlements are often concentrated on land sites subject to flooding (as in, for instance, Guayaquil, Recife, Monrovia, Lagos, Mumbai, Port Harcourt, Delhi, Bangkok, Jakarta and Buenos Aires), or on hillsides at risk from landslides or mudslides (as in Rio de Janeiro, La Paz and Caracas). Low-income groups often concentrate on hazardous sites such as these because they offer well-located sites on which the settlers have the best chance of establishing a home and/or avoiding eviction. But these are also land sites to which it is more difficult and expensive to extend basic infrastructure. Increased costs for infrastructure also arise because new developments spring up far from existing networks of roads, water mains and sewers and drains to which they need connection. In viewing the area around cities, one often sees the paradox of extreme overcrowding, serious housing shortages and acute shortages of infrastructure and services in particular areas and yet large amounts of land left vacant or only partially developed with all that this implies in terms of increasing the cost of providing infrastructure and services.

Cities transform environments and landscapes not only within the built-up area but also for considerable distances around them. The inhabitants, environment and natural resource base of this wider region are usually affected by:

- the transformations the expanding city brings – for instance, as land surfaces are reshaped, valleys and swamps filled, large volumes of clay, sand, gravel and crushed rock extracted and moved, water sources tapped and rivers and streams channelled;⁸⁹
- the demand from city-based enterprises, households and institutions for the products of forests, rangelands, farmlands, watersheds or aquatic ecosystems that are outside its boundaries;
- the solid, liquid and air-borne wastes generated within the city and transferred to the region around it.

Cities require a large input of fresh water and other natural resources, and the more populous the city and the richer its inhabitants, the greater the demand on resources and, in general, the larger the area from which these are drawn. Water needed for industrial processes, for supplying residential and commercial buildings, for transporting sewage, and for other uses is then returned to rivers, lakes or the sea at a far lower quality than that originally supplied. Storm and surface run-off also collects large pollution loads as it flows through cities – especially where there is inadequate provision for solid waste collection – as much of the uncollected solid waste generally finds its way into water bodies. Air pollutants generated by city-based enterprises or consumers are often transferred to the surrounding region through acid rain, affecting soils and water bodies (and sometimes damaging vegetation). In general, the weakness of local authorities in the areas around cities means that many environmental costs generated by production and consumption within the city are transferred there.⁹⁰

Within this area around cities, agriculture is generally in decline, as land is bought up by people or companies in anticipation of its change from agricultural to urban use and of the increases in land value that this brings, as the city's built-up area and transport system expand. There is usually a lack of effective public control of such changes in land use or on the profits that can be made from them, even when it is public investment (for instance, the expansion of road networks) that creates much of the increase in land values. Around prosperous cities, it is also encouraged by the scale of profits that can be made – and it is difficult to develop governance structures which prevent politicians and powerful vested

⁸⁹ Douglas, Ian (1983), *The Urban Environment*, Edward Arnold, London, 229 pages; also Douglas, Ian (1986), "Urban Geomorphology", in P. G. Fookes and P. R. Vaughan (Editors), *A Handbook, of Engineering Geomorphology*, Surrey University Press (Blackie and Son), Glasgow, pp. 270–283.

⁹⁰ Hardoy, Mitlin and Satterthwaite 2001, op. cit.; also McGranahan, Gordon, Pedro Jacobi, Jacob Songso, Charles Surjadi and Marianne Kjellén (2001), *The Citizens at Risk: From Urban Sanitation to Sustainable Cities*, Earthscan Publications, London, 200 pages.

interests being the prime beneficiaries. In many cities, it may also be encouraged by a lack of other domestic high return investment opportunities.

Uncontrolled physical expansion also destroys natural landscapes around cities that should be preserved as parks, nature reserves, historic sites or simply as areas of open space for recreation and children's play. The need to preserve or develop such areas might seem less urgent than, say, land for housing. But once an area is built up, it is almost impossible (and very expensive) to remedy a lack of open space. In addition, this impacts much on lower-income groups. Richer households tend to live in residential areas with more open space, and their homes often have gardens. They are much more mobile and so can travel more easily out of the city. And they can afford to become members of the "country clubs", sports clubs and golf courses, and so can enjoy walks, playgrounds and sports facilities.

Other cost transfers generated within cities are into the future. Carbon dioxide emissions (the main greenhouse gas) rise with economic growth and are concentrated in cities (since these are the main centres of production, consumption and waste generation). These emissions transfer costs to the future, through the human and ecological costs of atmospheric warming – and it is the larger, lower-density urban patterns with increasing proportions of people dependent on private automobiles that generally have the highest greenhouse gas emissions per person. Current levels of urban consumption for the products of agriculture and forestry, with the soils and forests being destroyed or degraded and biodiversity reduced, are also transferring costs to the future. The work of William E. Rees on the "ecological footprint" of cities⁹¹ has made evident the large land area on whose production the inhabitants and businesses of any city depend for food, other renewable resources and the absorption of carbon to compensate for the carbon dioxide emitted from fossil fuel use. Prosperous cities depend on the ecological productivity of very large areas, but can draw on "distant elsewhere", so this does not impact on their own surrounds. Continuing urban growth, without attention to reducing cities' ecological footprints, will be a key factor in underpinning increasing concentrations of greenhouse gases in the atmosphere, and thus a key cause of the very serious direct and indirect costs this would bring.⁹²

5. City governments that buck these tendencies

All the above may be taken to imply insuperable problems for expanding cities and for the global environment. Box 4 highlights how cities actually have large potential advantages for ensuring universal provision of infrastructure and services, keeping down waste levels, re-using waste streams and delinking a high quality of life from high levels of resource consumption (and greenhouse gas emissions).

Box 4: Potential economies of scale and proximity for cities

The high densities and large population concentrations in cities usually lower the costs per household and per enterprise for the provision of infrastructure (all-weather roads and paths, piped water, sewers, drains, electricity) and services (including day care, all forms of schools and health care, and emergency services). The concentration of industries reduces the unit cost of making regular checks on plant and equipment safety, as well as on occupational health and safety, pollution control and the management of hazardous wastes. There are also economies of scale or proximity for reducing the risk of most disasters, and generally a greater capacity among city dwellers to pay for these, or at least to contribute towards the costs.

⁹¹ See Rees, William E. (1992), "Ecological footprints and appropriated carrying capacity", *Environment and Urbanization*, Vol.4, No.2, October, pp. 121–130; also Wackernagel, Mathis and William Rees (1995), *Our Ecological Footprint: Reducing Human Impact on the Earth*, New Society Publishers, Gabriola (Canada), 176 pages.

⁹² IPCC (2001), *Climate Change 2001: Impacts, Adaptation, and Vulnerability*, Contribution of Working Group II to the Third Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge University Press, Cambridge, 1032 pages.

Cities also have many potential advantages for reducing resource use and waste. For instance, the close proximity of so many water consumers gives greater scope for recycling or directly re-using waste waters. With regard to transport, cities have great potential for limiting the use of motor vehicles (and thus also the fossil fuels, air pollution and greenhouse gases that their use implies). This might sound contradictory, as most large cities have problems with congestion and motor vehicle-generated air pollution. But cities should allow many more trips to be made by walking or bicycling; and they make a greater use of public transport and a high quality service more feasible. Many of the most prosperous European cities, with among the world's highest quality of life, have one-fifth of the gasoline use of the USA's less compact, more car-dependent cities.⁹³

Cities concentrate populations in ways that usually reduce the demand for land relative to population. Valuable agricultural land might be lost to urban expansion, but in most nations the area taken up by cities and towns is less than one percent of their total surface area. The concentration of people in cities can make easier their full involvement in electing governments at local and city level and also taking an active part in decisions and actions within their own district or neighbourhood.

Most of the urban problems described in the previous section reflect not the inherent characteristic of cities but the limitations in their governance structures. But there are many examples of innovation and better practice from low- and middle-income nations where the need for improved governance is most evident, which give clues as to how current problems can be tackled. Most come from local initiatives that arise from more competent and democratic urban governments in nations where decentralization programmes have given more power and resources to such governments.

Some cities that have grown rapidly in the last 50 years have avoided most of the problems noted above. For instance, Curitiba and Porto Alegre in Brazil have both grown rapidly in recent decades, yet have high quality living environments and innovative environmental policies (including Curitiba's much admired public transport system, based on express busways and feeder buses,⁹⁴ which has encouraged comparable systems in other cities). Citizens in Porto Alegre enjoy an average life expectancy and many indicators of environmental quality that are comparable to those in West European cities – and also a city government that during the 1990s was well known for its commitment to supporting citizen participation, greater government accountability and good public health and environmental management.⁹⁵

Two kinds of innovation need highlighting. The first is a local government programme of action and support for community initiatives within a plan that has been developed involving all groups within the city. Many cities have developed “local agenda 21s” in response to the guidelines in Agenda 21, the “action plan” on sustainable development that most of the world's governments endorsed at the United Nations Earth Summit in 1992. Unlike conventional city plans developed by city planning offices or external consultants, these seek a broader consensus among all groups (or stakeholders) within the city as to the priorities that the plan should address, and more fully involve them in planning, implementation and monitoring. Through local agenda 21s, many cities have developed long-term environmental programmes, which combine attention to addressing environmental health problems and improving housing conditions within the city with better environmental management of the city's (and the wider region's) natural resources – for instance, the Bioplan developed in Manizales in Colombia⁹⁶ and the environmental plans in the Peruvian city of Ilo.⁹⁷ Manizales also developed a much admired public information system, the “environmental traffic lights”, through which environmental conditions and

⁹³ Newman, Peter (1996), “Reducing automobile dependence”, *Environment and Urbanization*, Vol.8, No.1, April, pp. 67–92.

⁹⁴ Rabinovitch 1992, op. cit.

⁹⁵ Menegat 2002, op. cit.

⁹⁶ Velasquez, Luz Stella (1998), “Agenda 21; a form of joint environmental management in Manizales, Colombia”, *Environment and Urbanization*, Vol.10, No.2, October, pp. 9–36.

⁹⁷ López Follegatti, Jose Luis (1999), “Ilo: a city in transformation”, *Environment and Urbanization*, Vol.11, No.2, October, pp. 181–202; also Boon, Ronald G. J., Nancy Alexaki and Herrera Becerra (2001), “The Ilo Clean Air Project: a local response to industrial pollution control in Peru”, *Environment and Urbanization*, Vol.13 No.2, October, pp. 215–232.

trends in all its neighbourhoods are regularly measured and displayed.⁹⁸ Porto Alegre integrated a wide-ranging environmental management policy into its participatory budgeting but rooted it in a comprehensive regional environmental analysis.⁹⁹ Many cities in Europe have also shown how local agenda 21s can combine an attention to local needs with regional and global responsibilities (including a lower draw on planetary resources and waste assimilation capacities). They show how measures can be taken to make local governments and businesses develop the habit of responding to the local needs identified in participatory consultations – no easy task for any large institution.¹⁰⁰ Local governments can also demonstrate an independence when national government provides no lead – for instance, the many cities in the United States with elected governments that have committed themselves to reducing greenhouse gas emissions – despite the US government’s blocking of any internationally agreed programme to do so. A link between effective local democracy and a more effective meeting of local needs is not surprising; what is perhaps more surprising and encouraging is the number of examples of democratic local governments and the citizens within their jurisdictions agreeing to measures to address global problems including reducing their cities’ ecological footprints.

The second innovation that needs highlighting is a sustained programme to tackle the backlog in investment in infrastructure and services in the poorer and worst served areas of cities. This comes under many names and many forms – regeneration, upgrading, community development..... Many cities in low- and middle-income nations where the backlog is largest have had major “upgrading” programmes to improve provision for water, sanitation, drainage and garbage collection in inner-city tenement districts and in squatter settlements – often with programmes to improve schools and health care too. Initially, these were seen as one-off “upgrading projects” in particular “targeted” neighbourhoods; now there is a recognition that city and municipal governments need the capacity and competence to support continuous upgrading programmes throughout the city, working in partnership with their inhabitants. This recognition can extend up to central government – for instance, the government of Thailand set up a special fund in 1992 on which community organizations can draw that has supported a large and diverse range of upgrading programmes.¹⁰¹ It is difficult to generalize about innovations that stretch from something as large as Barcelona’s regeneration programme, to support for neighbourhood improvement programmes by the municipality of Ilo (in part because of its very small budget),¹⁰² except to say that there are core principles of “good governance” underpinning them. This often includes an eye for new opportunities that an increasingly globalized world economy can bring to their particular city. Many of the more successful regeneration programmes have also recognized that they must support and celebrate their own city’s culture. But this eye for international investment also needs to be tempered with realism; many city authorities have invested heavily in the infrastructure and facilities that were meant to attract international investment, but with few results.¹⁰³

Both effective local agenda 21s and sustained upgrading programmes are often underpinned by stronger local democracy, as the introduction of elected mayors and councillors over the last 10–15 years has helped make many city governments more accountable and responsive to their citizens. Several nations have had new constitutions or important constitutional amendments that make explicit the new powers

⁹⁸ Velasquez 1998, op. cit.

⁹⁹ Menegat 2002, op. cit.

¹⁰⁰ Roberts, Ian (2000), “Leicester environment city: learning how to make Local Agenda 21, partnerships and participation deliver”, *Environment and Urbanization*, Vol.12, No.2, October, pp. 9–26; also Lafferty, William M. and Katarina Eckerberg (editors) (1998), *From the Earth Summit to Local Agenda 21: Working Towards Sustainable Development*, Earthscan, London, 280 pages.

¹⁰¹ Boonyabanha, Somsook (1999), “The Urban Community Environmental Activities Project, Thailand”, *Environment and Urbanization*, Vol.11, No.1, April, pp. 101–115; Boonyabanha, Somsook (2005), “Baan Mankong; going to scale with ‘slum’ and squatter upgrading in Thailand”, *Environment and Urbanization*, Vol. 17, No. 1, pp. 21–46.

¹⁰² Follegatti 1999, op. cit.

¹⁰³ See Douglass, Mike (2002), “From global intercity competition to cooperation for livable cities and economic resilience in Pacific Asia”, *Environment and Urbanization*, Vol.14, No.1, April, pp. 53–68.

and responsibilities of local governments – including Brazil, Colombia and India. But the innovations powered by more effective local democracies are not only the result of elected mayors and councillors. Indeed, they are often far more the result of citizen groups being able to organize, make demands and undertake their own programmes. In a growing number of countries, federations formed by groups of the urban poor are demonstrating new ways of developing programmes that are transforming the lives of thousands of their member households – for instance, through negotiating upgrading, or developing new urban neighbourhoods. They have done so at a unit cost that is far lower than that of government or international agency programmes. Many of their initiatives also recover costs, with the money returned to fund further community-level programmes. Many of these urban poor federations have also developed successful partnerships with supportive local governments. For instance, in Mumbai and Pune, low-income communities are developing their own community-organized and managed toilets that are of far higher quality and much better managed than the previous government-managed ones, and that cost no more. But to achieve this required city governments to recognize their capacity to do so and to adapt their structures to support it. In several cities in South Africa, there are many settlements developed by the Homeless People’s Federation that have far better quality housing than in government programmes, yet cost no more. Such federations of the urban poor are active in Cambodia, India, Namibia, Philippines, South Africa, Thailand and Zimbabwe, and are emerging in several more.¹⁰⁴ They have even formed their own international umbrella organization to increase their capacity to change the policies of international agencies and support each other’s efforts.¹⁰⁵

If the kinds of innovations mentioned above become more widespread, what might this imply for the urban trends discussed in earlier sections? It certainly implies an urban future less dominated by very large cities, as they lose investment to better-governed smaller cities – one critical reason why São Paulo and Rio de Janeiro now have far fewer people than expected. Advanced telecommunications systems have also helped underpin more decentralized patterns of production (which also means more decentralized patterns of urban development) – except for the large cities that can adapt or that are successful at retaining a role as command and control centres for global corporations and the producer services they require.¹⁰⁶ What we do not know is whether the trend towards more decentralized urban patterns will manifest itself as huge sprawling urbanized regions or as networks of connected compact cities with well-managed surrounds. It also remains to be seen whether the smaller cities that have attracted new investments away from Mexico City, São Paulo, Beijing, Shanghai, New York, Calcutta become very large cities or, in turn, also lose out to another generation of successful smaller cities.¹⁰⁷ It is tempting to think that perhaps there is an “ideal” city size, but the quality of a city depends more on the quality of its governance than on its size. And ideal size for who? Clearly, large cities with high levels of private automobile use generate more intractable problems for congestion than smaller cities, especially if little provision is made to encourage people to walk, bicycle or use public transport. Successful large cities have particular problems ensuring that good quality housing is available that low-income groups can afford. But few people who have spent time in Paris, London and New York (or Rio de Janeiro, Buenos Aires, Bangkok and Mumbai) can deny that these have attractions that smaller cities lack. Large cities depend on large resource inputs, but the availability of resources varies so much from place to place (as do the efficiencies with which they are used), so the ideal size from this perspective will also vary from place to place. Rather than debate what constitutes an ideal city size, it is more important to have effective, democratic local governments within national frameworks that ensure that each city does not draw too heavily on local and global resources and waste assimilation capacities. Doing so may even surprise us with some of the world’s largest cities also performing best in terms of quality of life, efficient resource use, low waste volumes and low greenhouse gas emissions per person.

¹⁰⁴ See *Environment and Urbanization*, Vol.13, No.2 (October 2001) for more details of the work of these different federations.

¹⁰⁵ Slum/Shack Dwellers International; see www.sdinet.org

¹⁰⁶ Sassen, Saskia (1994), *Cities in a World Economy*, Pine Forge Press, Thousand Oaks, London, New Delhi, 157 pages.

¹⁰⁷ See Bourne 1995, op. cit. for a discussion of this in relation to the United States.

6. Conclusions

The world will certainly be more urbanized in 10–15 years time, and will have more large cities, but perhaps less than current projections suggest. There are good grounds for questioning whether most of the world's urban population will live in large cities. In most high-income nations and many middle- and low-income nations, more dispersed patterns of urban development are evident. In addition, in high-income nations, much of the rural population is, in effect, urbanized rural dwellers. They receive the infrastructure and services that used to be associated with urban centres, most do not work in agriculture and many work in urban centres (or telecommute with urban-based enterprises), so a growing proportion of rural dwellers are urbanized in their lifestyles and occupations but still classified as rural dwellers. This is also evident around major cities in some low- and middle-income groups, and is likely to have growing significance in many nations.

There are also grounds for questioning whether urbanization levels will continue to rise in all low- and middle-income nations. For instance, sub-Saharan Africa will only become increasingly urban if most of its more populous nations have greater economic success than they had during the 1990s. The size and number of large cities, and increases in urbanization levels in any nation or region, will be much influenced by that nation's economic performance. However, it would only need India to sustain high economic growth rates for the next 15–20 years for the world to become significantly more urban than anticipated. And as discussed earlier, the world could acquire several hundred million more urban dwellers overnight if India or China were to change their definitions of urban centres to those used by nations such as Peru and Sweden.¹⁰⁸ Thus, there is no reliable basis for predicting future levels of urbanization globally, except to note that future levels will be much influenced by the economic performance of the world's more populous nations that currently have low levels of urbanization.

The problems that arise from rapid urban growth are not inherent to cities or to rapid urban growth. Nor are these problems the result of a lack of knowledge of how to address them, or of a lack of precedents that show how to do so – although many city and municipal governments may lack trained personnel with this knowledge. The knowledge of how to install and maintain the infrastructure and services that underpin good quality city environments has developed over the last 150 years – and, as noted above, cities have many economies of scale and proximity to support this. Over the last 30 years, the knowledge has been added of how to integrate this provision with a broader regional concern for sustainable resource use, good land use management and a minimizing of wastes and pollution. The local agenda 21s noted above show how such concerns can be addressed in more democratic and inclusive ways. There is also convincing evidence that robust economies and a high quality of life can be de-linked from growing resource use, pollution and waste.¹⁰⁹

But this needs competent, effective local governance structures – and in most cities and smaller urban centres in low- and middle-income nations, these are not evident. There are many factors constraining the development of appropriate governance structures, or limiting their possible actions to address problems of poverty or environmental degradation – especially where these raise costs and limit choices for politically powerful enterprises and populations. Good governance will set limits on where industries can locate and developers can build; also on what local water sources they can tap and what wastes they can

¹⁰⁸ At least up to its 1990 census, urban areas in Sweden were built-up areas with at least 200 inhabitants and usually not more than 200 metres between houses; for Peru, urban centres were populated centres with 100 or more dwellings grouped contiguously, and were administrative centres of districts – see United Nations (1998), *World Urbanization Prospects: the 1996 Revision*, Population Division, Department of Economic and Social Affairs, United Nations ST/ESA/SER.A/170, 190 pages. Using these definitions in China or India would make both countries predominantly urban.

¹⁰⁹ Von Weizsäcker, Ernst, Amory B. Lovins and L. Hunter Lovins (1997), *Factor Four: Doubling Wealth, Halving Resource Use*, Earthscan, London, 322 pages.

dispose of. The latest information on global warming suggests that good governance will need to set limits on how much individuals can drive automobiles or fly (or limits on the amount of fossil fuel they can use).¹¹⁰ Good city governance has to include actions to ensure that infrastructure and services are available to all within its boundaries, and that revenues are raised from those who benefit from this. It will ensure “the rule of law”, through which the rights and entitlements of everyone (including low-income groups) and “the public good” are protected and effective democratic processes are in place, including the values this implies, such as accountability to citizens and transparency in the generation and use of public resources.

In high-income nations, we have become so used to a web of urban-based institutions that provide these that we forget their importance. We do not question the fact that we get water of drinking quality piped to our homes, and sanitation and electricity 24 hours a day, and that garbage is collected regularly – with the costs representing a very small part of our income. In most high-income nations, there are schools and health centres to which even the lowest-income households have access. There are emergency services available to all, when needed. We have local politicians through whom we can make demands and voice grievances. Legislation and courts protect us from eviction, discrimination, exploitation and pollution. There are safety nets for those who lose their jobs or fall sick – and pensions for retirement. There are lawyers, ombudsmen, consumer groups and watchdogs to whom we can turn if we feel we have been cheated. And all of this is possible because of local government institutions overseen by democratic structures. Even if some services are provided by private companies or non-profit institutions, the framework for provision and quality control is provided by local governments or local offices of national or provincial governments. While coverage for some services may be sub-standard, and some groups ill-served, the broad web of provision adequately serves the vast majority of city and small town populations.

The problems associated with rapid urban growth in low- and middle-income nations can only be addressed through the development of a comparable web of accountable local institutions in cities. This is also needed to ensure that the investments and interventions of national governments, international agencies and private companies recognize, respond to and are accountable to local needs. This requires local institutions that are representative of local populations and inclusive, in the sense that they ensure that everyone’s views are represented. It requires local institutions with the knowledge and capacity to ensure a sustainable use of local resources and to ensure basic infrastructure and services are available to all. These local institutions need the power and the legal basis to allow them to negotiate effectively with powerful external agencies or companies, even to question the proposals they put forward, and to hold these agencies or companies to account if they contravene agreements. Without such institutions, major projects or investments are profoundly undemocratic, because the populations in the areas where they take place have so little power to influence them. One structural difficulty that all the aid agencies and international development banks face is that they have no provision to formally include the views of their “clients” (low-income groups in “recipient nations”) in their governance structures. The two billion people suffering extreme poverty have no vote in global institutions. In multilateral institutions, their government may have a vote (although in the most powerful institutions, most voting power is retained by high-income nations), but their governments rarely represent their views. They also have no vote in bilateral donor agencies or within the governments that supervise them.

Effective local governance is more important in the lives of most people than good national or global governance (although achieving effective government institutions in each locality often requires changes in government at provincial/state, national and global levels). In addition, how are national governments and international agencies going to meet their “global” responsibilities without effective local government institutions as partners? For instance, it is difficult to see how biodiversity can be protected, malaria (and most other diseases) reduced and greenhouse gas emissions kept down without effective and representative local governments. Most global environmental problems will only be resolved through

¹¹⁰ IPCC 2001, op. cit.

the aggregate impact of actions undertaken by local governments – yet local governments are hardly ever given much consideration in global conferences and global action plans. Given the key role of local governments in ensuring that both environment and development goals are met, it is surprising to find so little discussion of “local governance” within most discussions of sustainable development or discussions of how to meet global targets such as the Millennium Development Goals.¹¹¹ The “big” issues such as greater equity, greater justice (and protecting human rights), protecting key resources, reducing greenhouse gases, achieving greater democracy, reducing poverty, managing globalization..... are still discussed, without discussing the local institutions needed to ensure progress in these areas. In addition, sustainable development has always been about moving towards the meeting of multiple goals and fashioning the mix that is most appropriate to each locality, undertaken in full knowledge of local resources and the possibilities and constraints these provide. Thus, it requires forums and decision-making structures in each locality to allow this, where the decisions taken have citizen support. Where it seems that we must not only follow Rene Dubos’ suggestion to think globally and act locally, but also to think locally and act globally.

¹¹¹ For more discussion on this point, see Satterthwaite, David (2005), "Meeting the MDGs in urban areas; the forgotten role of local organizations", *Journal of International Affairs*, Vol. 58, No. 2, pp. 87-112.

ANNEX

This annex has three tables:

- Table 9: The world's 100 largest cities, 2000
- Table 10: The world's 100 fastest growing cities 1950-2000
- Table 11: The world's 100 slowest growing large cities, 1950-2000

Some words of caution are needed with regard to interpreting the data they contain.

With the exception of population statistics for 1800 and 1900, all population figures are drawn or derived from data from United Nations (2004), *World Urbanization Prospects; The 2003 Revision; Data Tables and Highlights*, Population Division, Department of Economic and Social Affairs, United Nations Secretariat, ESA/P/WP/173, New York, 181 pages. Note should be made of earlier cautions in this paper regarding the accuracy of urban statistics for nations in which there have been few censuses and no recent census data are available.

For 1800 and 1900, data came from an IIED database with census data and estimates for city populations drawn from a great range of sources, including Chandler, Tertius and Gerald Fox (1974), *3000 Years of Urban Growth*, Academic Press, New York and London; Chandler, Tertius (1987), *Four Thousand Years of Urban Growth: An Historical Census*, Edwin Mellen Press, Lampeter, UK, 656 pages; and Showers, Victor (1979), *World Facts and Figures*, John Wiley and Sons, Chichester, 757 pages. For Latin America, it also drew on a review of 194 published censuses held between 1850 and 1980.

Where no population statistic or estimate was found for 1800 or 1900, but a statistic was available within five years of these two dates, these were used – hence the headings c.1800 and c.1900. Where no statistic was found but it was clear that the settlement existed, a 0 has been put in the column. The statistics for city populations for c.1800, and many statistics for c.1900, are estimates drawn from many different sources. Many may be inaccurate. But the point of including these in Tables is to show which of today's large cities and rapidly growing cities were already significant cities around 100 and 200 years ago.

Where a city has had more than one name during its history, the other names are listed.

It is likely that many of the Chinese cities listed for which no population figure is given for c. 1800 were already urban centres by this date. One particular difficulty in examining urban change in China historically is the fact that many cities have had several different names, and what appears to be a new city actually has a considerable history, but under another city name.

Table 9: The world's 100 largest cities, 2000

Note: In c.1800 or c.1900, where no statistic was found but it was clear that the settlement existed, a 0 has been put in the column.

URBAN CENTRE	COUNTRY	Population ('000s)				Annual average growth rate 1950-2000	Average annual population increment ('000s) 1950-2000
		c.1800	c.1900	1950	2000		
Tokyo	Japan	492	1,497	11,275	34,450	2.3	464
Mexico City	Mexico	137	415	2,883	18,066	3.7	304
New York-Newark	United States of America	60	4,242	12,338	17,846	0.7	110
São Paulo	Brazil		240	2,313	17,099	4.1	296
Mumbai (Bombay)	India	174	776	2,981	16,086	3.4	262
Calcutta, Kolkata	India	200	1,085	4,446	13,058	2.2	172
Shanghai	China	100	619	5,333	12,887	1.8	151
Buenos Aires	Argentina	43	813	5,041	12,583	1.8	151
Delhi	India	125	209	1,390	12,441	4.5	221
Los Angeles-Long Beach-Santa Ana	United States of America	0	102	4,046	11,814	2.2	155
Osaka-Kobe	Japan	373	970	4,147	11,165	2.0	140
Jakarta	Indonesia	92	115	1,452	11,018	4.1	191
Beijing (Peking)	China	1,100	1,100	3,913	10,839	2.1	139
Rio de Janeiro	Brazil	43	967	2,930	10,803	2.6	157
Cairo	Egypt	260	595	2,436	10,398	2.9	159
Dhaka	Bangladesh	110	90	417	10,159	6.6	195
Moscow	Russian Federation	238	1,120	5,356	10,103	1.3	95
Karachi	Pakistan	14	136	1,028	10,032	4.7	180
Manila	Philippines	85	204	1,544	9,950	3.8	168
Seoul	Republic of Korea	190	201	1,021	9,917	4.7	178
Paris	France	548	3,330	5,424	9,693	1.2	85
Tianjin	China	165	700	2,374	9,156	2.7	136
Istanbul/Constantinople	Turkey	570	900	967	8,744	4.5	156
Lagos	Nigeria	5	42	288	8,665	7.0	168
Chicago	United States of America	4	1,717	4,999	8,333	1.0	67
London	United Kingdom	1,117	6,586	8,361	7,628	-0.2	-15
Lima	Peru	53	130	973	7,454	4.2	130
Tehran	Iran (Islamic Republic of)	15	204	1,041	6,979	3.9	119
Hong Kong	China, Hong Kong SAR		284	1,631	6,807	2.9	104
Santa Fé de Bogota	Colombia	24	100	676	6,771	4.7	122
Rhein-Ruhr North	Germany	3	119	5,295	6,542	0.4	25
Chennai, Madras	India	125	553	1,397	6,353	3.1	99
Bangkok	Thailand	35	587	1,360	6,332	3.1	99
Bangalore	India	60	159	764	5,567	4.1	96
Lahore	Pakistan	0	203	826	5,452	3.8	93
Hyderabad	India	200	448	1,122	5,445	3.2	86
Santiago	Chile	21	288	1,330	5,266	2.8	79
Saint Petersburg	Russian Federation	220	1,439	2,903	5,214	1.2	46
Baghdad	Iraq	96	156	579	5,200	4.5	92
Wuhan	China	185	450	1,228	5,169	2.9	79
Philadelphia	United States of America	69	1,418	3,128	5,160	1.0	41
Madrid	Spain	169	539	1,550	5,036	2.4	70
Miami	United States of America		2	622	4,946	4.2	86
Shenyang (also Mukden before 1949)	China	180		2,091	4,828	1.7	55
Kinshasa	Dem. Rep of the Congo		5	173	4,745	6.8	91
Belo Horizonte	Brazil	0	13	407	4,659	5.0	85
Chongqing	China	218	620	1,680	4,635	2.1	59
Ho Chi Minh (formerly Saigon)	Viet Nam	35	160	1,213	4,619	2.7	68

Toronto	Canada	1	208	1,068	4,607	3.0	71
Riyadh	Saudi Arabia		30	111	4,519	7.7	88
Ahmedabad	India	89	186	859	4,427	3.3	71
Barcelona	Spain	110	552	1,557	4,378	2.1	56
Milan	Italy	135	491	3,633	4,183	0.3	11
Dallas-Fort Worth	United States of America	0	43	866	4,172	3.2	66
Sydney	Australia	3	478	1,696	4,099	1.8	48
Boston	United States of America	25	1,075	2,551	4,049	0.9	30
Singapore	Singapore	0	229	1,022	4,016	2.8	60
Khartoum	Sudan		8	183	3,949	6.3	75
Washington, D.C.	United States of America	8	278	1,298	3,949	2.2	53
Detroit	United States of America	2	286	2,769	3,909	0.7	23
Guangzhou (formerly Canton)	China	800	585	1,343	3,893	2.2	51
Houston	United States of America		45	709	3,849	3.4	63
Hanoi	Viet Nam	60	103	280	3,751	5.3	69
Guadalajara	Mexico	19	126	403	3,697	4.5	66
Rhein-Main	Germany	42	289	2,295	3,688	1.0	28
Pusan	Republic of Korea		17	948	3,673	2.7	55
Pune	India	100	153	592	3,655	3.7	61
Yangon	Myanmar	30	235	1,302	3,594	2.1	46
Atlanta	United States of America	0	90	513	3,542	3.9	61
Alexandria	Egypt	4	320	1,037	3,506	2.5	49
Porto Alegre	Brazil	4	74	483	3,505	4.0	60
Melbourne	Australia	4	485	1,331	3,447	1.9	42
Bandung	Indonesia		27	511	3,409	3.9	58
Montreal	Canada	16	268	1,343	3,409	1.9	41
Casablanca	Morocco	0	20	625	3,344	3.4	54
Berlin	Germany	172	2,707	3,337	3,325	0.0	0
Chengdu	China	110	475	725	3,294	3.1	51
Chittagong	Bangladesh	0	22	290	3,271	5.0	60
Monterrey	Mexico	11	85	356	3,267	4.5	58
Rhein-Ruhr Middle	Germany	20	214	2,001	3,238	1.0	25
San Francisco-Oakland	United States of America	0	439	1,855	3,236	1.1	28
Recife	Brazil	25	217	655	3,230	3.2	51
Ankara	Turkey	20	32	281	3,179	5.0	58
Athens	Greece	12	129	1,783	3,179	1.2	28
Jidda (Jeddah)	Saudi Arabia	5	25	119	3,171	6.8	61
Caracas	Venezuela	31	98	676	3,153	3.1	50
Pyongyang	Dem. People's Republic of Korea	0	74	516	3,124	3.7	52
Xian	China	224	1,000	650	3,123	3.2	49
Nagoya	Japan	100	244	992	3,122	2.3	43
Katowice	Poland	3	32	1,689	3,069	1.2	28
Abidjan	Côte D'Ivoire			59	3,057	8.2	60
Rhein-Ruhr South	Germany	41	437	1,770	3,055	1.1	26
Naples	Italy	430	563	2,749	2,995	0.2	5
Salvador	Brazil	100	206	400	2,968	4.1	51
Phoenix-Mesa	United States of America		6	221	2,934	5.3	54
Harbin	China		20	1,012	2,928	2.1	38
Changchun	China		80	765	2,881	2.7	42
Fortaleza	Brazil	0	89	261	2,875	4.9	52
Medellin	Colombia	6	55	376	2,866	4.1	50
Algiers	Algeria	73	137	469	2,761	3.6	46

Table 10: The world's 100 fastest growing cities, 1950–2000

Note: This only includes cities that had 750,000 or more inhabitants in 2000. In c.1800 or c.1900, where no statistic was found but it was clear that the settlement existed, a 0 has been put in the column.

URBAN CENTRE	COUNTRY	Population ('000s)				Annual average growth rate 1950-2000	Average annual population increment ('000s) 1950-2000
		c.1800	c.1900	1950	2000		
Karaj	Iran (Islamic Republic of)			7	1,063	10.5	21
Brasilia	Brazil			36	2,746	9.1	54
Abidjan	Côte D'Ivoire			59	3,057	8.2	60
Lusaka	Zambia			26	1,307	8.1	26
Faridabad	India			22	1,018	8.0	20
Dubai	United Arab Emirates			20	893	7.9	17
Kaduna	Nigeria			28	1,194	7.8	23
Riyadh	Saudi Arabia		30	111	4,519	7.7	88
Las Vegas	United States of America			35	1,335	7.6	26
Dammam	Saudi Arabia			22	759	7.4	15
Ulsan	Republic of Korea			29	1,011	7.3	20
Khulna	Bangladesh	0	10	39	1,264	7.2	24
Conakry	Guinea		7	39	1,234	7.2	24
Goiania	Brazil			52	1,609	7.1	31
Lagos	Nigeria	5	42	288	8,665	7.0	168
Yaounde	Cameroon		0.1	50	1,438	6.9	28
Sana'a	Yemen	0	59	46	1,264	6.9	24
Kinshasa	Dem. Rep of the Congo		5	173	4,745	6.8	91
Toluca	Mexico	7	23	54	1,455	6.8	28
Dar es Salaam	United Rep. of Tanzania		17	78	2,116	6.8	41
Jidda (Jeddah)	Saudi Arabia	5	25	119	3,171	6.8	61
Ouagadougou	Burkina Faso		8	30	764	6.7	15
Nairobi	Kenya		5	87	2,233	6.7	43
Tegal	Indonesia			30	762	6.7	15
Santa Cruz	Bolivia	6	16	42	1,061	6.7	20
Dhaka	Bangladesh	110	90	417	10,159	6.6	195
Kano	Nigeria	0	0.1	107	2,596	6.6	50
Mogadishu	Somalia	4	7	47	1,061	6.4	20
Niamey	Niger			34	752	6.4	14
Ghaziabad	India			42	928	6.4	18
Khartoum	Sudan		8	183	3,949	6.3	75
Tijuana	Mexico		0.1	60	1,297	6.3	25
Kampala	Uganda			53	1,111	6.3	21
Medina	Saudi Arabia			44	885	6.2	17
Benin City	Nigeria			46	918	6.2	17
Nampo	Dem. People's Republic of Korea			52	1,022	6.1	19
Guwahati	India	0	12	41	797	6.1	15
Bamako	Mali		3	62	1,114	5.9	21
Tripoli	Libyan Arab Jamahiriya	15	42	106	1,877	5.9	35
Valencia	Venezuela	7	28	108	1,893	5.9	36
Benghazi	Libyan Arab Jamahiriya			53	912	5.9	17
Songnam	Republic of Korea			53	911	5.9	17
Luanda	Angola	0	20	138	2,341	5.8	44
Grande Vitoria	Brazil		12	84	1,398	5.8	26
Harare	Zimbabwe		5	84	1,386	5.8	26
Douala	Cameroon		23	101	1,663	5.8	31
Queretaro	Mexico	35	34	49	798	5.7	15
Curitiba	Brazil	0	96	155	2,494	5.7	47
Manaus	Brazil	0	65	89	1,392	5.7	26

Orlando	United States of America		2	75	1,165	5.6	22
Freetown	Sierra Leone			52	802	5.6	15
Culiacan	Mexico			49	750	5.6	14
Campinas	Brazil	7	68	150	2,264	5.6	42
Puch'on (Puchon)	Republic of Korea			51	763	5.5	14
Teresina	Brazil			54	789	5.5	15
Bhopal	India	0	77	97	1,426	5.5	27
Port Harcourt	Nigeria			58	846	5.5	16
Kuwait City	Kuwait		20	81	1,175	5.5	22
Hanoi	Viet Nam	60	103	280	3,751	5.3	69
Aurangabad	India	70		65	868	5.3	16
Phoenix-Mesa	United States of America		6	221	2,934	5.3	54
Port-au-Prince	Haiti	15	60	133	1,767	5.3	33
Durg-Bhilainagar	India	0	0.1	70	905	5.3	17
Chandigarh	India			59	768	5.3	14
Norte/Nordeste Catarinense	Brazil			64	815	5.2	15
Tegucigalpa	Honduras	0	24	73	928	5.2	17
Amman	Jordan		0.1	90	1,147	5.2	21
Faisalabad	Pakistan		9	169	2,142	5.2	39
Suwon	Republic of Korea			74	932	5.2	17
Visakhapatnam	India	20	41	104	1,309	5.2	24
Surat	India	130	119	219	2,699	5.1	50
Maputo	Mozambique		6	92	1,094	5.1	20
Dhanbad	India		12	89	1,046	5.1	19
Kabul	Afghanistan	80	100	216	2,549	5.1	47
Asansol	India		15	91	1,065	5.0	19
Mexicali	Mexico		0.1	66	771	5.0	14
Mashhad	Iran (Islamic Republic of)	50	62	173	1,990	5.0	36
Belo Horizonte	Brazil	0	13	407	4,659	5.0	85
Maracay	Venezuela		4	89	1,015	5.0	19
Qom	Iran (Islamic Republic of)			78	888	5.0	16
Ankara	Turkey	20	32	281	3,179	5.0	58
Chittagong	Bangladesh	0	22	290	3,271	5.0	60
Rabat	Morocco	43	61	145	1,610	4.9	29
Cucuta	Colombia			70	772	4.9	14
Fortaleza	Brazil	0	89	261	2,875	4.9	52
Ulaanbaatar	Mongolia	0		70	764	4.9	14
Riverside-San Bernardino	United States of America		8	139	1,516	4.9	28
Gujranwala	Pakistan		29	117	1,226	4.8	22
Leon de los Aldamas	Mexico	0	118	123	1,293	4.8	23
Taejon	Republic of Korea		0.1	131	1,362	4.8	25
Ahvav	Iran (Islamic Republic of)			85	871	4.8	16
Neijiang	China			137	1,393	4.7	25
Ciudad Juarez	Mexico	0	8	123	1,239	4.7	22
Santa Fé de Bogota	Colombia	24	100	676	6,771	4.7	122
Hai Phong	Viet Nam		16	167	1,676	4.7	30
Accra	Ghana		15	167	1,674	4.7	30
Izmir	Turkey	125	196	224	2,216	4.7	40
Karachi	Pakistan	14	136	1,028	10,032	4.7	180
Seoul	Republic of Korea	190	201	1,021	9,917	4.7	178
Cali	Colombia	6	31	231	2,233	4.6	40

Table 11: The world's 100 slowest growing large cities, 1950–2000

Note: This only includes cities that had 750,000 or more inhabitants by 2000. In ca.1800 or ca.1900, where no statistic was found but it was clear that the settlement existed, a 0 has been put in the column.

URBAN CENTRE	COUNTRY	Population ('000s)				Annual average growth rate 1950-2000	Average annual population increment ('000s) 1950-2000
		c.1800	c.1900	1950	2000		
Liverpool	United Kingdom	76	940	1,382	924	-0.8	-9
Leeds	United Kingdom	53	429	1,692	1,417	-0.4	-5
Copenhagen	Denmark	101	462	1,216	1,079	-0.2	-3
London	United Kingdom	1,117	6,586	8,361	7,628	-0.2	-15
Manchester	United Kingdom	84	1,435	2,422	2,223	-0.2	-4
Genoa	Italy	90	220	908	847	-0.1	-1
Berlin	Germany	172	2,707	3,337	3,325	0.0	0
Birmingham	United Kingdom	72	1,248	2,229	2,243	0.0	0
Xiaoshan	China			1,070	1,124	0.1	1
Xintai	China			1,237	1,325	0.1	2
Buffalo-Niagra Falls	United States of America	0	352	899	977	0.2	2
Naples	Italy	430	563	2,749	2,995	0.2	5
Tyneside (Newcastle)	United Kingdom	36	615	909	993	0.2	2
Budapest	Hungary	54	785	1,618	1,787	0.2	3
Saarland	Germany			793	893	0.2	2
Pittsburgh	United States of America	2	562	1,539	1,755	0.3	4
Milan	Italy	135	491	3,633	4,183	0.3	11
Montevideo	Uruguay	14	268	1,140	1,324	0.3	4
Prague	Czech Republic	77	202	1,002	1,181	0.3	4
Brussels	Belgium	74	561	806	962	0.4	3
Vienna, Wein	Austria	231	1,698	1,787	2,158	0.4	7
Xinghua	China			1,282	1,556	0.4	5
Yixing	China			911	1,108	0.4	4
Hamburg	Germany	130	895	2,171	2,668	0.4	10
Rhein-Ruhr North	Germany	3	119	5,295	6,542	0.4	25
Cleveland	United States of America	1	382	1,392	1,789	0.5	8
Hanover	Germany	18	236	990	1,287	0.5	6
Bremen	Germany	36	163	676	882	0.5	4
Amsterdam	Netherlands	217	510	855	1,127	0.6	5
Lodz	Poland	1	314	725	974	0.6	5
Xiangxiang	China			664	908	0.6	5
Bielefeld	Germany	3	63	941	1,298	0.6	7
Zhaodong	China			615	851	0.7	5
Yuyao	China			611	848	0.7	5
Lille	France	55	289	723	1,007	0.7	6
Hunjiang	China			553	772	0.7	4
Xuanzhou	China			586	823	0.7	5
Detroit	United States of America	2	286	2,769	3,909	0.7	23
Turin	Italy	66	330	880	1,247	0.7	7
New York-Newark	United States of America	60	4,242	12,338	17,846	0.7	110
Rotterdam	Netherlands	58	319	741	1,094	0.8	7
St. Louis	United States of America	6	614	1,407	2,081	0.8	13
Rhein-Neckar	Germany	0	0.1	1,077	1,609	0.8	11
Aachen	Germany	24	135	710	1,064	0.8	7
Fuyu	China			682	1,025	0.8	7
Nuremberg	Germany	25	261	790	1,193	0.8	8
New Orleans	United States of America	8	287	664	1,009	0.8	7
Karlsruhe	Germany	8	97	632	980	0.9	7
Riga	Latvia	29	294	490	761	0.9	5
Yuzhou	China			751	1,173	0.9	8

Milwaukee	United States of America		285	836	1,311	0.9	9
Oslo	Norway			492	774	0.9	6
Dublin	Ireland	165	382	626	989	0.9	7
Liupanshui	China			1,275	2,023	0.9	15
Boston	United States of America	25	1,075	2,551	4,049	0.9	30
Huzhou	China	0	0.1	678	1,077	0.9	8
Rhein-Main	Germany	42	289	2,295	3,688	1.0	28
Rhein-Ruhr Middle	Germany	20	214	2,001	3,238	1.0	25
Xinyi (Jiangsu)	China			600	973	1.0	7
Yichun (Heilongjiang)	China			554	904	1.0	7
Philadelphia	United States of America	69	1,418	3,128	5,160	1.0	41
Huaian (also Ching-chiang, Hwaiyin, Huaiyin, Qingjiang, Hwaiin)	China	70	0.1	740	1,232	1.0	10
Chicago	United States of America	4	1,717	4,999	8,333	1.0	67
Nizhni Novgorod (also Gorki, Gorky)	Russian Federation	23	90	796	1,331	1.0	11
Providence	United States of America	8	176	703	1,178	1.0	9
Cincinnati	United States of America	1	326	881	1,508	1.1	13
Rhein-Ruhr South	Germany	41	437	1,770	3,055	1.1	26
Zhangjiangang	China			509	886	1.1	8
San Francisco-Oakland	United States of America	0	439	1,855	3,236	1.1	28
Rome	Italy	153	438	1,566	2,743	1.1	24
Donetsk	Ukraine		28	585	1,026	1.1	9
Jiaxing	China			448	791	1.1	7
Samara (also Kuybyshev)	Russian Federation		90	658	1,173	1.2	10
Athens	Greece	12	129	1,783	3,179	1.2	28
Baltimore	United States of America	27	508	1,168	2,083	1.2	18
Paris	France	548	3,330	5,424	9,693	1.2	85
Saint Petersburg	Russian Federation	220	1,439	2,903	5,214	1.2	46
Kyoto	Japan	377	353	1,002	1,806	1.2	16
Yueyang (Yuehchou, Yuejou, Pa-chiu)	China	0	0.1	673	1,213	1.2	11
Stuttgart	Germany	20	177	1,483	2,677	1.2	24
Bucharest	Romania	34	276	1,111	2,009	1.2	18
Taian	China			829	1,503	1.2	13
Katowice	Poland	3	32	1,689	3,069	1.2	28
Louisville	United States of America	0	205	476	866	1.2	8
Munich	Germany	48	499	1,258	2,295	1.2	21
Zibo (also Boshan, Tzupo, Poshan, Tzepo, Tzucheng)	China	0	0.1	1,453	2,675	1.2	24
Saratov	Russian Federation	27	137	473	878	1.2	8
Suining	China			763	1,428	1.3	13
Leshan	China			604	1,137	1.3	11
Moscow	Russian Federation	238	1,120	5,356	10,103	1.3	95
Datong	China		0.1	618	1,165	1.3	11
Chelyabinsk	Russian Federation	2	20	573	1,088	1.3	10
Zigong	China	0	0.1	564	1,072	1.3	10
Havana	Cuba	94	236	1,147	2,187	1.3	21
Tbilisi	Georgia	15	160	574	1,100	1.3	11
Zurich	Switzerland	10	151	494	955	1.3	9
Kansas City	United States of America		164	703	1,365	1.3	13
Odessa	Ukraine	7	449	532	1,037	1.3	10
Kharkov	Ukraine	10	174	758	1,484	1.4	15
Wuxi (also Wu-hsi)	China	0	200	572	1,127	1.4	11

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