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**PROJECTIONS OF URBAN DEVELOPMENT**

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## ***Preface***

'Projections of Urban Development' opens a wide field in terms of content as well as geographical coverage. In this working paper, Charles Westin and Niklas Westin offer an overview of world population development, the main trends in global urbanisation and the effects of fast-growing mega-cities that lack adequate environmental infrastructure and political stability. Applied here is a scientific analysis of urban development processes and urban social problems that is based mainly on UN and World Bank statistics and specific trend projections. As Westin and Westin clearly demonstrate, the world population is expected to grow until the end of prognosis horizons (which, according to this report, is essentially 2050). The bulk of this population growth will occur in Africa and South Asia, while the populations of Latin America and East Asia will continue to increase though at a relatively slower pace. Meanwhile, developed and industrialised countries' populations will stagnate or increase only marginally, mainly due to immigration. Demographic development is uneven, this report shows, but there seems to be long-term convergence, with Africa as a possible exception.

What's more, population increases will mostly be in terms of urban – rather than rural – growth. The quicker the national population growth, the more rapidly (the largest) urban agglomerations will grow. Africa may once again be an exception because both its rural population and its urban agglomerations are expected to increase. However, Westin and Westin manage to pinpoint where, on a global scale, urban growth could be exceptionally high and which problems would be specifically related to such expansion. In many cities, this means the rise of slums, squatters and favelas, which, in turn, are related to worldwide environmental risks, global warming and flooding, crime, corruption, and health and urban terrorism, especially in cities where civil society has broken down. As Westin and Westin conclude the:

really serious problem facing the world is the slum-growth in rapidly growing cities and mega-cities in the least developed countries, countries where population growth is the highest and where the economies are the weakest.

This report is well written, informative and no doubt important. It should raise awareness of one of the most important global issues: uneven population growth and the uncontrolled growth of large urban agglomerations.

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Vienna, May 2009



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## **1. Introduction**

### **1.1 Predicting the future**

In this report some tentative ideas will be outlined about making projections of urban development in a long-range perspective. Our aim is to say something about the principal trends and problems that the international community is facing with the rapid development of megacities and gigantic conurbations in developing countries in Africa, Asia and Latin America.

Predictions of future events may be done out of scientific curiosity, but probably more often they are done for reasons of rational planning and political decision-making. Forecasting future events for other than scientific reasons are thus usually carried out in relation to specific interests and to realise particular values. Predictions are however also a basic element of the empirically based and logically tested methods upon which rational scientific knowledge is advanced. The hallmark of scientific theorising is to explain phenomena of whatever kind they may be – occurrences in the natural (physical) world, processes and events shaping the history and doings of nations and states, actions and interactions between individuals and between groups in the human life world, human behaviour with all that it entails in terms of cognitive and emotional development, and so on. In field after field, domain after domain, scientific explanation is replacing superstition and religious dogma as the source of knowledge about the world we live in, and upon which rational planning and decision-making must be founded.

Predicting a future event on the basis of some scientific theory is putting this theory to the test. Should the event occur as predicted this is indeed strong support (if not full proof) for the correctness of the theory. On the other hand, if the predicted event should fail to occur this is generally an indication that some parts of the theoretical construction need to be reworked. From the scientific point of view, it is essential that empirical predictions are put to the test by different researchers independently of one another. A sound theory should generally speaking not only be able to explain events in the past, which many theories are quite good at even in the social sciences. It should also correctly predict future events and developments within its domain of explanation, which the social sciences (possibly with the exception of economics) are not so good at. Natural science theories have developed models in field after field with varying explanatory range depending on the complexity of the factors that determine the course of events – from astronomy's prediction of solar eclipses tens of thousands of years in the future to meteorology's

forecasts of local weather a week in advance. The social sciences often provide reasonable explanations of past events but, as mentioned, are less successful in predicting the future.

Long-term forecasts of complex developments with a large number of variables involved represent a challenge to the social sciences. A simple form of prediction is to look in the rear mirror, for the sake of simplicity let's say twenty years back in time. We then want to identify significant tendencies and on the basis of this information prognosticate by drawing out the trends. In general terms we have a pretty good idea about the conditions of domestic mobility and urban development for this current period. If nothing out of the ordinary will occur that would affect urban growth rates, predictions for the coming few years drawing out the identified trends will be reasonably accurate. We may even present fairly good predictions of developments for the coming five years. Understandably it is more demanding to forecast the situation in a twenty-five to thirty years' perspective.

## **1.2 Cities and megacities now and then**

Large cities existed as far back as in antiquity. Two well-known examples are Babylon and Thebes. At the height of its power in the first centuries A.D. Rome is said to have had more than one million inhabitants. Similarly cities in China and India could have very large populations. Tenochtitlán, the Aztec capital, was said to have had some 250 000 inhabitants when Hernan Cortéz arrived in 1521. The common denominator of these historically early conurbations was that they served as centres of large empires. Power was concentrated to a deified emperor, a court and a small circle of religious functionaries. These megacities of antiquity were centres of political and religious power. As such they were exceptions to the general size and functions of other towns and cities, which mainly served as places of trade and commerce. In a world in which 99 per cent of the population lived off the land, most towns and urban settlements were quite small by modern standards.

Modern urbanisation as we know it may be understood as a development progressing in leaps and bounds. It was a gradual process that initially was closely linked to the industrial revolution. Since the industrial revolution started in England, urbanisation got on its way early on in England. In the nineteenth century London became the largest city of the world, growing from 1.2 million in 1800 to 6.5 million in 1900. In contrast to the situation in pre-industrial times a multitude of quite large cities grew, often at sites that were conveniently located for modern

forms of mass transportation of goods and people. Birmingham, Coventry, Leeds, Liverpool, Manchester, Sheffield and many others had been small, rather insignificant towns in pre-industrial times but were conveniently located for the requirements of the manufacturing industry and therefore grew rapidly with industry's increasing demand of manpower. Some towns that had played a significant role in mediaeval times as local centres of trade and commerce lost in importance and were degraded to 'rotten boroughs'. Industrialisation soon reached Belgium, France, Germany and the United States, and somewhat later Denmark, northern Italy, Netherlands, Sweden and Switzerland. In Sweden, for example, a number of new industrial towns were founded at railway junctions, in places where there was no previous history of urban settlement. Several mediaeval small towns not on the main railway lines lost population. The mediaeval port of Lödöse even ceased to exist. Industrialisation required a concentration of manpower at the place where production was located. Since the principal source of energy in the nineteenth century production was coal, industries grew up in the vicinity of coal mines – in the English Midlands, in the Rheine-Ruhr region of Germany, in Wallonia in Belgium, in the Appalachian region of the United States.

Industrialisation may have triggered urban growth in the nineteenth century. However, as cities grew they developed a socio-economic logic of their own which promoted further growth of population around a diversified economy of services and subcontractors. Urbanisation should not be understood as only or simply a consequence of industrialisation and modernity. It has a complex relationship to modernity. One might hypothesise that as the economy of the developed world is gradually moving away from industrial manufacturing the growth of cities will be determined by factors important to the current knowledge-based and globalised economy – universities, laboratories, centres of decision-making, international airports and so on. It is conceivable that mega-cities in the developed world have reached a size where the costs of housing and the time spent on commuting between home and work-place are so large that people who are comfortably off will choose other alternatives for residence. This leads to questions of whether we may speak of an optimal size of a city. It should be sufficiently large to provide all necessary services in terms of health care, education, housing and jobs, but yet avoid the problems of congestion of transportation systems, pollution and loss of quality time for work or relaxation that are generated in major conurbations. The megacity is quite dependent on a functioning infrastructure, and is thus also very vulnerable when calamities out of the ordinary occur – accidents in transportation systems, loss of electric power, terrorist attacks and so on. Tokyo, the largest conurbation in the world, has a surprisingly well-functioning infrastructure for

transportation and distribution. As mentioned before, preindustrial societies across the world did produce some exceptionally large urban metropolises. Imperial Rome devised an extensive infrastructure to cater for transportation, water distribution and sewage, considerably more advanced than the situation is in shanty towns and slum areas in many megacities of the developing world today. Industrialisation and modernity triggered the growth of cities in the developed world in the nineteenth and twentieth centuries. It is true that the rapid growth of London and other nineteenth century industrial megacities was accompanied by widespread poverty, slum dwellings, epidemics, high death rates, social disruption, crime and alienation. From a social point of view living conditions in nineteenth century London slums, as described by Charles Dickens, were perhaps not altogether so different from living conditions in the shanty towns surrounding present-day Mumbai.

We would nevertheless contend that the megacities of the developed world of today differ in several principal respects from some of the swiftest growing megacities in the developing world. These differences boil down to some basic issues: Land ownership, tenure, authority control, and a functioning infrastructure to cater for the most essential human needs (water, sewage, housing in permanent structures, living space, transport, health care, education, jobs, social security, law enforcement, voice and so on). These basic essentials, taken for granted by residents in the major cities of the developed world, may be lacking, partially and in certain cases almost totally in the slums of megacities in the developing world. The most important difference is however that the nineteenth century European growing cities were based around an economy of industrial production. This condition of production did have brutal consequences for the poorest of the poor, and it cemented a class structure that dominated social conditions (segregation in housing, education, and opportunity structures) to this day. It did however at the same time entail a seed of change for the better. While this holds true for developments in certain countries of the world that are gradually improving their national economies (China, parts of India, Brazil, Mexico, Argentina, Southeast Asia), this does not seem to be the case in much of sub-Saharan Africa or in much of South Asia (including parts of India). We see the enormous growth of certain cities where some corresponding development of the economy is lacking.

### **1.3 Urbanisation statistics**

In this report we are concerned with size and conditions of *urban agglomerations*, not the size and situation of a given city's *administrative and political limits*. This means that the greater New York

metropolitan area by definition includes among others Newark and Jersey City in the state of New Jersey and the south-western parts of the state of Connecticut. Similarly the greater Stockholm metropolitan area includes besides Stockholm itself also surrounding municipalities in the county of Stockholm. Like New York and Stockholm most major urban agglomerations in the world have developed around a core city. As the population of this city grows the contiguous urban area will eventually stretch beyond the administrative limits of the core city. Suburban areas in neighbouring municipalities may attract middle-class well-to-do families, as often is the case in the United States where inner city housing in some neighbourhoods may be in a state of material and social decay (for example South Bronx in New York City). Many middle-class families choose to settle in municipalities within commuting distance of the centre. In numerous cities in the developing world we see a different situation. Squatter communities become established outside the core city's administrative boundaries. Shanty towns, *bidonvilles*, *favelas*, constructed out of available materials – leftover pilings, spare bricks, plastic sheeting, cardboard covering, corrugated steel and mud – develop outside the city limits for reasons that have to do with unclear ownership of land which in many cases is deemed unsuitable for permanent dwellings, little or no control by the authorities and little or no policing.

Some major conurbations<sup>1</sup> in densely populated parts of Europe have not developed out of one core city but consist of several neighbouring cities that have grown into each other. The most obvious example in Europe is the Rheine-Ruhr agglomeration which consists of among others the cities of Bochum, Dortmund, Duisburg, Düsseldorf, Essen, Gelsenkirchen, Hagen, Krefeld, Mönchengladbach, Leverkusen, Solingen and Wuppertal. Amsterdam–Haarlem and Leiden–Haag–Rotterdam are examples of such conurbations in central Netherlands. In the British Midlands conurbations including Birmingham–Coventry–Wolverhampton and Liverpool–Manchester–Oldham have developed.

Theoretically the statistics of a given city in the developed world should not entail problems of defining how many people are living in the city. Everyone residing on a permanent basis within the administrative limits of the city must count. One has to report to the local authorities when taking up residence or when permanently moving away from the city. The statistics on the formally registered population of a city is not a problem in these countries. This, however, is not

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<sup>1</sup> In this text we use the terms *urban agglomeration* and *conurbation* synonymously. Conurbation is possibly the more technical term. Both terms refer to a widespread, continuous urban area of buildings, streets, railways, parks etc., uninterrupted by rural activities and establishments (at least in principle), and when it comes to large concentrations of population, most often encompassing several different and independent municipal units.

the full picture. In countries of immigration in Europe as well as in North America there are significant numbers of undocumented, irregular migrants. Many, if not most, find a living in the black economy of major cities. These persons will not be registered in the census until a general amnesty for irregular migrants is enforced. Major cities in receiving countries, cities such as New York, Los Angeles, Madrid, Barcelona, Naples, Milan, London, Paris, Hamburg and Berlin will have larger populations than the official figures state. It is considerably more difficult to assess the number of inhabitants in megacities of the developing countries. Even though statistics departments responsible for collecting census data exist, these may be understaffed in relation to the task. There is a large influx of squatters, mobility is high, many dwellers lack permanent housing and a personal address. Corruption is a factor that may affect the collection of statistics. Numbers for the growing megacities in the developing countries have to be based on estimates and qualified guesswork. It is in the nature of squatter communities that inhabitants are not officially registered. Megacities attracting some five thousand rural migrants each month will face problems of keeping track of all the new residents settling in the shanty towns.

Another problem – informational rather than statistical – is where to draw the line. How many surrounding municipalities, towns and cities should be included in the conurbation? Sources may differ on this point, not because the underlying statistics are erroneous but because of differences in how the extension of the conurbation in question is defined. For example, the city conurbation of Seoul, South Korea, is given as having 9.7 million inhabitants for 2005 in a list of urban agglomerations provided by MongaBay.com (an environmental site). Other sources give the following figures for Seoul: 12.2 million in 2007 (WorldAtlas.com), 19.5 million in 2007 (Demographia.com) and 23.4 million (citypopulation.de). The information given by these sites is based on national census data, United Nations population agglomerations estimates, projected growth rates from most recent available censuses, and various combinations of national census data and authority defined agglomerations. The case of Seoul is exceptional. Obviously the differing estimates depend on just how extensively the greater Seoul metropolitan area is defined. In most cases the differences in information about agglomeration size are not as striking as in the case of Seoul. The principal rule of defining urban agglomerations employed by the United Nations in its estimates is that the urban landscape in question is a continuous built-up area. There may be green spaces here and there – natural parks and reservations – but these are for human recreation. These spaces are not intended for farming, animal husbandry, forestry or other rural economic activities. A second principle that may apply pertains to how far from the urban centre people who work in the centre are willing to commute to work on a daily basis, and hence

how large a percentage of the local population in a peripheral municipality work elsewhere than locally. Information about traffic flows and how systems of transport are organised provide additional grounds for defining urban extension. A problem is that whatever general rules one decides on to define an urban agglomeration, they will need to be adapted to the local conditions. These vary considerably in different parts of the world. Basically the information assessed by the United Nations is based on how individual states define their urban agglomerations.

**1.4 A typology of large conurbations**

Based on the MongaBay list of world urban agglomerations from 2005, the following table may be constructed (table 1). Information given by Demographia.com and other available sources on the Internet are basically much the same. For our purposes here the MongaBay list will do for an overview as we are not giving detailed information about individual cities. MongaBay reproduces the estimates given by the United Nations and does not provide any definition of its own.<sup>2</sup> We identify three categories of urban agglomerations: Those with populations of more than six million inhabitants (megacities), those with populations of between two and six million (very large cities), and those with populations of between one and two million (large cities). The following geographical/economic areas are defined: Asia excluding Hong Kong, Israel, Japan, Singapore, South Korea and Taiwan (the latter are included in the ‘OECD’ category); Africa; Latin America including the Caribbean; CIS (Commonwealth of Independent States – all former Soviet republics except Estonia, Latvia and Lithuania); and the ‘OECD’ area (Europe except CIS states, but including USA, Canada, Australia, New Zealand, Israel, Japan and the East Asian ‘tigers’ (or rather ‘tiger economies’), that is Hong Kong, Singapore, South Korea and Taiwan.

	More than 6 million	2 – 6 million	1 – 2 million	Total
<b>ASIA</b>	15	46	119	180
<b>AFRICA</b>	2	18	16	36
<b>LATIN AMERICA</b>	6	19	28	53
<b>CIS</b>	1	3	17	21
<b>‘OECD’</b>	10	48	52	110
<b>Total</b>	34	134	232	400

Table 1: The four hundred largest conurbations. Source: MongaBay 2005/United Nations.

<sup>2</sup> The United Nations data, and consequently the MongaBay list, represents a somewhat more conservative estimate than estimates given by WorldAtlas.com and Demographia.com.

	<b>More than 6 million</b>	<b>2 – 6 million</b>	<b>1 – 2 million</b>	<b>Total</b>
<b>ASIA</b>	15	46	119	180
<b>China</b>	3	19	69	91
<b>India</b>	5	8	23	36
<b>Other</b>	7	19	27	53
<b>‘OECD’</b>	10	48	52	110
<b>USA</b>	3	17	18	38
<b>Japan</b>	2	2	2	6
<b>‘Europe’</b>	3	18	22	43
<b>Other</b>	2	11	10	23

*Table 2:* The major conurbations in Asia (excluding Israel, Japan and the East Asian tiger economies) and the ‘OECD’ area. Source: MongaBay 2005/United Nations.

Being the largest and most populous continent Asia accounts for close to half of the world’s largest conurbations. Africa, Latin America and the CIS have jointly an equal number of major conurbations as the general ‘OECD’ area. Large conurbations have existed longer in the ‘OECD’-states as industrialisation got underway much earlier in most of these countries. Large urban metropolises developed earlier in Latin America than in Africa, which is seen in a larger number of megacities and large cities. In certain respects the development in Africa is shadowing that of Latin America and indications are that urban growth will accelerate in Africa. The CIS represents an in-between situation – the European parts are not dissimilar to urban developments in western parts of Europe, while the Central Asian republics have much in common with some parts of western Asia. Let us have a closer look at Asia and the ‘OECD’ area as these parts of the world are where we find the largest number of major conurbations (table 2).

From this table we see that China alone accounts for more than half of the major conurbations in Asia (defined here as not including Israel, Japan or the East Asian tigers). India, with a population size quite rapidly approaching that of China, on the other hand accounts for considerably less than a quarter of the major conurbations. In part this difference may be attributable to differing cultures where urban settlements may have had a greater significance in Chinese history than in Indian history. It is furthermore quite likely that China’s rapidly developing economy has triggered an exodus of rural dwellers to small towns, cities and eventually to the great megacities of Shanghai and Beijing. If this hypothesis holds true it is then a quite recent development. The table shows that other Asian states account for seven megacities and a large number of other very

large and large conurbations. These megacities are Jakarta, Dhaka, Karachi, Manila, Istanbul (geographically on the European-Asian border), Tehran and Bangkok, all situated in states with large and rapidly growing populations.

The largest megacity of the world without any comparison is the Tokyo conurbation covering a large part of central Honshu, the largest Japanese island. Japan also has the Osaka–Kobe conurbation, which is one of the world’s really large conurbations. However, given the relatively small territorial size of Japan, its large population, high population density and advanced economy it is in fact surprising that there are not more cities in the ranges of ‘large’ and ‘very large’. Compared to the United States, which has about twice Japan’s population, Japan is not at all as urbanized in terms of cities exceeding one million inhabitants. Europe (defined here as not including CIS states) has at least double the population of the United States but roughly about the same number of cities exceeding one million inhabitants. Urbanisation in Japan and Europe is much more concentrated to cities and towns with populations less than one million inhabitants than the case is in the United States.

The populations of Japan and Europe are not expected to increase very much in the coming thirty to fifty years due to the demographic changes of aging populations and fewer women in fertile ages. In some countries populations are even projected to decline. Population increase will mainly be attributed to immigration. This however is not the case in the United States, whose population is projected to increase both as a result of immigration and of natural growth. This implies that urban growth in Europe and Japan, which is likely to continue, will not primarily be due to general population increase, but will be determined rather by economic and social factors. The United States on the one hand and Japan and Europe on the other thus represent two different types of future urban development.

Based on the information so far, we may set up the following typology for the growth of major conurbations in the next twenty-five to thirty years.

- Slow growth of major cities: Japan, Europe, European parts of CIS
- Continued rather rapid growth of major cities: United States, Latin America, China and Asian parts of CIS
- Very rapid growth of major cities: Africa, India and other south Asian states

Let us now list (table 3) the forty largest conurbations and mega-cities of the world, all with populations exceeding six million. Although the three largest conurbations are situated in the general 'OECD' area, this table illustrates that twenty-eight of the forty largest conurbations are to be found in the developing world, ten of which are situated in Africa and South Asia, areas in which urbanisation is projected to increase very rapidly.

Urban area	Pop.	Urban area	Pop.	Urban area	Pop.	Urban area	Pop.
Tokyo	34.3	Delhi	15.3	Paris	10.4	Guangzhou	7.0
New York	19.7	Moscow	14.0	Lagos	9.3	Kinshasa	7.0
Seoul	19.5	Los Angeles	13.8	Nagoya	9.2	Lima	7.0
Jakarta	18.2	Shanghai	13.6	Karachi	8.7	Taipei	6.5
Mexico City	18.1	Kolkata	13.2	Chicago	8.6	Hong Kong	6.5
Sao Paulo	17.8	Buenos Aires	12.7	London	8.3	Chennai	6.4
Osaka–Kobe	17.3	Beijing	11.3	Bangkok	8.0	Lahore	6.3
Mumbai	17.0	Shenzhen	11.0	Essen etc.	7.4	Ho Chih Minh	6.3
Manila	16.8	Rio de Janeiro	10.9	Tehran	7.3	Dhaka	6.0
Cairo	15.8	Istanbul	10.5	Bogota	7.2	Dongguan	6.0

*Table 3:* The forty largest conurbations of the world. Source: Demographia World Urban Areas, March 2007.

### 1.5 Globalisation

Globalisation is a central dimension of modernity. All human societies are linked together through trade and business, through the movement of international capital, through global information media and through the mobility of people in domestic and international migration. The developing world is a central part of the globalisation processes both at the top level of states being members of the international community, and at the bottom level of individual actors – producers, consumers and migrants sending remittances back home. The poorest of the poor in poor developing countries may themselves not have access to global media, television or internet, but they will nevertheless have access to information about the world at large which will stand out as cognitive alternatives to status quo. This information may be distorted and incorrect in its details. It may have the character of rumours, disseminated in personal conversations between people who are familiar with each other, but there is often some kernel of truth behind rumours. Remittances sent by relatives and family members serve as confirmations that livelihoods can be better elsewhere. Motivations to move to the city, and possibly to North America, Europe or the Gulf States, will build up. International migration accounts only for a

small part of the total mobility in the developing countries. It is like the visible parts of an iceberg of a massive underlying internal mobility.

The driving force behind this mobility is the exodus of 'surplus' rural populations. Due to population growth traditional rural communities in many parts of the developing world no longer are in a position to provide for all members of society. This may be due to an increase in population which is not met by a corresponding increase in arable land for food production. It could also be due to an actual decrease in arable land resulting from overgrazing, desertification, changing climatic conditions with droughts in some countries, floods in others. Domestic mobility is a stepwise process. Local towns provide an alternative to rural poverty – urban poverty. Local labour markets cannot take on the many migrants seeking livelihood. The larger provincial cities with a larger and more diversified labour market will appear to be an option for some. This step is followed by movements of domestic migrants to the capital or some other large city with international connections. International migration may start in the village but people board the airplane at the airport of a major city, often the capital city. Most would-be migrants however don't make it internationally but end up in the shanty towns of the megacity.

### **1.6 Some assumptions**

Much has been written about urbanisation. The internationally recognised Swedish geographer Torsten Hägerstrand published a collection of essays on the future of urbanisation in 1970. In this book he says that it is really quite difficult to predict the situation of urban development thirty years ahead, that is, at the turn of the millennium 2000. The main obstacle is, he says, that it is hard to predict technological developments. It took a generation to develop the telephone from an early prototype to a commercially viable and usable product. It took ten years for television to become accessible to most families in developed countries. What is in store for the future one can only speculate about, Hägerstrand says. Interestingly, however, he refers in his book from 1970 to American developments of linking computers in different places to one another through electronic networks, in other words the early beginnings of the internet.

It is fairly safe to assume that most buildings constructed in the 1960s (and before) will stand where they are and continue to be used, possibly for other purposes than they were originally intended. Urbanisation is concentration of buildings and people in space. Historically narrow passages and alleys sufficed for people to move between buildings when distances within the

concentration were insignificant. As urban areas grew in size city planners had to allow for a secondary factor, physical communication by other means than walking. As urban areas grew in population, an increasing share of available space had to be allocated for communication, railways, roads and with the advent of the automobile, parking space. Hågerstrand's articles are about urbanisation in Sweden in the mid-twentieth century, and not about urbanisation in the twenty-first century in developing countries. His book however illustrates the intricate interplay between technology and economy for urban development.

We can be sure of one thing. Urbanisation will continue and will most likely be more extensive than it has been over the past twenty-five years. This assessment is based on the following propositions:

- Population growth: Urban agglomerations are present in all countries of the world. The larger the country's population, the larger the number of urban agglomerations and the larger the largest conurbation will be. The more rapid the national population growth, the more rapidly will (the largest) urban agglomerations grow.
- Economic development: Urban development is both a function of economic development and at the same time a motor of economic development. Countries whose economy is expanding will also be countries where an overall urbanisation is on the increase. However, the rapid increase of one or of a few megacities in developing countries may rather be the effect of the incapacity of traditional rural economies to meet the demands of population growth.
- Internal or domestic mobility (rural to urban) is a function of age, of personal networks and of community relations.

Projections of domestic flows need to be charted in relation to developments in some highly significant and obvious domains:

- *Demographic development*, its size and structures of population growth or decline, relative changes between countries, regions and continents. Demographic projections for periods of twenty-five to fifty years ahead have proved to be reasonably reliable.
- *Economic development* is more difficult to predict in detail. However, some general tendencies may be identified.

- *Environmental development* is of special importance when it comes to understanding conditions behind certain forms of forced mobility. At the global level it is about desertification, droughts, floods, cyclones, hurricanes, forest fires in the wake of climate change, while at the local level it concerns the pollution of *living conditions*.

Living conditions in urban agglomerations are affected by

- *Environmental conditions*: Pollution of air, water and soil; non-existent waste management; epidemics; inadequate shelter; insecurity of land tenure; social unrest; crime, and overall poverty.
- *Scarce resources*: availability of (improved) water, arable land, living space, jobs.
- *Technological conditions*: Inadequate communications, inadequate infrastructure.
- *Political conditions in the country*: Political instability and undemocratic rule will impact social security. Densely populated impoverished urban environments may serve as breeding grounds for political extremist movements.

The principal focus of the article is on urban development in Africa, Asia and Latin America. It is based on statistics and projections provided first and foremost by various United Nations expert panels and by the World Bank, two organisations committed to collecting and assessing information for purposes of long-term planning, and also with access to top expertise for the task. The fact that we rely on different sources entails that we encounter some differences in for what period the projections are made – from the present to 2020, 2025, 2030 and 2050. We present the information as it is given in the reports published by these organisations. We have not attempted to extrapolate to other target years.

We also draw on information from various Internet sites, a number of articles and books by human geographers, demographers, economists and sociologists. We have also included some books in our bibliography written by social anthropologists who present case studies of living conditions in *favelas*, shanty towns and slums of very large cities such as Rio de Janeiro, Nairobi, Dakar and Mumbai among others.

## 2. World population prospects and levels of development

### 2.1 Population projections

According to estimates made by the United Nations population division, world population is expected to increase from 6.7 billion<sup>3</sup> in 2007 to 9.2 billion in 2050. In its report *World Population Prospects* the population division refers to three categories of development: most developed regions, less developed regions (an intermediate position), and least developed regions. The bulk of this increase will take place in the less and least developed regions. Here population is projected to rise from 5.4 billion to 7.9 billion between 2007 and 2050. The fastest growing populations are to be found among the least developed countries, where the population is projected to increase from 800 million today to more than 1.7 billion during this period. The population for the most developed regions will remain fairly stable at approximately 1.2 billion. As a consequence their share of the world population will drop from 18 per cent at present to 14 per cent while the least developed countries will increase their share from 12 to 19 per cent. Thus the intermediate category, the less developed regions, that accounts for 70 per cent of the world's population today is projected to account for 68 per cent in 2050. These data are summarised in tables 4 and 5. The tables indicate that especially fast growth is expected in Africa where the population more than doubles the coming four decades from 965 million to almost 2 billion inhabitants as opposed to Europe where the population is expected to decline. In 2007 most people in the world lived in a few countries.

Major area	Population in millions 2007	Population in millions 2050 (medium variant)	Percentage distribution 2007	Percentage distribution 2050 (medium variant)
<b>World</b>	6671	9191		
<b>Least developed regions</b>	804	1742	12.1	19.0
<b>Intermediate</b>	4644	6204	69.6	67.5
<b>Most developed regions</b>	1223	1245	18.3	13.5

*Table 4:* Population of the world in 2007 and 2050. Source: United Nations, Department of Economic and Social Affairs, Population Division 2007.

<sup>3</sup> One billion: 1 000 000 000 according to US usage.

Major area	Population in millions 2007	Population in millions 2050 (medium variant)	Percentage distribution 2007	Percentage distribution 2050 (medium variant)
Africa	965	1998	14.5	21.7
Asia	4030	5266	60.4	57.3
Europe	731	664	11.0	7.2
Latin America and Caribbean	572	769	8.6	8.4
North America	339	445	5.1	4.8
Oceania	34	49	0.5	0.5

Table 5: Population of the world in 2007 and 2050 in continents. Source: as in table 4.

Country (or area)	Population (thousands) 2007	Population (thousands 2025)	Population (thousands 2050)
Afghanistan	27 145	46 927	79 423
Bangladesh	158 665	206 024	254 084
Brazil	191 791	228 833	254 085
China	1 328 630	1 445 782	1 408 846
Columbia	46 156	55 563	61 860
Congo, Dem. Rep.	62 636	107 481	186 837
Egypt	75 498	98 513	121 219
Ethiopia	83 099	124 996	183 404
France	61 647	65 769	68 270
Germany	82 599	80 341	74 088
India	1 169 016	1 447 499	1 658 270
Indonesia	231 627	271 227	296 885
Iran	71 208	88 027	100 174
Iraq	28 993	43 293	61 942
Japan	127 967	121 614	102 511
Kenya	37 538	57 176	84 757
Mexico	106 535	124 695	132 278
Myanmar	48 798	55 374	58 709
Nigeria	148 093	210 129	288 696
Pakistan	163 902	224 956	292 205
Philippines	87 960	115 878	140 466
Russian Federation	142 499	128 193	107 832
Sudan	38 560	54 267	73 029
Tanzania	40 454	59 989	85 077
Thailand	63 884	68 803	67 376
Turkey	74 877	89 557	98 946
Uganda	30 884	54 011	92 935
United Kingdom	60 769	65 190	68 717
United States	305 826	354 930	402 415
Viet Nam	87 375	106 357	119 971

Table 6: The 30 most populous countries in 2050. Source: same as for tables 4 and 5.

China and India alone accounted for almost 40 per cent of the world's population. This is not expected to change. Generally it is the very same countries that will account for most of the world's population increase. Table 6 below shows the total population in selected countries in alphabetical order for the years 2007, 2025 and 2050.

Since the early 1970s the speed of population growth in the world has decelerated due to decreasing fertility rates. However, fertility has not been declining at the same pace in all countries. A total of 73 countries, including the entire developed world, are experiencing fertility rates below replacement level. This is the fertility rate needed to maintain the given number of people in a specific country at a given point in time. This level is 2.1 children per woman for countries with low mortality rates. At the global level it is approximately 2.3 children per woman. Some countries, all of which belong to the least developed category, still experience fertility levels above 6 children per woman. These countries are in the early phases of the so called demographic transition, a situation characterised by high birth rates but declining death rates. This divergence is expected to change when birth rates will gradually decrease as demographic transition proceeds to a situation of low birth rates and low death rates. In the period 2045–2050 as many as 148 countries, accounting for 76 per cent of the world population will have fertility rates below replacement level. Nowhere are fertility rates expected to be higher than 4 children per woman.

Another factor influencing population growth is obviously mortality. The past century was characterised by remarkable gains in life expectancy, rising from a global average of 46 years in the early 1950s to 67 years today. This is primarily a consequence of the rapid decline of mortality in developing countries. Beginning with the industrial revolution the developed countries were already far advanced in their demographic transition by the early 20<sup>th</sup> century. Since then the pace of rising life expectancy has been slower as compared to the developing world, hence levelling out differences between the two groups. But vast differences between and within regions still exist in the world today and they are likely to persist throughout the projected period. In Africa life expectancy is projected to be 66 years in 2045–2050 as compared to 53 years in 2005–2010. All other regions are projected to have life expectancies more or less close to 80 years, ranging from Asia's 77 years to North America's 83 years. Seven African countries and Afghanistan are expected to remain below the 60 years life expectancy level in 2045–2050. It needs to be borne in mind, however, that not all countries of the world have experienced continuous improvements of longevity. Some Eastern European countries and southern Africa have seen reductions in their

life expectancy recently. To some extent this is due to economic stagnation. In southern Africa life expectancy has fallen from 61 to 49 years in the past two decades. The most important explanation by far is the prevalence of HIV/AIDS.<sup>4</sup> As for tropical Africa, another explanation is the re-emergence of infectious and parasitic diseases such as malaria and tuberculosis.

The UN projection is contingent on continuous improvements in life expectancy levels and further reductions in fertility, which in turn implies that the proportion of elderly persons will increase. This has been a reality in the developed world for decades and it is a process that is likely to continue. An issue high on the agenda in these countries is how to finance the growing needs for health-care and geriatric care as the proportion of the population of working-age declines. The regions of 'intermediate' development will also face a period of population aging although the proportion of people of working age is expected to decline only slightly. In the least developed countries, on the other hand, the proportion of the population of working age is expected to rise during the projected period. The latter countries face somewhat different challenges. One of these challenges is how to create enough working opportunities as the number of people entering the labour market increases, particularly in the fast growing urban centres. Historically urbanisation in the developed world has been connected with fertility decline and improved health conditions. However, this generalisation hides the large disparity between the urban poor and their more affluent counterparts (Newbold 2007, p.66-67). Newbold draws the conclusion that health advantages connected with urbanisation are likely to diminish.

This present year – 2008 – marks an historical point of significance for mankind. More than half of the world's total population is living in urbanised landscapes for the first time in the entire history of the human race. The projected population will increase from the current 6.7 billion to 9.2 billion in 2050. Not only will almost the entire increase of population take place in the less and least developed regions, it is projected to take place in urban rather than in rural environments. This will entail the growth of small and medium-sized towns and cities in the developing world. Even more importantly, it will also engender the fast growth of large cities, very large cities and mega-cities. What this will imply for living conditions for the inhabitants, problems for the country in question, and potential risks to the international community will be discussed in the following chapter of this report.

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<sup>4</sup> It is important to note that the UN projection is based on the assumption that HIV prevalence will be lower for many of the highly affected countries in the future, mainly because of the expansion of antiretroviral therapy.

## **2.2 Global economic prospects**

Demographic development of populations is interrelated to development of national economies in complex ways. Generally it is assumed that projections of population development, let us say in a twenty-five to thirty years' period, may be reasonably accurate. This is because we can draw out the trends. If we know how many children there are in the age brackets of between 0 and 10 years, we will roughly know the size of the population between 30 and 40 years of age in thirty years' time. Obviously the projection depends on assumptions of mortality for various age brackets, above all for elderly persons, and of fertility rates when it comes to projecting the number of children born in the intermediate period. The assumption that these projections are based on is that change in demographic variables is a slow process. Family formation, reproductive behaviour and practices of birth control are deeply ingrained cultural values that take a long time to alter. Projections for longer periods ahead, let us say forty to fifty years will depend on additional assumptions. This makes long-term projections more unreliable.

The general relationship between demography and economy may be stated in terms of demographic transition. Traditionally in rural societies the situation was one of high birth rates coupled with high death rates. The consequence was low population increase, often just above replacement level. High infant mortality implied that not many children would reach the age when they themselves would procreate. At the other extreme the situation in the most developed countries is one of low birth rates coupled with low death rates. Most children who are born reach the age of procreation and continue to live well their seventies and even eighties. Longevity of the population implies that an accumulation of elderly persons well above the age of retirement challenges welfare systems and retirement systems because there is a proportionally much smaller part of the population involved in work and production.

The situation of demographic transition is one in which decreasing death rates in developing countries, due to improved health care systems, efficient drugs and means of combating killing infectious diseases, is coupled with continued high birth rates because people don't change their behaviours and practices so quickly. Europe experienced its state of demographic transition in the 19<sup>th</sup> century. Its surplus population emigrated above all to the USA, but also to various Latin American countries, Australia, New Zealand and South Africa. Today the developing world is in a state of demographic transition. While China appears to have almost completed this transition, many countries in South Asia and in sub-Saharan Africa are right in the midst of an enormous population increase attributable to decreasing mortality rates.

In order to refine our projection of population developments we need to make some kind of assessment of economic development. While population size and national economy are variables that are partly dependent on each other, there are other factors of significance. One such factor is the distribution of national wealth. The World Bank presented a report on the global economic prospects in 2007. The report introduces different economic growth scenarios covering the years 2006 to 2030.

The World Bank report consists of five chapters. The first chapter presents the baseline 2006, and the developments immediately preceding 2006 but also going back in time to the 1980s. This lays the foundation for trends that are drawn out to 2030 in the following chapter, which we will concentrate on here. The remaining chapters analyse three principal threats to global economic growth. These are unequal income distributions in the international community, growing tensions in the labour market and environmental pressures.

The World Bank builds its projections on a neo-classical model and essential assumptions regarding the forces driving globalisation and economic growth. Besides demographic trends the assumptions pertain to investment behaviour, the impact of technological innovations and governmental policies. The World Bank argues that many developing countries, unlike the most developed countries, will not have to devote significant resources to care for their elderly. The developing countries will have a very large share of their population in the productive and reproductive phases of the life course. This could prove to be a competitive advantage if enough (foreign) capital is invested to erect a stable and yet dynamic labour market. On the other hand, if this situation is not dealt with appropriately a situation of mass unemployment and poverty can have serious consequences for political stability and the willingness of foreign capital to invest in the country.

In the central scenario the global economy is projected to more than double from \$35 trillion<sup>5</sup> in 2006 to \$75 trillion in 2030. The developing countries' output is expected to triple from \$8 trillion in 2005 to more than \$24 trillion in 2030, thus increasing its share of global output from 23 to 33 per cent. The World Bank concludes that this is a significantly smaller increase than seen for the period 1980 – 2005. It projects that the increase for the most developed countries will remain at the same level as recorded for the 1980 – 2005 period, or go down slightly from 2.0 to

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<sup>5</sup> One trillion: 1 000 000 000 000 according to US usage.

1.9. By contrast a significant acceleration of output is expected for the developing countries from 2.4 to 3.1 (World Bank report, 2007, p. 39).

Although a country's total economic output is an important variable to consider, what really matters from a welfare point of view is the distribution within the country, in operational terms how skewed or evenly distributed income per capita actually is, and furthermore the skewness of income distributions between the developed and developing countries. There are considerable differences among the developing countries. Incomes in China are expected to increase from 19 per cent of the average incomes in the most developed countries to 42 per cent in 2030. Average income in Latin America is not thought to converge with levels in high-income countries for the coming twenty-five years. Sub-Saharan Africa is projected to fall further behind as the growth per capita in this region will be below the levels of high-income countries.

The World Bank expects growth in trade to be substantial during the coming two decades, even though the baseline scenario depends on the assumption that there will be no substantial changes in current trade policies. In this central scenario export levels are projected to triple from \$9 trillion in 2005 to \$27 trillion in 2030. For the developing countries exports are expected to increase from \$3 trillion to \$12 trillion between 2005 and 2030.

Even though it is reasonable to anticipate significant changes in the global financial system in the coming decades it is much more difficult to hypothesise about their nature and what conditions they may be a response to. The World Bank believes, however, that it is likely that the developing countries' importance for the financial markets will continue to grow as their share of the global output increases.

The report discusses the question of saving rates in relation to demographic change. Savings are important because savings represent a supply of capital that is available for investments and thus part of the global financial flows. While the most developed countries do have relatively high saving rates, these are expected to decline with aging populations, mainly in terms of high-risk investment. In sub-Saharan Africa on the other hand, with as yet very low saving rates, saving rates are expected to increase as young people move into the work-force. The CIS states<sup>6</sup> are likely to see a drop in the workforce and thus also in savings due to rising elderly dependency. The same development is projected to occur in China and East Asia. Sub-Saharan Africa together

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<sup>6</sup> CIS; the Commonwealth of Independent States includes all states of the former Soviet Union except Estonia, Latvia and Lithuania.

with the Middle East and North Africa have young populations and should thus see increasing labour force participation and savings in the projected period. Latin America and South Asia occupy an intermediate position and may possibly see a decrease in workforce participation towards the end of the projected period.

For the reasons just mentioned the World Bank projects that capital will become scarcer in the global economy. Developing countries could benefit from this situation inasmuch as flows of capital South–South will strengthen the opportunities for low-income countries to improve financial returns. Capital flows between developing countries have risen greatly since the 1990s, and the projected demographic trends will provide a further impetus for capital flows in the coming twenty-five year period that are not determined by the interests of investors in the developed world. The World Bank hypothesises that policy reform and a strengthening of the institutional environments in the developing countries should enable them to access savings required for growth in the event of a decline in financing from the most developed countries.

The World Bank sketches two more scenarios. One is a slow-growth scenario in which the growth of per capita incomes for the developing countries in the coming 25 years is put at 1.9 per cent instead of 3.1 per cent as in the principal scenario outlined above. The World Bank argues that this scenario is unlikely. It would have to be triggered by a series of economic shocks in several regions more or less simultaneously. The third scenario is one of fast-growth. Economic growth in the developing countries would exceed the 3.1 per cent projected above. Convergence between developing and developed countries would be much faster than expected in the central scenario above. Such a development is however unexpected, and if it were to occur, it would mean that the World Bank has underestimated the growth potential for the coming decades. As we mentioned previously, Torsten Hägerstrand pointed to the possible importance of computer networks back in 1970, without having any real foundation for assessing the enormous impact computer networks building up the Internet has had on virtually every aspect of the economy, information dissemination, political life and culture. The World Bank points out that we are still only in the very beginning of the information age. Technological innovations are to be expected. A speeding up of information flows is most likely. We are still only seeing the very early stages of a biotechnological revolution, which could have currently quite inconceivable consequences for the economic landscape. For some individual countries this projection may hold true, but the World Bank does not think that this scenario is likely to occur for the developing world as a whole. One principal reason is the inertia of economic and political systems involved towards

radical change, and the inertia represented in the demographic set-up, which we can project by and large for the coming twenty-five years.

Returning to the central scenario one may list various threats to continued economic growth. The most imminent threat is the inability to institute income equality. The benefits associated with economic growth will not be felt by all countries and all people. Sub-Saharan Africa, the most vulnerable region, may fall even further behind with increasing inequality as a result. If the international community and global capital fail to bring about a change in the unequal distribution of resources between the developed and the developing countries, or at the very least to set a process of change in motion, and if the particular state in question somewhere in the developing world fails to do something radical about the inequality of income distribution at home, people (young people mainly) with initiative and resources will do what they can to improve the conditions for themselves and for their families. Geographical mobility is one of the options they have. This could mean migrating to some other country, a rich country in the developed world, an option that only a limited number will have. In most cases the option is to move to the closest city in the hope of being able to make a living there.

### 2.3 Development projections

Migration, international and domestic, is driven by economic motives. In a world where no obstacles exist, it is conceivable that most seriously intended movement projects will be realized. Obstacles are rather to be found at the individual level in insufficient information

<b>Level of development</b>	<b>2005</b> Human development report	<b>2030</b> Projection
<b>Least developed</b>  WDI < 0.700	All African states (except Mahgreb and Libya).  South Asia (including India). Afghanistan, North Korea, Tajikistan and Uzbekistan.  Haiti, Peru and Bolivia  No European states.	Almost all sub-Saharan countries (except Botswana, Lesotho, Namibia, Swaziland and South Africa).  South Asia (except India). Afghanistan, North Korea.  Haiti  No European states.
<b>Intermediate level</b>	Mahgreb and Libya.	Botswana, Lesotho, Namibia, Swaziland and South Africa. Maghreb, Egypt and Libya.

$0.700 \leq \text{WDI} < 0.850$	South East Asia, West Asia (except Israel), China.  Latin America except Haiti, Peru and Bolivia  The CIS including Russia, The Balkan states (except Greece), Latvia.	India, South East Asia (except Malaysia and Thailand), West Asia (except Israel), Central Asia.  Latin America except Haiti, Chile, Argentina and Uruguay  The CIS (except Ukraine). The Balkan states (except Bulgaria, Rumania, Greece and Croatia).
<b>Most developed</b>  $0.850 \leq \text{WDI}$	No African states.  The East Asian Tigers, Israel, Japan.  No Latin American states  The European OECD-states. EU (except Latvia, Bulgaria, Rumania)	No African states.  The East Asian Tigers, Japan, China, Malaysia and Thailand. Israel.  Chile, Argentina and Uruguay  The European OECD-states. EU with Croatia and Ukraine.

Table 7: Classification according to level of development based on World Development Index (WDI) for 2005. Source: Human Development Report 2005.  
 $0 \leq \text{WDI} \leq 1.000$ .

and inadequate means to finance the journey. In the real world, however, far from all mobility projects are realized. The tendencies described in this report thus refer to the *mobility*

Region	Infant mortality: % of live births	Life expectancy M / F: years	Total fertility rate 2005: number of children	Total population 2005: millions	Population growth in % 2005	Projected population 2050: millions
Central Africa	113	42.9 / 45.0	6.18	109.6	2.7	303.3
West Africa	111	46.4 / 47.3	5.59	263.6	2.3	587.0
East Africa	89	46.1 / 47.0	5.41	287.7	2.4	678.7
Southern Africa	42	44.6 / 46.0	2.81	54.1	0.4	56.0
North Africa	41	65.8 / 69.7	3.04	190.9	1.7	311.9
South Asia	65	62.4 / 65.4	3.04	1 610.9	1.6	2 495.0
West Asia	45	66.5 / 70.7	3.23	214.3	2.0	383.2
South East Asia	37	65.9 / 70.4	2.42	555.8	1.3	752.3
East Asia	30	71.1 / 75.4	1.68	1 524.4	0.6	1 586.7
Caribbean	32	65.8/70.4	2.42	39.1	0.8	46.4
Central America	22	71.6/76.7	2.55	147.0	1.5	209.6
South America	24	68.5/75.6	2.44	375.2	1.4	526.9

<b>North America</b>	7	75.2/80.5	1.98	330.6	0.9	438.0
<b>East Europe</b>	14	62.5 / 73.7	1.29	297.3	-0.5	223.5
<b>South Europe</b>	7	75.5 / 81.9	1.37	149.4	0.3	138.7
<b>North Europe</b>	5	75.6 / 80.8	1.66	95.8	0.3	105.6
<b>West Europe</b>	4	76.1 / 82.3	1.56	185.9	0.2	185.5

*Table 8:* Demographic profile of regions in Africa, Asia, Latin America and Europe organized according to infant mortality as indicator. Fertility and population growth correlate positively and life expectancy correlates negatively with infant mortality. Source: UNFPA – State of the World Population 2005.

*potential.* By this we mean all the realised movement projects as well as all the unrealized ones, which would have been carried through were there no obstacles. We have made use of the World Development Index (WDI) to classify countries into three principal categories (columns 1 and 2). The forecast for 2030 in column 3 is based on trends and tendencies described by the World Bank's Global Economic Prospects (2007). We have also consulted works by Douglas Massey (1998), Manuel Castells (1996) and Stephen Castles & Mark Miller (2003). World Economic Outlook (2005) and the IOM report for 2005 have also been used.

A country's level of economic development and its demographic profile are interrelated in a somewhat complex way. Population size is one important variable. A small country population-wise can never achieve a position among the major economies of the world, regardless of how well developed its economic and industrial infrastructure is. A large population is a necessary but not sufficient condition for a country to be regarded as one of the major world economies. Size of the domestic market is an important variable. The level of economic development is obviously also a decisive factor. The age distribution of the population is a third important variable.

Countries where birth rates and death rates are high have – relatively speaking – fewer people of working age and even fewer really old people. Such countries have a young population profile. As much as half the population can be younger than fifteen years of age and it is primarily in countries with this demographic profile that child labour may be found. In such a situation, the country's population increases rapidly. The country's economic progress is eaten up by the growing population, the implication being that economic growth is insignificant or even non-existent. This is a situation typical of the least developed countries.

Countries with low birth rates and low death rates will have a population profile characterised by small nuclear families, a decreasing share of people of working age and an increasing share of

elderly people. This characterizes the situation in the most developed countries. Data from the UNFPA report for 2005, which projects population development to 2050, are summarized in table 8.

## 2.4 Levels of development 2030

***The least developed countries:*** Most sub-Saharan African countries remain among the least developed and poorest countries of the world. Despite AIDS the population is expected to grow. On the strength of its rich natural resources and industrial infrastructure South Africa is expected to successfully manage its policy of distributing resources. This will lift the country to the intermediate level. Population growth will be small, largely due to the AIDS epidemic, which has hit the country hard. The small neighbouring states of Botswana, Lesotho, Namibia and Swaziland are in a position to capitalise on South Africa's economic development.

Much of South Asia, which includes Bangladesh, India, Burma, Nepal, Pakistan and Sri Lanka, will also remain an underdeveloped region with a large population growth in one of the world's most densely populated regions. However, enormous regional differences will manifest themselves in these heavily populated states, above all in India. India will undergo a rapid economic development, but regional and social differences will continue to be monumental. Afghanistan and North Korea remain among the poorest of the poor Asian states.

Haiti in the Caribbean will remain the poorest country of the American continent. Peru and Bolivia are expected to do somewhat better.

***The intermediate group:*** Besides South Africa and its small satellites all of North Africa is projected to reach a level of development meeting the intermediate category. Whereas population growth will be relatively moderate in southern Africa the population is expected to grow rapidly in North Africa according to the UN population forecasts.

A strong economic development is projected for South East Asia but only Malaysia and Thailand are expected to reach the highest level of development, partly on the strength of their relative political stability.<sup>7</sup> Population is expected to grow in this region but at a moderate rate. The

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<sup>7</sup> Thailand has experienced a number of military take-overs of government, the most recent coup in September 2006. Political stability is nevertheless regarded as reasonably high, and democracy has usually been reinstalled

current strong economic development in China is expected to continue and even accelerate. With its growing middle-class (today more than 300 million) and its huge internal market China has become a major priority for foreign investors eager not to miss out on a share of the cake. Regional differences in the distribution of welfare will however continue to be significant.

Despite large profits from the West Asian oil fields economic development in the region is projected to stagnate as the demands for oil are expected to gradually decrease.<sup>8</sup>

In terms of economy Croatia is projected to rise to the most developed level, but other Balkan states (with the exception of the Balkan EU-members) will remain at the intermediate level. This is also expected of the Commonwealth of Independent States (CIS), possibly with the exception of Ukraine which could enjoy a strong economic development. Russia has immense natural resources and a large population. Its political stability may however be questioned, which could hamper economic development.

Most Latin American countries will remain in the intermediate category. The southern industrialised parts of Brazil are expected to reach the highest levels of development, but the north-eastern regions will lag behind.

***The most developed states:*** No African country will qualify to this category. China, Malaysia and Thailand will join the community of highly developed Asian countries, which already include Hong Kong (now part of China), Japan, Singapore, South Korea and Taiwan. All EU-states and EU-associated states will belong to this group. The southernmost states of Latin America – Argentina, Chile and Uruguay are expected to qualify among the most developed states. Some parts of Brazil and Mexico will be highly developed but other parts will lag behind in development. It is quite possible that Ukraine will also reach this level of development. The population of Europe will stagnate at a level of around 740 million and then gradually decrease. The entire European Union (EU-27) will have an aged population.

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within a few years. Thailand is a constitutional monarchy with the royal family symbolising the country's stability.

<sup>8</sup> This projection is of course speculative, and whether it will take place within the coming twenty-five years or thereafter is an open question. However, an increasing general awareness of the imminent threat of a man-made climate change (through global warming and global dimming) is likely to stimulate research and development into ecologically acceptable energy sources. In turn this should for example lead to the gradual replacement of the combustion engine driven by gasoline with some less environmentally harmful alternative for the car park of the world. Within a not too distant future the aim must be to reduce the use of fossil fuels for heating and transportation.

## 2.5 Projections of urbanisation

We mentioned in a previous section that half of the world population is now urban. There are still significant regional differences. Considerably more than half of the population in the most developed countries is urban. Australia, a large country in size but small in population, is one of the most urbanised countries of the world. Most of its population is concentrated to the state capitals of Sydney, Melbourne, Brisbane, Perth, Adelaide and Hobart. Of these cities only Hobart has a population of less than one million. Besides these capital cities only a very limited number of cities have populations exceeding 100 000. The United States and Canada are also highly urbanised countries.

The less developed countries of the world are expected to reach a point where half the population is urban by 2015. As from then the world's rural population will count 3.5 billion and subsequently start to decline. Today some 90 per cent of the world rural population lives in the less developed regions. It is however in the urban areas of the developing world most of

Develop- ment group	Urban population; billion 2007	Urban population; billion 2025	Urban population; billion 2050	Percentage urban 2007	Percentage urban 2025	Percentage urban 2050
<b>World</b>	3.29	4.58	6.40	49.4	57.2	69.6
<b>Most developed regions</b>	0.91	0.99	1.07	74.4	79.0	86.0
<b>Less and least developed regions</b>	2.38	3.59	5.33	43.8	53.2	67.0

*Table 9:* Urban population and percentage urban by developing group. Source: United Nations. World Urbanisation Prospects 2007.

the world population growth will end up. While the world population is expected to increase with 1.3 billion between the years 2007 and 2025, the urban population of the developing world will account for almost the entire population growth – 1.2 billion.

As we can see from table 9 the urban population in the less and least developed regions is expected to increase with 50 per cent from 2.4 billion in 2007 to 3.6 billion in 2025. Or seen through another lens, the urban population will almost double by 2050 reaching 5.3 billion. In

contrast the urban population in the most developed regions is increasing at a considerably slower pace, from 900 million in 2007 to one billion in 2025. Large as these projections may appear to be, the *rate* of urbanisation is actually slowing down in all regions of the world. It was during the twentieth century that we witnessed the fastest growth of the world urban population. The reason for this is that the overall rate of population growth is slowing down. The urban population of the world is expected to grow annually with 1.8 per cent between 2007 and 2025, whereas the rural population is expected to grow at an annual rate of change of merely 0.08 per cent. Differences in urban population growth become even more evident when we look at the major areas of the world. While more than 80 per cent of the North American population is urban, less than 40 per cent in Africa is so.

Even if the rate of urbanisation is slowing down, the level of urbanisation is steadily increasing in all major areas of the world, especially in Africa and Asia. Asia has the largest urban population of the world, currently 1 645 million people, which represents half of the

Major area	Urban population; millions 2007	Urban population; millions 2025	Urban population; millions 2050	Percentage urban 2007	Percentage urban 2025	Percentage urban 2050
<b>Africa</b>	373	658	1 234	38.7	47.2	61.8
<b>Asia</b>	1 645	2 440	3 486	40.8	51.1	66.2
<b>Europe</b>	528	545	557	72.2	76.2	83.3
<b>Latin America</b>	448	575	683	78.3	83.5	88.7
<b>North America</b>	275	337	401	81.3	85.7	90.2
<b>Oceania</b>	24	30	37	70.5	71.9	76.4

*Table 10:* Urban population and percentage urban by major area. Source: United Nations. World Urbanisation Prospects 2007.

world's urban population. Still, in Asia the level of urbanisation barely reaches over 40 per cent. In 2025 another 800 million are projected to be living in the cities of Asia, and by then they will be more numerous than the rural population. By 2050 the urban population of Asia is estimated to be close to 3.5 billion, representing 66 per cent of the continent's total population and 54 per cent of the world urban population.

Africa is the only major area where the rural population is expected to grow between the years 2025 and 2050, but it is in the urban areas that we will see exceptionally large population growth. The average annual rate of change is estimated to be 3.15 per cent between 2007 and 2025 and 2.52 per cent between 2025 and 2050. Urban dwellers will be more than three times as many in 2050 as they are to today. This means that more than 1.2 billion people will be living in the African urban areas, which equals almost 20 percent of the projected world urban population. As early as 2025 Africa will be home to the second largest urban population in the world, approximately 660 million inhabitants, outnumbered only by the urban population of Asia. Despite these projected developments, the level of urbanisation will remain the lowest in the world, 47 per cent in 2025 and 62 per cent in 2050. The urban population of Latin America grew very rapidly during the period 1950 to 2007, from 69 million to 448 million. This implies that the level of urbanisation is much higher than for the other less developed regions. It is even higher than Europe's level of urbanisation, 78 per cent for Latin America in 2007 compared to 72 per cent for Europe. The level of urbanisation in Latin

City size	Population millions 2007	Population millions 2025	Percentage distribution 2007	Percentage distribution 2025
<b>10 million or more</b>	286	447	8.7	9.7
<b>5 to 10 million</b>	214	337	6.5	7.3
<b>1 to 5 million</b>	760	1 058	23.1	23.1
<b>500 000 to 1 million</b>	322	390	9.8	8.5
<b>Fewer than 500 000</b>	1 712	2 354	52.0	51.3

*Table 11:* World urban population by city size. Source: United Nations. World Urbanisation Prospects 2007.

America is expected to increase to 84 per cent by 2025 and to 89 per cent by 2050. The urban population is projected to grow to 575 million in 2025 and to 883 million in 2050.

The main share of the world urban population is to be found in a few countries – the most populous ones. To put it differently, most countries have small urban populations. As much as 75 per cent of the urban inhabitants live in no more than 25 countries. Some of these countries remain rural to a large extent at the same time as they are highly urbanised. This applies for instance to China, India, Bangladesh, Pakistan, Indonesia and Nigeria, all belonging to the group of most populous countries of the world. These countries have large urban and large rural

populations at the same time. The projected increase of the world urban population is believed to be located to a small number of countries. Almost 65 per cent of the increment to the world urban population in the 2007–2025 period is projected to take place in eleven countries only. China and India together are thought to account for 35 per cent. They gain another 261 million and 197 million urban dwellers respectively. The other nine countries are Nigeria, the Democratic Republic of Congo, Bangladesh, Indonesia, Pakistan, the Philippines, Brazil, Mexico and the United States. As we see, all but the United States are developing countries with fairly low levels of urbanisation. The majority of the world's urban dwellers live in cities with less than 500 000 inhabitants. This will remain the case in 2025. Population in these cities will increase from 1 712 million to 2 354 million.

Another 23 per cent of the world urban population lives in cities with one to five million inhabitants. This is not expected to change by 2025. Cities of this size together have 760

<b>Urban agglomeration</b>	<b>Population millions 2007</b>	<b>Urban agglomeration</b>	<b>Population millions 2025</b>
Tokyo	35.7	Tokyo	36.4
New York	19.0	Mumbai	26.4
Mexico City	19.0	Delhi	22.5
Mumbai	19.0	Dhaka	22.0
Sao Paolo	18.8	Sao Paolo	21.4
Delhi	15.9	Mexico City	21.0
Shanghai	15.0	New York	20.6
Kolkata	14.8	Kolkata	20.6
Dhaka	13.5	Shanghai	19.4
Buenos Aires	12.8	Karachi	19.1
Los Angeles	12.5	Kinshasa	16.8
Karachi	12.1	Lagos	15.8
Cairo	11.9	Cairo	15.6
Rio de Janeiro	11.7	Manila	14.8
Osaka-Kobe	11.3	Beijing	14.5
Beijing	11.1	Buenos Aires	13.8
Manila	11.1	Los Angeles	13.7
Moscow	10.5	Rio de Janeiro	13.4
Istanbul	10.1	Jakarta	12.4
		Istanbul	12.1
		Guangzhou	11.8
		Osaka-Kobe	11.4
		Moscow	10.5
		Lahore	10.5
		Shenshen	10.2
		Madras	10.1
		Paris	10.0

*Table 12:* Population of urban agglomerations with more than 10 million inhabitants in 2007 and 2025. Source: United Nations. World Urbanisation Prospects 2007. The estimated populations for 2007 and the rank order in this tables differs slightly from the data given in table 3, which is based on a different source. The differences between the population data given in the tables is mainly due to different definitions of the urban agglomerations.

million inhabitants, distributed across 361 cities. These figures are expected to rise to 1 058 million inhabitants in 524 cities by 2025. Today there are 19 cities (according to some information 21) cities with more than 10 million inhabitants. By 2025 the number of cities with more than 10 million inhabitants is expected to be 27. Their share of the world urban population will increase from 9 to 10 per cent.

Today eleven of the nineteen cities with more than ten million inhabitants are located in Asia. By 2025 the number will have increased to fifteen. Latin America will still have four such cities while Africa will have three urban agglomerations of more than ten million inhabitants.

## 2.6 Conclusions so far

Projections of world population growth for the coming decades up until the mid-twenty-first century are in general agreement that the total population will continue to grow. The main part of this population growth will take place in Africa and South Asia. The populations of North America, Europe and Japan will increase only marginally, mainly as a result of immigration and labour recruitment. The populations of Latin America and East Asia will continue to increase but at a slower pace than in Africa and South Asia. Latin America and East Asia have come further in their demographic transition than Africa and South Asia.

Linked to the demographic transition is the rural to urban transition. When countries have gone through the demographic transition rural populations will remain stagnant at a level that is economically viable. Population increase, which is just above replacement level (in some countries even below replacement level), will be located to urban environments. Population increase in the developed world will, as just mentioned, pretty much be dependent on immigration. International migration in the late twentieth and early twenty-first centuries is basically urban–urban, not rural–rural which characterised the European emigration to North America in the nineteenth century. Job opportunities available for international migrants are

almost entirely to be found in urban environments, for unskilled migrant labourers in the service sector, and for skilled professionals in the business and information-processing sectors.

In parts of the less developed world the demographic transition appears to be well on its way. This applies in particular to China and some other countries in East and Southeast Asia. Urbanisation will continue, to converge gradually with the levels of urbanisation in the developed world. Urbanisation is to some extent a function of population growth, but largely it is a function of economic development, with a reallocation of production from agriculture to manufacture. China with its enormous internal market is projected to become a major economic player in the global economy in a few decades ahead, on a par with the United States if not already by 2030 having surpassed the United States in economic output.

Population growth is projected to be greatest in sub-Saharan Africa and in South Asia where the process of demographic transition is only just starting. These regions are at the same time the ones with the least impressive economic growth. India with its huge population undoubtedly has an enormous economic potential. However, resources are very unevenly distributed in India. While some parts of the country, especially in major cities, are as modern as any parts of Europe or North America, other parts of India, shanty towns surrounding the very same cities, are home to the poorest of the world's poor people. Some rural parts of India are also exceptionally impoverished. The rapid growth of urban populations in sub-Saharan Africa and parts of South Asia is not primarily the result of pull-factors of a developing economy, but rather of push factors in rural environments that no longer can adequately feed a growing population.

On a global scale population increase thus will mainly be in terms of urban rather than rural growth. But we need to be aware of the fact that the motivating forces differ for regions depending on population development and economic prospects.

### 3. Critical factors influencing urban living conditions

#### 3.1 An outline of critical factors affecting living conditions in urban slums

I happened to tell a colleague and friend of mine, emeritus professor Johan Asplund at the Department of Sociology, University Lund, about this assignment of projecting urban development in the developing countries. He responded jokingly, and I quote him from memory. “I can easily tell you the answer” he said. “It will be a disaster!” This is a pessimistic prediction of course, but it is also quite a reasonable one if we draw out the current trends of living conditions in the rapidly growing megacities in many of the developing countries. It is a reasonable prediction if the international community is largely unaware of the growing problems related to the enormous challenges posed by the rural to urban transition in the developing world. It is a reasonable prediction if the international community fails to take adequate action to solve the mounting problems. In this subsection we will outline some critical factors that affect people’s living conditions in the shanty towns and slum dwellings surrounding the rapidly growing urban agglomerations in developing countries. What follows is a description of the situation as it appears today.

The United Nations Human Settlements Programme (UN-Habitat) that was established in 1978 is well aware of the mounting problems and has developed a programme to monitor urban growth and human well-being. This programme involves five crucial indicators. Data from the 2006 report from UN-Habitat will be summarised in two following subsections. In a fourth subsection some crucial issues will be addressed that affect certain urban agglomerations more than others. One such problem relates to global environmental risks, global warming and its effect on weather systems. Obviously some megacities are at greater risk than others due to location (low-lying with risk of flooding, hilly with risk of landslides, coastal with risk of being hit by tidal waves, tropical cyclones and so on). Another issue pertains to the overall political situation in the country in question. Major cities in countries at war, or in countries where civil society has broken down, face greater risks of urban terrorism and armed conflict between different militia groups (Baghdad, Beirut, Kabul and Mogadishu are such examples).

A note on terminology: The poor urban districts that make up a large part of the urban agglomerations in the developing world are referred to by different terms. In Brazil the common term is *favela*. Rio de Janeiro, Sao Paulo and other large cities in Brazil include widespread *favelas*. These are buildings constructed out of whatever material may be at hand. People who live in the

*favelas* are squatters from a formal legal point of view. They do not hold legal rights to the land upon which they have built a shack, which barely provides shelter against rain and cold. In the French-speaking world the corresponding word is *bidonville*. In English one speaks of *shanty towns*. The common denominator is that these living quarters are recent constructions. They are temporary in the sense that they can be pulled down by the authorities without notice. Whatever materials remain will be recycled in the construction of new temporary dwellings on another location or, in many cases, on the very same location. Originally the English word *slum* referred to neighbourhoods housing poor people in the growing industrial cities of nineteenth century England. In more recent times it has come to denote housing estates that originally were built as permanent solid dwellings, but which through decades of neglect have deteriorated to a state that is unsuitable for human dwelling.

UN-Habitat (2003, p. 7) refers to the following definition of slums:

{[The term slum describes] a wide range of low-income settlements and/or poor human living conditions and note that these inadequate housing conditions exemplify a variety of manifestations of poverty as defined in the Programme of Action adopted at the World Summit for Social Development.

The term slum includes the traditional meaning, that is, housing areas that were once respectable or even desirable, but which have since deteriorated, as the original dwellers have moved to new and better areas of cities. The condition of the old houses has then declined, and the units have been progressively subdivided and rented out to lower-income groups. A typical example is the inner-city slums of many historical towns and cities in both the industrial and developing countries.

The term slum has, however, come to include also the vast informal settlements that are quickly becoming the most visual expression of urban poverty. The quality of dwellings in such settlements varies from the simplest shack to permanent structures, while access to water, electricity, sanitation and other basic services and infrastructure tends to be limited. Such settlements are referred to by a wide range of names and include a variety of tenurial arrangements.'

In this text we do not make a difference between these categories but follow the language usage of UN-Habitat in which we refer to all dwellings that by the standards of the developed world are deemed unsuitable for dwelling.

First of all, however, we will give an outline of various critical conditions based on the reading of three UN-Habitat reports from 2003, 2006 and 2007. The general picture sketched here also draws upon anthropologically inspired case studies of megacities in the developing world by Simone (2004) and Neuwirth (2005).

*Mass poverty:* Urban poverty is sociologically linked to a wide range of social problems. Poor people from rural areas move to the poor districts of the growing cities. They do so in the hope of being able to provide for their families, which they for various reasons no longer may have been able to do back in the rural village. Like most migrants, those who move to the urban slums may have a sense of initiative and ambition, but a general characteristic is that the rural to urban migrants, despite the fact that they often may be young, are not among the educationally most qualified persons. In developing countries secondary education is generally less developed in rural regions as compared to the situation urban areas (UNFPA, 2005). Regular salaried jobs are rarely available to these migrants in the city. People have to make do with whatever opportunities appear – vending, providing simple services, recycling various objects and artefacts, and so on. Some of the most desperately impoverished even live off the city's rubbish dumps where not only edible wastes can be salvaged but all sorts of dumped materials and objects from the richer quarters can be made use of once again. Others resort to begging.

Widespread urban poverty entails serious health risks, unpredictable living conditions, inadequate shelter and protection against harsh weather conditions, encroachments on human dignity, undernourishment and malnutrition especially among children, exploitation of young children for labour, exposure to uncontrolled lethal chemicals in generally unhealthy work places, exploitation of women for sexual satisfaction, victimisation of crime and abuse, lack of voice and means to change one's living conditions, overcrowded living quarters and lack of privacy, victimisation of police brutality and random evictions and so on and so forth. People living in such undignified conditions have to spend most of their time in an often fruitless struggle to make ends meet.

Children at a young age are forced to take part in the struggle for survival through begging or through hard labour in workshops under conditions that adults would not accept. It is an

established fact that children, girls as well as boys, are sold to brothels, shady adoption agencies and illegal medical institutions. Trafficking in children and young women has become a global 'industry' which generates profits on a par with the illegal drug and arms trades. A secondary consequence of such conditions is that a large share of the children in the slums of these urban agglomerations miss out on basic education, either because schools may be non-existent in neighbourhoods that do not officially exist or because the family cannot afford the 'luxury' of sending their children to school. A 'culture of poverty', described by the anthropologist Oscar Lewis in the 1960s, is thus perpetuated. Urban poverty has much in common with rural poverty. Children growing up in conditions of rural poverty are in many situations denied formal education, often because national schools do not reach out to remote impoverished villages. A significant difference is however that children growing up in rural conditions still will take part in everyday transference of traditional knowledge, whatever that may entail, by the very fact of living in close vicinity of their elders. Perhaps the greatest problem facing the urban poor is the breakdown of traditional values and knowledge, of collective ideals and identities. The urban poor face stiff competition in their struggle for survival.

*Health risks:* Globalisation implies that an epidemic outbreak of an infectious disease in the slums of Kinshasa, Lagos or Mumbai will soon have global consequences. A reminder of this was the rapid spread of the influenza epidemic a few years ago starting in Southeast Asia with the infectious transmission of virus from poultry to humans. It was believed that migrating birds could easily spread the infection to other parts of the world – to poultry and to city pigeons thus increasing the risk of subsequent transmission of the infection from birds to humans. The real scare is of course when such transmissions occur that the infectious agent (virus or bacteria) in question will undergo a genetic mutation and thus make transmission from human to human possible.

Poultry is an important source of protein. It is especially important for people living in poor conditions. There are no religious taboos with regard to eating eggs or meat from poultry. Hens, ducks, geese and turkeys are easily kept even in urban areas. People in crowded urban areas of Southeast Asia including South China live in a kind of symbiosis with animals, above all domesticated birds. This situation increases the risk of bird to human transmission of infectious diseases. The many forms of influenza that have afflicted the world with fairly regular intervals are believed to be endemic in the bird populations of Southeast Asia and South China.

Generally speaking, the close contacts between humans and animals in the many urban slum areas of the developing world may be understood as *a bringing in of rural ways of life to the urban space*. The urban slums in many parts of the developing world may in other words be characterised as living conditions which in fact are semi-rural. For instance, while it is not particularly problematic to live close to animals in a rural setting because whatever else may be lacking, space is one thing that is abundantly available, lack of space in the urban context becomes a serious constraint to the viability of sustaining rural forms of life. Animals and humans are forced into very close contact. Another example, in a rural setting it is not a sanitary problem or a discomfort to one's need for privacy to relieve oneself in the open at some appropriate distance from one's dwellings. There will be bushes or perhaps sand-dunes to squat behind. In densely populated urban areas which lack functioning sewage or public toilets this basic human need is an acute social and sanitary problem with serious repercussions for public health. People may perhaps learn to live with the stench from streets and passageways in living quarters that are littered with faeces and urine from animals and humans. However, not only do such conditions greatly increase the risk of diseases in the area, having to relieve oneself in front of others in the street is also an unwelcome encroachment upon the individual's sense of dignity and privacy. This situation is especially problematic for women who run the risk of being assaulted when exposing their private parts and needs in semi-public situations.

Besides living with birds people living in slum areas share space with rodents, stray cats, wild dogs and lemurs, not to mention insects against which there is little protection. The poor of India share living space with cows. In non-Muslim countries pigs may be part of an urban fauna of domesticated animals. Donkeys and goats may also be part of the scene. The close contact in cramped living spaces between humans and animals is one obvious risk factor for transmissions of diseases from animal to human. The most imminent risk, however, is the risk of transmission of infectious diseases from human to human in confined and cramped living space, characterised by unsatisfactory sanitation and in many of the most hard-hit slum areas no sewage at all, and unsafe drinking water.

*Crime and criminality:* Living with unemployment under constant economic strain in unhealthy environments, facing the risk of eviction because of insecure tenure, in cramped living conditions which do not always provide adequate shelter against torrential rainfall or the damp cold of winter nights is a typical breeding ground for criminal activity. Criminal activity will range from petty theft to homicide. Violence is ever present. There are however significant country

differences. Rates of urban violence, in particular homicide, are significantly higher for Latin America with the Caribbean and for sub-Saharan Africa than for any part of Asia. A general statistical problem when it comes to crime is that the degree to which criminal offences are reported to the police will vary considerably depending on the offence. It is a well-known fact in the developed world that rape tends to be underreported. The reasons for this may be that the offender and the victim are acquainted with one another or the irrational shame that besets the victim. In the developed world it is a fact that practically every homicide that is committed will sooner or later be known by the police authorities. Homicide is therefore one of the few criminal offences that we do have reasonably reliable statistics on – in the developed world. The situation is very different in the urban slum areas of the developing world. To many groups from both the inside and the outside of the slum areas the lives of slum dwellers are expendable. Homicide rates for a number of Latin American and sub-Saharan cities are sky high compared to the situation in south Asia and in most developed countries. Homicide accounts for the most common cause of death for young males of less than thirty years of age. Because human life of the poorest of the poor slum dwellers is not highly valued in society, homicides may not be known to the police or prosecutors. The statistics even on homicide will therefore tend to be biased not giving the full account.

According to UN-Habitat report 2007 crime rates have increased globally with about 30 per cent from 2 300 to over 3 000 per 100 000 individuals for the twenty year period between 1980 and 2000. In this international comparison African data have been excluded since only a few countries have provided data for the period. The relatively high figures for North America and Europe are explained by greater willingness of people to report crimes. The general trends are that property crimes tend to be underreported in the developing countries as compared to in the developed world.

An estimation given by UN-Habitat 2007 is that 60 per cent of all urban dwellers in developing countries have been victims of crime. Crime rates for parts of Latin America and Africa are even higher. An important conclusion is that crimes tend to be more severe in urban areas than in rural regions. The authorities in Brazil, Mexico, Peru and Venezuela report that more than half of the homicides of their respective countries occur in rapidly expanding urban areas such as Rio de Janeiro, Sao Paulo, Mexico City, Lima and Caracas.

We may speak about institutional violence carried out by the state or in the name of the state and other 'informal' institutions, including business interests in the private sector. This would include extra judicial (unreported) killings by the police and state or community vigilante-directed 'cleansing' actions directed against gangs, street children and other groups suspected of criminal activities. Urban slums will tend to serve as retreats if not the actual base of organised crime. This is because of the lack of authority control of slum areas and the absence of policing. The activities of organised crime are primarily aimed at other targets than the slum areas – business interests in the commercial parts of the city, global trafficking networks and so on. Slum areas are however where 'loyal' henchmen may be recruited and where one can go under cover if necessary. Violence will be one means of settling economic disputes between different criminal organisations involved in drug trafficking, armed robbery, kidnappings, prostitution control and arms trafficking. Slum areas may be divided territorially between different gangs engaged in extortion and control of local prostitution. In many cases such gangs consist of adolescents and young adults. They may clash in violent confrontations if borders are crossed or the 'rights' of one gang are appropriated by another gang.

Living on top of one another in the slums with little prospects of being able to make a change, it is hardly surprising that surveys of criminal activity also report a considerable prevalence of domestic family violence. Long-term unemployment, being victims of the poor social conditions and not seeing any chances of radical change will inevitably generate aggression through constant frustration, aggression directed at family members – women and children. Rape and child abuse are all too common, quite frequently combined with various forms of drug addiction. Many children will be partially or totally abandoned by their parents. This is the basis of large bands of preadolescent street children who seek support and protection in one another, and who survive from what they can make by shoe-shining, windscreen washing, petty theft and prostitution. Large bands of street children, often comprising of more than thirty or forty children, are found in practically all the major urban conglomerations in the developing world. One city can host a large number of such groups. Life expectancy is short. Many die young from drug abuse, brain damage acquired from glue sniffing, infectious diseases, malnutrition and homicide. From Brazil it is reported that vigilantes serving the interests of local shop proprietors and business are paid to shoot street children. It is estimated that there are at least tens of millions of street children across the globe. Some estimates are even in the range of 100 million. Projections indicate that numbers are growing as urban agglomerations grow. The situation is indicative in Kenya. The

estimations speak of 115 street children in 1970, 17 000 in 1990, 150 000 in 1997 and 250 000 in 2001.

Corruption is a very serious problem in almost all developing countries.<sup>9</sup> It is serious because it prevents rule of law and the ability of societal institutions to operate for the common good and safety of members of society. Corruption engenders distrust and lack of faith in societal institutions and in democracies in the system of governance itself. Corruption thus contributes to political instability. Countries high on 'The Global Corruption Barometer' are in rank order of highest levels of perceived corruption: Somalia, Burma, Iraq, Haiti and Uzbekistan. Other countries high on the list are Pakistan, Russia, Nigeria, Kenya, Bangladesh and Afghanistan. In the survey reported by UN-Habitat 2007 African respondents regarded the police to be the most corrupt sector followed by political parties. In Asia and Latin America the political parties were judged to be most corrupt, followed by the police.

Despite extremely high rates of serious crime in the urban slums of sub-Saharan Africa and Latin America, it is still safe to assume that a majority of the slum dwellers do not commit themselves to serious criminal activity. This is in accordance with criminological theory. It is equally certain that most slum dwellers will be the victims of criminal activity that is not the concern of the police or prosecuting authorities. Since many of the slum areas lie outside the jurisdiction of the central city itself in what might be described as no-man's-land the situation will continue. Urbanisation itself is a factor behind the increasing crime rates.

*Insecurity of tenure:* One of the major problems affecting the urban poor, especially in the developing countries is insecurity of tenure, in other words the right to live where one lives. The risk that millions of people face every day is that of being forcefully evicted from one's dwellings. In the most brutal of evictions the people to be evicted are not even notified by the authorities. Bulldozers appear unannounced and just raze the shanty towns. The dwellers may not even have time to collect whatever few possessions they may have. Security of tenure is defined by UN-Habitat (2007, p. 117) as follows:

{[Security of tenure is] an agreement between an individual or group (with respect) to land and residential property which is governed by a legal (formal or customary) and administrative

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<sup>9</sup> Corruption entails bribing and undue influence above all of political and judicial rulings to benefit interests of particular individuals, groups or organisations. Corrupt practices may exist at all levels of society.

framework. The security derives from the fact that the right of access to and use of land and property is underwritten by a known set of rules, and that this right is justiciable.’

The main reasons behind large-scale forced evictions have to do with public infrastructure development, international events (global conferences, Olympic Games) and urban development projects. UN-Habitat (2007, p. 19) reports for instance that 1.7 million people were directly affected through evictions in conjunction with demolitions of housing related to the Beijing Olympic Games. As urban agglomerations grow in size, squatter areas that are fairly centrally located may attract the interest of real estate investors. A global experience is that when forced evictions do take place – for whatever official reason – it is always the poor who are evicted. Evictions hit the most vulnerable categories of the population the hardest: women, children, ethnic minorities and other disadvantaged groups. Evictions increase rather than reduce the problems that they were aimed to ‘solve’.

*Lack of infrastructure:* The slum communities situated on the peripheries of the growing urban agglomerations tend to lack at least one or several elements of basic technical and physical infrastructure: Piped water that is safe is not always available in the vicinity of the dwellings. Piped sewage systems are generally not in place in shanty towns for the simple reason that dwellings are erected on sites that are not intended for housing and thus are not integrated into urban planning schemes. In such cases people have to make do with pit latrines, bucket latrines, ditches or sidewalks. Electricity may be available, often in the form that slum dwellers attach private wires to electrical mains in the vicinity. It goes without saying that regular security regulations are not always observed, with the consequence that people die and fires occur in short circuit accidents. Should a fire break out there is an imminent risk that it will spread almost explosively due to the inflammable materials from which dwellings are constructed and the narrow space between dwellings. Paved streets do not exist. In the dry season this situation may be manageable. In the rainy season, however, streets soon turn into mud pools making access to dwellings with carts and wagons virtually impossible. Many of the sites upon which shanty towns are erected are deemed unsuitable for urban development because they are low-lying and thus may be flooded. Some shanty towns – *favelas* such as in Rio de Janeiro – are on the other hand built on foothills and mountains at the back of the city. Here the risk may be one of landslides and mudslides.

Urban slums in the developing world generally lack various forms of social infrastructure that we take for granted in the developed world: Public schools are rarely to be found in shanty towns. Children who actually are sent to school will have a long distance to walk to the nearest school. The 2008 earthquake in southwest China revealed that school buildings in the cities that were hit were badly constructed and caved in. Local health care centres are non-existent in urban slum areas. Public control by policing is rare, and a number of reports state that when the police authorities show up, they are not there to protect the urban poor but in all too many cases to harass them. Public transport systems are on the whole underdeveloped in many urban agglomerations in the developing world. While residents in the affluent sectors of society will have their own cars, people in the slums will have to make their way long distances by foot if they should happen to hold a job outside the slums.

In major urban agglomerations the influx of new dwellers may be 5 000 per month. In some rapidly growing cities, it could even amount to 10 000 per month, 120 000 per year, and over a million in ten years. Most of the new residents end up in the slum areas. They may come from all parts of the rural hinterland. This means that neighbours in the urban slums may speak different languages, come from different ethnic groups and belong to different religious denominations. Something which has not been addressed in the reports on slum dwelling is cultural diversity that characterises many of these areas. When people have to spend much of their time on just finding ways to make a living, then cultural identities and cultural differences will not necessarily be regarded as a problem. Indirectly, however, this situation could become an obstacle for integration in the forming social bonds, in bringing out a sense of community and in generating an understanding of common interests. It can become a problem of informal social control. From a political point of view slum dwellers by and large seem to be alienated from the mechanisms of power. They have no member of parliament to speak for them. There are to our knowledge no successful examples of electing candidates to serve as spokespersons for the community. Empowerment is virtually totally absent in these communities. While democracy as a political system is a non-question in a majority of the developing countries it is nevertheless recognised in some, in India for example. How is democracy brought to the slum-dwellers of Mumbai, Delhi and Kolkata? Riots taking place in the slums of Nairobi involving serious conflict between different ethnic groups in the spring of 2008 highlights the problems of social disintegration among the urban poor.

### 3.2 Slums in the 21<sup>st</sup> century

The connection between urbanisation and development is disputed. While some authors treat them as almost identical processes others emphasize the negative aspects of urbanisation. Generally countries that are highly urbanised tend to be more developed, regardless of whether you look at income-levels or at performance on the human development index. When countries develop, urban economic activities become more significant for the overall economic performance. Even in low-income countries cities generate a larger share of the gross national product than their rural counterpart. As highlighted in the previous subsection this however does by no means imply that all urban dwellers are benefitting from the economic growth. Economic growth does not necessarily translate into poverty reduction. The unprecedented economic growth witnessed in China, and most apparent to the observer in the building boom in Beijing, Shanghai and Hong Kong, has not reduced poverty in China. Rather it has led to vast and rapidly growing income disparities. As a matter of fact, urban inequality is a growing problem not only for China but for most countries. Even though a majority of the world's poor currently live in rural areas this is about to change in a few decades. The growing inequalities become very apparent in the cities where the poor and the rich to a great extent are spatially divided. In some regions urbanisation seems to be identical with the growing of slums.

UN-Habitat defines slums as 'a settlement in an urban area in which more than half of the inhabitants live in inadequate housing and lack basic services'. As an operational definition UN-Habitat uses the following indicators: *durable housing*, *sufficient living space*, *access to improved water*, *access to sanitation* and *secure tenure*. A slum household is a group of individuals living under the same roof in an urban area lacking one or more of these conditions. This operational definition is then used to measure the prevalence of slums in the world. According to UN-Habitat there were approximately one billion slum dwellers in the world in 2005, which equals almost one third of the total world population that year. More than 90 per cent of the world slum settlements are to be found in the developing world, but there are regional differences.

In Africa there are vast differences between the northern parts and the southern parts of the continent. North Africa actually reduced the number of slum dwellers between the years 1990 and 2005. At present there are approximately 21 million persons living in North African slums, which is half a million less than in 1990. This in turn means that the share of slum dwellers compared to the total urban population has decreased quite significantly from 38 per cent to 25 per cent. In sub-Saharan Africa by contrast the proportion of slum dwellers is the highest in the

world, almost 72 per cent. In this region the annual urban growth rate and annual slum growth rate are 4.58 and 4.53 per cent respectively, which means that the slums in practice are growing at the same rate as the cities in general. The slum inhabitants in sub-Saharan Africa almost doubled in numbers from 101 million in 1990 to 199 million in 2005.

Many North African countries have been able to address the problem of slum formation in their cities through the implementation of policies designed to raise the living conditions for the poor in general and for the inhabitants of slums in particular. The fact that cities are not growing as fast in North Africa as in sub-Saharan Africa may be an important explanation as to why there are proportionally considerably less slum dwellers in the northern as compared to the southern parts of the continent. For sub-Saharan Africa there are many reasons why the formation of slums appears to have become the norm. Many countries of the region have seen their economies decline. The region is heavily hit by the prevalence of HIV/AIDS. Ethno-political conflicts in the post-colonial state formations have haunted many parts of sub-Saharan Africa: Angola, Burundi, Chad, The Democratic Republic of Congo, Ethiopia, Kenya, Liberia, Nigeria, Rwanda, Sierra Leone, Somalia and Uganda are some of the countries that have experienced internal conflict and the breakdown of civil society for long periods of time.

A majority of the world's slum dwellers are however living in Asia. UN-Habitat estimates that there were some 580 million people living in slum conditions in Asia in 2005. Just as in Africa there are differences between sub-regions. Most of South Asia's slum dwellers live in India, approximately 170 million in 2005. This corresponds to 17 per cent of the total world slum population. In Bangladesh there were another 36 million and in Pakistan almost 40 million slum inhabitants that year. Even though India has had a remarkable economic growth during the most recent decade, and has been in a position to reduce extreme poverty, this has not yet led to a reduction of the spread of slums in the cities.

	2005	2010	2015	2020: Scenario 1	Moderate change 2020: Scenario 2	Reduced by half 1990- 2020: Scenario 3
<b>World</b>	997 767	1 115 002	1 246 012	1 392 416	1 292 065	705 745
<b>North Africa</b>	21 224	21 062	20 904	20 741	18 898	17 286
<b>Sub- Saharan Africa</b>	199 231	249 886	313 419	393105	369 631	150 654

<b>Latin America and Caribbean</b>	134 257	143 116	152 559	162 626	149 913	81 385
<b>East Asia</b>	212 368	238 061	266 863	299 150	277 704	157 527
<b>South Asia</b>	276 432	308 611	344 537	384 644	356 877	178 762
<b>Southeast Asia</b>	59 913	64 073	68 521	73 279	67 583	58 302
<b>West Asia</b>	33 057	37 860	43 360	49 659	46 224	26 290

*Table 13:* Slum populations in different regions of the world in 2005 and projected for 2010, 2015 and 2020. Three different scenarios are presented for 2020. Numbers are for thousands. Source: UN- Habitat 2006, p. 190.

Much the same holds true for China, which hosts the largest slum population of East Asia, and of the world. Despite China's economic boom it still hosts 196 million slum dwellers, which equals 20 per cent of the total world slum population. There were approximately 60 million slum dwellers in Southeast Asia and 33 million in West Asia in 2005. There are interesting differences in slum growth rates between the regions. The slums of Southeast Asia are growing by 1.34 per cent per year whereas the slums of West Asia are growing by 2.71 per cent per year. Thailand actually reduced the number of slum dwellers from almost 2 million in 1990 to 120 000 in 2005. Slum growth rates in South Asia and East Asia are 2.2 per cent and 2.28 per cent respectively.

Slum growth rates in Latin America and the Caribbean resemble those of East Asia – 1.28 per cent per year. Out of the 134 million people living in slum conditions in Latin America, some 52 million were living in Brazil, 15 million in Mexico, 15 million in Peru, 12 million in Argentina and 10 million in Venezuela in 2005. Slum growth rates vary however between these countries. In Brazil and Mexico these rates are quite low, 0.34 and 0.49 per cent per year respectively. In Argentina and Venezuela they are considerably higher, 2.21 and 2.46 per cent, while Peru has a significantly high rate for slum growth of 3.36 per cent per year.

UN-Habitat constructs three scenarios for the future growth of slums. In scenario one the assumption is that present trends of slum growth continue unchanged in the future. According to this scenario the number of slum dwellers is projected to increase from approximately one billion in 2005 to approximately 1.4 billion in 2020. Scenario two makes the assumption that the Millennium Development Goal 7 target 11 will be reached, which means that the lives of 100 million slum dwellers will be improved by 2020. The projection according to this scenario is that

some 1.3 billion will be slum dwellers in the world as a whole. The third scenario makes the assumption that the international community and national stakeholders will have implemented effective policies to prevent the formation of slums. The projection is that the world wide number of slum dwellers will have been reduced by 50 per cent. This would mean that the share of slum dwellers of the world's urban population would decline from 31 per cent in 1990 to 15 per cent in 2020. The lives of 700 million people would thus be improved (UN-Habitat 2006, p. 34).

UN-Habitat considers this third scenario to be very unlikely. The most likely scenario according to UN-Habitat is that current trends will continue until 2020, thus increasing the number of slum dwellers to 1.4 billion. According to the no-change scenario and the moderate-change scenario sub-Saharan Africa will become the region with the largest number of slum dwellers by 2020. North Africa is the only part of the continent where the slum population is expected to decrease in the coming years. The only African country which today has a slum population exceeding ten million and that will have fewer than 10 million slum dwellers in 2020 is Egypt.

Slum deprivation looks different in different regions and countries of the world. As we remember UN-Habitat uses an operational definition of slum, where a slum is defined as a household lacking one or more of the following conditions: durable housing, sufficient living space, access to improved water, access to sanitation and secure tenure. The data shows that slum deprivation is most severe in sub-Saharan Africa, whereas the households in the slums

<b>Region</b>	<b>One deprivation</b>	<b>Two deprivations</b>	<b>Three deprivations</b>	<b>Four deprivations</b>
<b>North Africa</b>	89	11	0	0
<b>Sub-Saharan Africa</b>	49	33	15	3
<b>Latin America and Caribbean</b>	66	25	8	1
<b>South Asia</b>	66	29	5	0
<b>Southeast Asia</b>	74	20	5	1
<b>West Asia</b>	77	16	6	1

*Table 14:* Distribution of slum households by number of shelter deprivations. Per cent. Source: UN-Habitat 2006, p. 33.

of North Africa are generally only lacking one of the five conditions. Data for East Asia are not available.

More than half of the population in sub-Saharan slums suffer more than one deprivation. The most common deprivation is lack of sanitation, but lack of access to water (improved water) and insufficient living space are also real problems in sub-Saharan Africa. In North Africa slum prevalence (under this definition) would be greatly reduced by increasing access to improved sanitation. The situation in West Asia is quite similar to that in North Africa. However, a larger percentage of the population in West Asia suffer from three or more deprivations. The slums of South Asia are in many respects comparable to the situation in sub-Saharan Africa but fewer households suffer from multiple deprivations. The data for Latin America actually indicate a higher level of slum dwellings than in South Asia. But as UN-Habitat puts it, 'neither the magnitude of slums nor the degree of severity [in Latin American cities] is as daunting as in other regions'. (UN-Habitat 2006, p. 33).

UN-Habitat presents a scorecard for how well different developing regions are performing on the Millennium Development Goal 7, target 11, which is to have achieved a significant improvement in the lives of 100 million slum dwellers by 2020. This is done by classifying the countries in four categories and measuring the relative success depending on the annual slum growth rates and the proportion of slums in these countries.<sup>10</sup> The first category consists

Country	2005	2010	2015	2020: Scenario 1	Moderate change 2020: Scenario 2	Reduce % by half 1900-2020: Scenario 3
Angola	4 839	6 300	8 201	10 677	10 075	5 412
Cameroon	6 197	7 977	10 268	13 217	12 459	6 699
Côte d'Ivoire	6 203	8 361	11 271	15 194	14 381	7 701
Dem. Rep. Congo	9 227	11 054	13 243	15 865	14 846	8 044
Ethiopia	12 315	15 665	19 926	25 347	23 866	12 847
Kenya	9 620	12 905	17 311	23 223	21 972	11 771
Madagascar	5 696	7 434	9 703	12 664	11 953	6 419
Mozambique	7 710	10 909	15 437	21 842	20 753	11 071
Nigeria	46 272	55 732	66 026	76 749	76 943	38 900
Sudan	12 441	16 131	20 915	27 118	25 580	13 745
Tanzania	14 113	19 205	26 133	35 561	33 685	18 024

<sup>10</sup> Because the incidence of slums is very different in the regions studies the cut-off points for the proportion of slums are not used consistently.

<b>Argentina</b>	11 978	13 379	14 943	16 690	15 486	8 459
<b>Brazil</b>	52 374	53 259	54 159	55 074	50 392	27 914
<b>Mexico</b>	14 983	15 353	15 733	16 123	14 771	8 172
<b>Peru</b>	14 862	17 581	20 796	24 601	22 988	12 469
<b>Venezuela</b>	9 642	10 906	12 336	13 952	12 967	7 072
<b>Afghanistan</b>	6 375	8 760	12 036	16 536	15 676	8 381
<b>Bangladesh</b>	36 079	44 687	55 348	68 533	64 378	34 746
<b>China</b>	195 682	219 878	247 066	277 616	257 793	140 709
<b>India</b>	169 671	184 868	201 425	219 466	202 950	111 236
<b>Indonesia</b>	22 049	23 608	25 277	27 064	24 965	13 718
<b>Iran</b>	21 763	23 587	25 564	27 707	25 603	14 043
<b>Iraq</b>	9 992	11 346	12 884	14 630	13 604	7 415
<b>North Korea</b>	15 494	17 002	18 655	20 470	18 948	10 779
<b>Pakistan</b>	39 722	45 507	52 136	59 730	55 602	30 274
<b>Philippines</b>	21 792	23 984	26 397	29 053	26 904	14 725
<b>Viet Nam</b>	9 632	10 204	10 811	11 453	10 548	5 805

*Table 15: Countries with a projected slum population exceeding 10 million in 2020. Thousands. Source: UN-Habitat 2006, p. 190-191.*

of countries ‘on track’. These are the countries experiencing rapid and sustained decline in slum growth rates in urban areas and/or those with low slum prevalence. The countries included in this category are Puerto Rico, Uruguay, Cuba, Egypt, Sri Lanka, Thailand, Tunisia and Georgia. As mentioned previously, Thailand has reduced its slum prevalence from 2 million slum dwellers in 1990 to fewer than 120 000 in 2005. This result has largely been achieved by means of government sponsored programmes aimed at improving the housing conditions for households living in urban slums. Egypt likewise has succeeded in reducing its slum population by more than 3 million between 1990 and 2005. Tunisia more than halved its slum population to less than 200 000 during this period.

The second category is made up of so called ‘stabilising countries’. These are countries that are starting to reverse slum growth rates but which need to monitor this development to ensure a successful outcome. This category encompasses Brazil, Mexico, Trinidad and Tobago, Columbia, Dominican Republic, El Salvador, Paraguay, Iran, Philippines, Turkey, Kazakhstan, Myanmar, Turkey, Moldova and South Africa. Several highly populated countries are included in this category. Brazil, Mexico, Turkey, Indonesia and South Africa have been able to stabilize their slum growth rate over the last two decades. In absolute numbers, however, and relative to the overall urban population their slum population is still large.

A third category includes countries 'at risk'. These countries experience a moderate to high slum growth rate. They require implementation of policies aimed to reverse the growth in number of slum dwellers. Countries included in this category are Argentina, Botswana, Costa Rica, Lebanon, Panama, Saudi Arabia, Algeria, China, Ecuador, Honduras, Iraq, Jamaica, Jordan, Morocco, Namibia, Syria, Bhutan, Congo (Brazzaville), India, Mongolia and Viet Nam.

The fourth and final category consists of countries regarded as 'off track'. These countries already have a high proportion of slums. They are facing rapid and sustained slum growth rates which require immediate action to reverse slum growth trends. This category includes more countries (not population though) than the other three categories combined. The great majority are sub-Saharan countries. South Africa is actually the only sub-Saharan country not included in the 'at risk' or 'off track' categories. Other countries included in the 'off track' category are Venezuela, Bolivia, Peru, Guatemala, Haiti, Afghanistan, Bangladesh, Pakistan, Nepal and Cambodia. Besides sub-Saharan Africa many countries of South Asia are included in this category. Bangladesh and Afghanistan have annual slum growth rates of 4.3 and 6.4 per cent respectively. Pakistan's slum growth rate is smaller, 2.7 per cent annually, but still has an immensely large slum population of close to 40 million.

India is doing better, and is placed in the 'at risk' category, with an annual slum growth rate of 1.7 per cent. However, it is important to bear in mind that India hosts the second largest slum population of the world with its 170 million slum dwellers. As for East Asia and Southeast Asia, Thailand stands out as having successfully reduced slum growth rates and bringing down the total number of its slum dwellers. An absolutely necessary condition is that the government realises the magnitude of the problem and commits itself to bringing about a change. This is what the Thai government has done in contrast to governments of many other countries who take a lighter attitude to slum growth and slum dwelling. The Thai government set up a large scale programme of developing affordable public housing in close cooperation with the municipal authorities. Different kinds of innovative land-use mechanisms and local context-specific solutions were adopted. It was a combination of state intervention and market mechanisms. Since the public sector housing became common in the 1990s the private sector was forced to lower costs of housing, ultimately having positive effects for the urban poor of Thailand's cities. A chain reaction – a virtuous spiral – was set in motion once the government committed itself to tackling the problem of slum dwelling. An enabling condition for allocating national resources to a programme of slum reduction was the slow but steady improvement of Thailand's national

economy.<sup>11</sup> Indonesia and Philippines have also managed to keep their slum growth rates at relatively low levels, 1.4 and 1.9 per cent respectively, thus qualifying for the ‘stabilising category’. Despite its economic development, China has the world’s largest slum population of more than 195 million. The country is included in the ‘at risk’ category because it has an annual slow growth rate of 2.3 per cent. Cambodia, a small country that still has not recovered from the genocide perpetrated by the Khmer Rouge regime in the 1970s, more than doubled its slum population from 870 thousand to over two million between 1990 and 2005 with an annual slum growth rate of 6.1 per cent.

Surprisingly the countries of West Asia generally show higher slum growth rates than the other regions of Asia. For example, Iraq has a slum growth rate of 2.5 per cent, Jordan 4.3 per cent, Saudi Arabia 3.8 per cent and Syria 2.3 per cent. Even higher growth rates are witnessed in Yemen with 5.0 per cent and Oman with 5.4 per cent. The two latter countries are therefore included in the ‘off track’ category. One needs to bear in mind that the countries of West Asia start at a considerably lower level of slum prevalence than the countries of South Asia.

Tunisia and Egypt are regarded as being ‘on track’ whereas Algeria and Morocco are considered as being ‘at risk’ with slum growth rates of between two and three per cent annually. UN-Habitat regards Latin America as the best-performing region. Cuba and Uruguay are among the few countries in the developing world that are ‘on track’. Highly populated countries such as Brazil and Mexico are performing fairly well at keeping their slum growth rates down. Haiti, Bolivia, Guatemala, Venezuela, Peru and Nicaragua are however not performing sufficiently well and are classified as ‘off track’ with regard to slum growth rates.

### **3.3 State of the world slums**

As mentioned, UN-Habitat 2006 employs five indicators to assess slum prevalence. The first indicator is lack of *durable housing*. Operationally it takes into account whether the floor of the living quarters of the household under study is constructed out of permanent materials (the ‘floor’ criterion). A vast majority of all households worldwide satisfy the ‘floor’ criterion, but estimates suggest that approximately 18 per cent of all housing units world-wide do not meet this criterion, which in total numbers nevertheless is a staggering figure of 125 million units. The

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<sup>11</sup> UN-Habitat 2006, p. 166.

estimates also suggest that 25 per cent of all household buildings do not conform to urban building regulations.

The second indicator is lack of *sufficient living space*. Operationally sufficient living space is defined as a household with less than three persons per room. Crowding into small and poorly ventilated spaces significantly increases the risk of transmission of infectious diseases. Approximately 20 per cent of the world urban population was living in overcrowded dwellings in 2003.

The third indicator is lack of access to *safe drinking water* (improved water). A number of disparities exist when it comes to access to safe drinking water. First, the world's urban population have generally speaking a higher coverage of access than the greater part of the world's rural population. Some 95 per cent of the world urban population enjoy access to safe drinking water, whereas only 72 per cent of the world rural population. Secondly, people in the most developed countries consume on an average ten times as much drinking water per capita than people in the less and least developed countries. Thirdly, there are vast differences in water access and water management between the developed and the developing countries.

Region	Access to sufficient living space 2003 in (per cent)	Urban population in 2003 (thousands)	Population lacking sufficient living space (thousands)	Distribution of urban population lacking sufficient space in developing world
North Africa	90.5	77 910	7 429	1.9
Sub-Saharan Africa	73.1	251 166	67 629	16.8
Latin America & Caribbean	88.2	417 229	49 176	12.2
East Asia	91.5	564 871	47 813	11.9
South Asia	65.0	448 738	156 849	39.1
Southeast Asia	73.1	228 636	64 448	15.3
West Asia	91.1	124 370	11 111	2.8
<b>TOTAL</b>			401 456	100.0

Table 16: The criterion 'sufficient living space' Sufficient living space coverage among urban population by region 2003. Source: UN-Habitat 2006, p. 70. Column 1 gives the percentage of the population in each respective region with access to sufficient living space. Column 4 gives share of the total world population lacking sufficient living space. Tables 17 and 18 are organised according to the same principle.

Fourthly, there are vast differences in the quantity consumed and the quality of the water between affluent and impoverished households in the very same city in developing countries. Furthermore, people living in low-income areas often have to pay more for their water than those living in high-income neighbourhoods. The operational definition of 'improved water supply' is access to 20 litres of improved water per person and per time unit which is defined locally and thus varies. The water should be available without excessive effort and time to access, and it should be affordable.

Piped water accessible from a tap is enjoyed by 62 per cent of all city dwellers. Another 10.4 per cent of the world's urban dwellers had access to piped water from a public tap, and 8 per cent have to access water manually from wells. This leaves an unexplained 18.8 per cent of all urban households. The problem is lack of information and differences in definitions and methods of computation. We may assume however that the only access to water for a significant share of these urban residents is from rivers and streams, water which by definition

<b>Region</b>	<b>Access to safe water source 2003 (per cent)</b>	<b>Urban population in 2003 (thousands)</b>	<b>Population lacking safe water (thousands)</b>	<b>Distribution of urban population lacking safe water in developing world</b>
<b>North Africa</b>	94.9	77 910	3 960	2.4
<b>Sub-Saharan Africa</b>	82.0	251 166	45 210	27.6
<b>Latin America &amp; Caribbean</b>	95.2	417 229	20 166	12.3
<b>East Asia</b>	92.5	564 871	42 365	25.9
<b>South Asia</b>	94.3	448 738	25 428	15.5
<b>Southeast Asia</b>	91.0	228 636	20 577	12.6
<b>West Asia</b>	95.1	124 370	6 115	3.7
<b>TOTAL</b>			163 822	100.0

*Table 17:* The criterion 'access to improved water'. Improved drinking water coverage among urban population by region. Source: UN-Habitat 2006, p. 77.

is not safe or improved. UN-Habitat estimates that the number of people without access to improved water will double between 1990 and 2010.

Africa as a whole has the lowest coverage of access to improved water in the world. Only 64 per cent of the total population has access to improved water. The rural areas are especially hard hit where only 50 per cent of the population has access to safe water. Thus the situation is better in

the urban areas with 85 per cent coverage. Sub-Saharan Africa is worse off than North Africa (82 per cent access to safe water in urban areas, and 45 per cent access in rural areas. Some cities in sub-Saharan Africa are in a more precarious situation with regard to piped water. For instance, 13 per cent of Luanda's and 15 per cent of Kampala's residents lack piped water. The situation is considerably more serious in Kigali where 35 per cent of the residents lack piped water.

The urban areas of Asia are on the whole slightly better off where 70 per cent of the urban residents have access to piped water and 93 per cent to safe water. There are vast regional differences however. In Southeast Asia only 45 per cent of the urban population have access to piped water, which can be compared to the 79 per cent of urban dwellers in West Asia. Yet, two-thirds of the world's population that is lacking safe water live in Asia. Both urban and rural dwellers add up to 680 million people lacking safe water in Asia. The situation for Latin

Region	Access to improved sanitation 2003 (per cent)	Urban population in 2003 (thousands)	Population lacking improved sanitation (thousands)	Distribution of urban population lacking improved sanitation in developing world
North Africa	89.4	77 910	8 245	1.5
Sub-Saharan Africa	55.1	251 166	112 815	20.1
Latin America & Caribbean	84.2	417 229	66 061	11.8
East Asia	69.4	564 871	172 756	30.8
South Asia	67.0	448 738	148 084	26.4
Southeast Asia	80.0	228 636	45 727	8.2
West Asia	94.9	124 370	6 322	1.1
<b>TOTAL</b>			560 011	100.0

Table 18: The criterion 'improved sanitation'. Improved sanitation coverage among urban population by region. Source: UN-Habitat 2006, p. 86.

America and the Caribbean is considerably better. The coverage of improved water reaches 95 per cent of the urban population and 69 per cent of the rural population.

A fourth and in many respects the most crucial indicator is access to *improved sanitation*. The definition of 'improved sanitation' implies that a household should have access to a safe system for the disposal of human excreta. This could be in the form of a private toilet or a public toilet shared by a maximum of two households. In urban areas this implies direct connection to a

public, piped sewer or direct connection to a septic system, or ventilated pit latrines. The definition also includes 'acceptable local technologies'.

According to UN-Habitat more than a quarter of the urban population in the developing world lack of access to improved sanitation and more than 40 per cent of the world's total population lives without access to improved sanitation. This means that 2.5 billion people lack access to improved sanitation, of whom virtually 100 per cent are living in the developing world. The vast majority lives in Asia (76 per cent; 1.98 billion) and a significant number live in Africa (18 per cent; 470 million). The number of people living without access to adequate sanitation in Latin America and the Caribbean is smaller but still unacceptably high (5 per cent; 130 million).

As many as 560 million urban dwellers are living without improved sanitation. This corresponds to 27 per cent of the developing world's urban population. It is estimated that the number of deaths due to poor sanitation and hygiene, leading to the spread of infectious diseases, is as high as 1.6 million per year. The problem is that lack of improved sanitation is not always considered a priority among urban dwellers and local decision-makers which may explain why this is the shelter deprivation with the lowest coverage. UN-Habitat's estimate is that 300 million people, 10 per cent of the world's urban population, defecate in the open or use unsanitary bucket latrines. In North Africa urban coverage increased from 84 per cent in 1990 to 89 per cent in 2003. Because of rapid population increase and high rate of urbanisation the coverage in sub-Saharan Africa has not changed since 1990 but remains at a 54 per cent level, which in fact however has drastically increased the total number of people lacking adequate sanitation.

For East Asia coverage has increased from 64 to 69 percent, for South Asia from 54 to 67 per cent and for Southeast Asia from 67 to 80 per cent. For West Asia however the coverage has actually gone down from 96 to 95 per cent. Latin America and the Caribbean experienced a modest increase from 82 to 84 per cent.

### **3.4 Environmental vulnerability**

The UN-Habitat report from 2007 is concerned with policies of enhancing urban safety and security. The report analyses several different threats to urban security and safety. One of the major threats is environmental. Risk factors underlying threats to urban safety need to be examined at various geographic and spatial levels. Ultimately it is individual human beings that

are affected but the risk factors need to be pinpointed at appropriate levels – neighbourhood (community), urban agglomerations, national and global level. Identifying the appropriate level has to do with analysing the complexities of the problem and allocating effective policy responses.

Some examples might illustrate the problem. Quite a few major urban agglomerations are located to regions in which there is a long record of seismic activity. Geology has not yet acquired a level of theoretical sophistication by means of which major earthquakes and volcanic eruptions can accurately be predicted with regard to point in time, exact location and magnitude. Several large conurbations are located along the active San Andreas fault in California (among them San Francisco, San José and Los Angeles). The Japanese islands are also locations of seismic activity affecting major conurbations. Within the past ten years major earthquakes have hit urban areas in China, Pakistan, Japan, Iran and Turkey. The basic cause of deaths in earthquakes is that buildings collapse burying people in rubble that can be several meters deep. In seismically active regions it is all the more important that constructions are built in such a way that they are reinforced to withstand the geological forces involved. Shanty towns are not built to be earthquake safe. Another example: Geologists are certain that Mount Vesuvius within a not too distant future is going to have a major eruption. Some of the poorest neighbourhoods of the greater Naples conurbation are likely to be hit. Man cannot rein the enormous forces involved in seismic activity, but these forces can be monitored. And above all, urban development can be prevented from being situated at the most exposed locations, and the most harmful consequences of seismic activity can be avoided if adequately reinforced buildings are constructed. There is, it appears, almost always a man-made side even to natural disasters. There are means to reduce vulnerability.

Vulnerability is thus a key concept. It has appeared in a number of disciplines in the study of poverty, sustainable livelihoods and food security. Vulnerability is defined as ‘the probability of an individual, a household or a community falling below a minimum level of welfare, or the probability of suffering physical or socio-economic consequences as a result of risky events and processes and their inability to effectively cope with such risky events and processes.’ (UN-Habitat, 2007, p. 23). One of the most important socio-economic determinants of vulnerability is poverty. The urban poor are more exposed to risky events, be they with origins in the human life world (crime, terrorism) or in the natural world (seismic activity, freak weather conditions etc.). The report identifies three fundamental components: risk, response and outcome.

Specific risky natural and man-made or hazards include floods, seismic disasters, hurricanes, technological disasters and war. Examples of major responses are *ex ante* measures such as effective spatial design of cities as well as the design of individual buildings. Insurances belong to the *ex ante* measures. *Ex post* measures involve emergency response systems and reconstruction of damaged infrastructure. Key outcomes may include physical injury, loss of income and assets as well as emotional and psychological stress. Western psychiatry has paid a lot of attention to so called post traumatic stress disorders (PTSD) over the past two three decades, the causes of which are attributed initially to extremely stressful experiences of political violence and war as well as of natural disasters, and to secondary factors of what happens after the disaster – the response factors in other words.

The environmental problems that require serious consideration with regard to urban growth, in particular in the developing world, are of several kinds. We have already dealt with the first issue – living conditions of the poor residing in the slums of rapidly growing urban conglomerations. Problematic access to safe water and lack of secure sanitation and sewage are the most imminent problems affecting the lives of slum dwellers. In addition one should mention air pollution from hundreds of thousands of old motor vehicles lacking efficient exhaust cleansing (affecting not only the poor quarters), polluted rivers and water fronts, polluted land from disbanded industrial enterprises upon which slum dwellings often may be erected, problems of congestion and general lack of public infrastructure. The current garbage crisis in Naples, a major city in one of the European Union's leading countries, illustrates how vulnerable a big city can be when public infrastructure breaks down. In the case of Naples the city authorities have as of July 2008 been unable to come to terms with the companies responsible for garbage disposal (companies controlled by organised criminal networks). Streets become filled with garbage that is not disposed of. Tourists chose other destinations. The economy of the Naples region, which is heavily dependent on tourism, suffers a severe blow.

An additional environmental problem many poor countries face is the import of industrial refuse from the rich countries of the north. This business does generate some income for a few 'entrepreneurs'. However, once the refuse is landed in the port of a developing country it is often dumped on available sites in the vicinity of the port, sites that quite frequently tend to be situated in the vicinity of growing shanty towns. The imported refuse may consist of barrels of lethal chemicals, electronic waste products from computers, television sets and radios, but also of parts

from old refrigerators, cars, etc., that have not been recycled, and possibly cannot be recycled for economic reasons, in the sending country.

A principal environmental threat that the international community only quite recently has become aware of is the man-made phenomenon of global warming and climate change due to emission of green-house gases. There is an increased frequency of extreme weather events which most meteorologists now put down to global warming. In recent years the world has experienced an increase in hurricanes of higher magnitude than earlier, increased rainfall and flooding in some regions, and decreased rainfall with droughts in other regions. These changes affect agriculture and other forms of economic activity. The hurricane Katrina flooded New Orleans causing an immense destruction of property although fortunately the loss of human lives was relatively small given the magnitude of the disaster. Loss of lives would be grossly magnified if a cyclone of Katrina's magnitude were to directly hit an urban area in a developing country, as evidenced from the devastation caused by the tropical cyclone hitting low-lying coastal areas of Burma in the spring of 2008. The resulting loss of lives was in the range of 100 000. Although no major urban area was hit the affected coastal region is densely populated agricultural land. Information about the disaster provided by the military regime may not be entirely accurate. Since the regime would not permit international aid to enter the country immediately the catastrophe was certainly aggravated. A cyclone of similar magnitude and intensity directly hitting Dhaka or Kolkata would in most probability lead to total devastation of the enormous slum areas surrounding these megacities.

It is not possible to list the cities and urban agglomerations that are most prone to be seriously affected by extreme weather conditions related to global warming within the space of this report. Low-lying countries and urban areas within these countries are at risk should the ocean level rise as a result of melting of landlocked ices of Greenland and the Antarctic. Besides the low countries of Europe, Bangladesh, parts of India, China, Southeast Asia and numerous islands in the Pacific and Indian Oceans are at risk. Droughts with the additional risk of desertification have hit countries in the African Sahel belt just south of the Sahara and various countries of Central Asia. While these regions in general are sparsely populated there will nevertheless be 'environmental refugees' who make their way to urban centres in the country in question, or to neighbouring countries. A general projection is that environmental disasters related to the climate change are likely to hit the least developed world harder than the most developed world.

The outcome of climate shocks, environmental calamities and natural disasters depends to a large extent on the policy responses. The United Nations *Human development report 2007/2008* addresses the question. This report deals with the impact of climate change on human development. Between the years 2000 and 2004 some 262 million people were affected by climate disasters annually. The impacts were however spread unevenly across the planet. In the developing countries one in nineteen persons was affected between 2000 and 2004 compared to one in 1 500 in the OECD countries. For example, 68 million people were affected by flooding in East Asia and 40 million in South Asia. In sub-Saharan Africa about ten million were affected by drought. Approximately 98 per cent of those affected by climate disasters reside in the developing world.

The report differentiates between risk and vulnerability. The report defines the difference as follows:

{[Risk is] about exposure to external hazards over which people have limited control, vulnerability is a measure of capacity to manage such hazards without suffering long-term potentially irreversible loss of well-being. ... The process by which risk is converted into vulnerability in any country is shaped by the underlying state of development.} (UNDP 2007/2008, p 78).

Poverty, disparities in human development and inequality, lack of climate-defence infrastructure and lack of access to insurances are all factors that convert risk into vulnerability.

The report speaks about 'low development traps' and seeks to identify ways in which climate shocks can affect human development. The first trap identified is 'before-the-event losses in productivity'. Because poor people lack the capacity to manage risk they are less inclined to engage in high-risk investment. For example, peasants make decisions that are less risky but that also yield less returns. The second trap is that the poor face human costs of coping with climate shocks. Food shortages will follow general loss of production, push up prices but simultaneously press down agricultural earnings. One of the most serious impacts is reduced intake of nutrition by which children and pregnant women are especially hard-hit. The report identifies a third trap in the 'erosion of physical capital'. When people sell their assets the prices of these assets drop, which in turn generates increased inequality between the poor and the affluent since the affluent have other means of coping with climate shock than selling out their assets. The fourth way in

which a climate shock affects human development is through the ‘erosion of human opportunities’. For example, a climate shock caused by drought or by flooding will limit food availability, thus increasing prices, which in turn will force people to cut down food consumption. A number of serious consequences may follow – reduced school attendance, increased vulnerability to infectious diseases and fewer resources for medical treatment.

The after-shocks of a climate disaster imply that people living under conditions of poverty are by and large unable to reverse their conditions and expand their capabilities. Climate shocks tend to sustain low-development traps over long periods of time. They trigger a circle of vicious events, which include ill-health, unemployment, human conflict and market collapse.

### 3.5 Democracy and political stability

In projecting the situation of urban environments in the developing world the issues of democracy and political stability need to be addressed. Democracy as a system of governance will not in itself affect urban growth. The evidence is that urban growth is at least as high in countries that are politically undemocratic as it is in countries with a long history of democratic rule. Neither does it seem as though political stability *per se* affects the rate of urban growth. A politically unstable country such as Pakistan has had an enormous urban growth. Politically stable countries (democracies as well as countries with authoritarian rule) have also seen large urban growth.

However, political stability, and even more importantly, democracy affect living conditions in all parts of the urban environment. Cities and urban areas such as Beirut, Gaza, Mogadishu and Baghdad provide examples of threats to urban living in societies where civil society has broken down or is largely absent. Rival militia groups terrorize civilians.

We have used indicators developed by the World Bank to assess the political governance of African and Asian states only. The World Bank identifies six so called governance indicators:

- Voice and accountability
- Political stability and Absence of violence
- Government effectiveness
- Regulatory quality

- Rule of law
- Control of corruption

The World Bank has presented an assessment of all states on the basis of political development over the period 1996 – 2004 (Kaufman, Kraag and Mastruzzi, 2005).<sup>12</sup> We have made use of the indicators Voice and accountability (VA) and Political stability (PS). The index values for VA and PS range from 0 to 100. Table 19 is a matrix consisting of sixteen cells in which states have been classified according to their assessed values on VA and PS.

Obviously a correlation exists between voice and accountability on the one hand and political stability on the other. Well-developed political democracies are normally characterized by political stability. It is rather difficult to conceive of a well-developed political democracy, which at the same time shows every sign of political instability. In states where political stability is low and where voice and accountability (political democracy) is weak societal upheavals are likely to occur. In cell 1 of table 19 twelve states are listed, which all have very low values for voice and accountability and where at the same time political stability is very weak. These twelve states are, or have recently been, involved in civil wars (Afghanistan, Sudan and Somalia), or are states where political repression is extremely harsh (Burma and Zimbabwe) or where civil society has broken down (Ivory Coast, Congo Kinshasa and Liberia).

Pakistan is a densely populated state for which democracy is set aside and where political stability is judged to be exceptionally weak. A military junta has been in power for many years. Several wars of short duration have been fought against India. The conflict concerning Kashmir is not yet resolved. Benazir Bhutto, leader of the democratic opposition and presidential candidate in upcoming elections, was assassinated in December 2007. Pakistan has recently made itself known as a country where certain Muslim factions recruit and train terrorists. Obviously there is considerable risk that developments will escalate beyond the authorities' control. This could entail conflict between the military regime (supported by the USA) and militant Muslim factions. In view of Pakistan's weak political stability urban violence could escalate whenever the government loses control. Karachi, Islamabad and Rawalpindi along with several other large metropolitan areas in Pakistan have been sites of terrorist actions, assassinations and random bombings. These cities host cells of political extremists who recruit new followers among the urban poor.

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<sup>12</sup> An updated version of the World Bank assessment stretching up until 2007 is available. For technical reasons we were however unable to access the updated site. For purposes of this report we have used information presented in our previous report on projections of international migration (Westin & Westin, 2005).

VA Voice and accountability	PS Political Stability			
	PS < 15	15 ≤ PS < 30	30 ≤ PS < 60	60 ≤ PS ≤ 100
VA < 15	Burma, Sudan, Congo Kinshasa, Uzbekistan, Iraq, Somalia, Zimbabwe, Ivory Coast, Afghanistan, Pakistan, Liberia, Central African Republic [1]	North Korea, Turkmenistan, Laos, Iran, Cameroon, Syria [2]	Eritrea, Libya, Saudi Arabia, China, Vietnam, Kazakhstan. [3]	[4]
15 ≤ VA < 30	Burundi, Tadz-hikistan, Chad, Nepal, Yemen, Azerbaijan, Algeria, Congo Brazzaville, Bangladesh [5]	Guinea, Ethiopia, Rwanda, Kirghizstan, Egypt, Angola, Libanon. [6]	Tunisia, Cambodia, Jordan, Armenia [7]	Arab Emirates [8]
30 ≤ VA < 60	Nigeria, Uganda, Indonesia, Sri Lanka, [9]	Kenya, Philippines, India [10]	Guinea-Bissau, Morocco, Malawi, Kuwait, Burkina Faso, Zambia, Malaysia, Tanzania, Turkey, Mozambique, Niger, Madagascar, Senegal, Thailand, Mali, Ghana, Sierra Leone [11]	Hong Kong, Mongolia [12]
60 ≤ VA ≤ 100	[13]	Israel [14]	South Korea, South Africa. [15]	Taiwan, Japan. [16]

Table 19: Classification of states by Voice and accountability (VA) and Political stability (PS) for 2004.  $0 \leq VA \leq 100$  and  $0 \leq PS \leq 100$  for African and Asian states. Latin American and Caribbean states are not included. Source: [www.worldbank.org/wbi/governance/govdata](http://www.worldbank.org/wbi/governance/govdata). See also Holzman & Münz (2004). Countries according to risks of political upheavals:

Very great risk

Large risk

Some risk

Little or no risk

States that more or less meet the requirements of political democracy in terms of voice and accountability may nevertheless be politically unstable. Six such states are listed in cell 9, among them the heavily populated states of Nigeria and Indonesia. Both these states are the

scene of regional conflicts based on cultural, economic, religious and social differences. In both countries ethnic minorities strive to gain political autonomy. An extended civil war took place in Nigeria in 1967 – 1970 when the south-eastern region declared its independence as Biafra. Today the country is subject to a latent political conflict between the northern region dominated by the Muslim Hausa people and the southern regions, which mainly are Christian, and the home of the Yoruba and Ibo peoples.

In the long-term perspective it is most likely that the lack of democratic influence through voice and accountability will be at the root of political upheavals. The states listed in cells 2 and 3 (hardly any democratic institutions), which at the same time are regarded to be more or less politically stable, present the greatest future risks. How long will North Korea be able to persist as the dictatorship it is today? What pressures will the world exert on North Korea to change its system? Furthermore, how long will the Mullahs govern Iran? What role will Iranians in exile play to bring about a change of government in Iran? In a twenty-five years' perspective political changes are most likely to occur in both North Korea and Iran. It is reasonable to project that opposition to authoritarian regimes will establish itself in urban areas rather than in rural districts in view of access to international connections and international information.

The really hard problem category is the group of states listed in cell 3 – little or no political democracy combined with sturdy political stability. This is equivalent to authoritarian one-party states where the government has all the instruments of oppression at its disposal to control its population, to imprison its opponents, to prohibit critical manifestations directed at the government and to restrict people's access to information. The fact that stability is reasonably high means that political upheavals are not imminent as for instance the case appears to be in Pakistan. However, in a twenty-five to thirty years' perspective it is reasonable to assume that political change will occur. The question is whether democratisation and liberalization will come about through peaceful transition or whether power holders will oppose a transformation of the political system.

China is a communist country in terms of governance, but it has introduced market economy on a grand scale. In the long term, maybe in a twenty-five to thirty years' perspective, it is doubtful whether these two organising principles are compatible. The Tiananmen Square massacre in 1989 serves as a reminder that the communist government did not (and possibly still does not) tolerate outspoken opposition. With growing affluence and internationalisation of the economy people in

China are apt to demand democratic rights and the establishment of civil society based on liberal rather than communist principles. Whether China can manage the transition from a one-party state to political liberalization, a multi-party system and democratisation remains to be seen. We project that political demands of democratisation will be voiced in the global megacities of China. We must ask ourselves if it would be possible for the Chinese government to get away with a Tiananmen Square massacre in the near future. We think not, but it depends of course on what pressure the international community can exert on the government, and what support the domestic opposition can expect from the international community. With increasing liberalisation we have to expect demands of autonomy, not only from Tibetans, Turkmenians, Mongols and other non-Chinese people but also from peoples in southern and western China that increasingly are beginning to 'ethnify' themselves. Will an economically well developed and democratic state controlling the territory of what today is the People's Republic of China be able to hold together? What are the chances that the communist regime cannot handle the powerful tide of change that economic development already has triggered? If the political forces of change on the other hand lead to civil war and political chaos a refugee emergency of enormous proportions may well arise. Urban development in China is likely to hold a seed of change.

#### 4. Concluding words

We have presented the facts of urban growth as they come out in current statistics today. We have reported on several projections made in different but relevant domains by two international organisations concerned with long-term projections – The United Nations and its various expert panels and The World Bank. We have sought to integrate the available information to make projections stretching two, three or four decades ahead into the future. The findings may be summarised as follows:

- The global population is expected to increase from the present 6.7 billion to 9.2 billion in 2050.
- Almost all the increase of population is expected to take place in the less and least developed regions of the world.
- The least developed regions with an index value of less than 0.700 on the World Development Index will remain at a low level of economic development and not improve their ratings on this index by 2030. This applies to most of sub-Saharan Africa and large parts of South Asia.
- Some East Asian and Latin American states will improve their economic output and distribution of wealth so that they will join the most developed regions of the world with a value of more than 0.850 in the World Development Index. China is by far the most important player in this scenario.
- Almost all the projected increase in population will be urban rather than rural, although there will be significant country differences.
- The bulk of urban increase will be in cities and agglomerations of less than 1 million inhabitants.
- Large cities, very large cities and megacities in the developing world will however also increase their populations at an accelerating speed.
- Most of the population increase in these very large conurbations in the developing world will be located to ever expanding slums and shanty towns on the outskirts of the core city.
- In the least developed countries rates of slum growth parallel those of urban growth.
- Urban growth in the least developed countries does not appear to be a response to economic growth (not a pull factor), but rather a response to the incapacity of rural

livelihoods to manage to feed the increase in population resulting from the demographic transition (a push factor in other words).

- Living conditions in urban slums are harsh, and involve a number of risks related to mass poverty, spread of infectious diseases, crime, insecurity of tenure and lack of societal infrastructure (physical and social).
- With the ongoing global warming, the world is likely to experience an increase of extreme weather conditions. Slum dwellings on developing countries are generally more vulnerable to natural disasters (hurricanes, flooding, earthquakes etc.) than other neighbourhoods.
- In countries haunted by internal political conflict and where civil society has broken down militia groups will combat each other with heavy arms in urban areas.

Like other cities of the world, the large cities in the developing world have a centre or core region. Even in the least developed countries one will find shopping malls, banks, offices, hotels, restaurants, government departments, universities, paved streets with side-walk cafés and high-rise buildings. The city core will hardly differ in any significant way from urban centres in the developed world. Possibly the presence of street children who have dared to enter the affluent parts of the city may reveal the fact that this is a city in the developing world. However, most of the population of cities such as Dhaka, Kolkata, Mumbai, Lagos, Kinshasa and Nairobi live in the slums making up a greater part of the urban area. One characteristic of slum areas that has been mentioned in this summary is lack of functioning physical and social infrastructure. Another and perhaps revealing characteristic is that life forms in a sense are semi-rural (the close presence of animals). There are several possible responses to these issues.

One response has to be theoretical and conceptual. We (the scientific community) would need to reconceptualise our understanding of the urban-rural so called divide. We should not take the urban conglomerations of the developed world as a point of reference when considering the urbanisation processes taking place in the developing world. What we face is a ruralised urban environment and an urbanised rural landscape.

The mega-cities of the developed world seem to function more or less. They do have problem districts characterised by higher rates of unemployment than elsewhere, widespread social welfare dependency, housing that does not meet reasonable standards of welfare, and higher crime rates than for other parts of the urban environment, to mention a few significant social indicators.

Mega-cities in the developed world do however on the whole have a functioning physical and social infrastructure for transportation, distribution, waste management and societal control. Growing mega-cities in the less developed world are at greater risk of not managing their problems of infrastructure. Some countries are doing much better than others. Egypt and Thailand have for instance managed to reduce slums in the mega-cities of Cairo and Bangkok. Although China has the largest slum population of the world, it is reasonable to project that a change is due sooner or later. Necessary urban infrastructure will gradually be set up as the national economy improves.

The really serious problem facing the world is the slum-growth in rapidly growing cities and mega-cities in the least developed countries, countries where population growth is the highest and where the economies are the weakest. The question that we must ask ourselves is whether the many gigantic concentrations of poverty expected to be a reality in merely a few decades to come in the least developed countries are biologically, ecologically or economically sustainable. Current trends and projections point towards an ecological collapse of the gigantic slum areas. The ecological collapse of a megacity will have far-reaching consequences for the international community – be it in terms of diseases, criminal networks or political extremism and terrorism.

A second response has to be policy oriented. What actions should the international community take? This is no easy question to answer, but a minimum requirement would be to work unilaterally through the United Nations to ensure that the millennium goals will be met.

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