An aerial view of Macau, China. Image © Richard Baker/Corbis.

Sustainable Cities

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Welcome by Frank A. Bennack, Jr.

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Cities will face four main challenges over the next half century: urban population growth in developing countries, population aging, environmental changes, and governance.

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Presentation

I am going to take a global perspective on cities in the next half century. Though the demographic statistics are imprecise, sometime in 2007 or 2008 the world will, for the first time, have more urban than rural people. By 2050, the world's urban population will probably double. If that happens, it will be necessary to build, in the next 40 to 45 years, urban infrastructure for as many additional people as the people now in cities.

The rural population of today's so-called more developed countries has been declining since the beginning of the twentieth century, while the urban population of these countries has been increasing slowly (see Figure 1). The

population of today's less developed countries has been predominantly rural; the rural population rose steeply but is now leveling off. Lately, the urban population in the less developed countries has been rising extremely rapidly and will overtake the rural population in the less developed countries within fifteen years. Rural populations will be declining everywhere before the middle of this century.

Cities will face four main challenges over the next half century. Urban population growth in developing countries is the first challenge. Urban populations grow in three ways: by people migrating from the countryside into cities; by rural areas growing into urban areas; and by births outnumbering deaths in existing urban areas – natural increase, in other words. Migration accounts for about 40 percent of urban population growth, and natural increase for about 60 percent. Until 1800, cities had higher death rates than birth rates. That has changed now; cities are a source of their own growth.
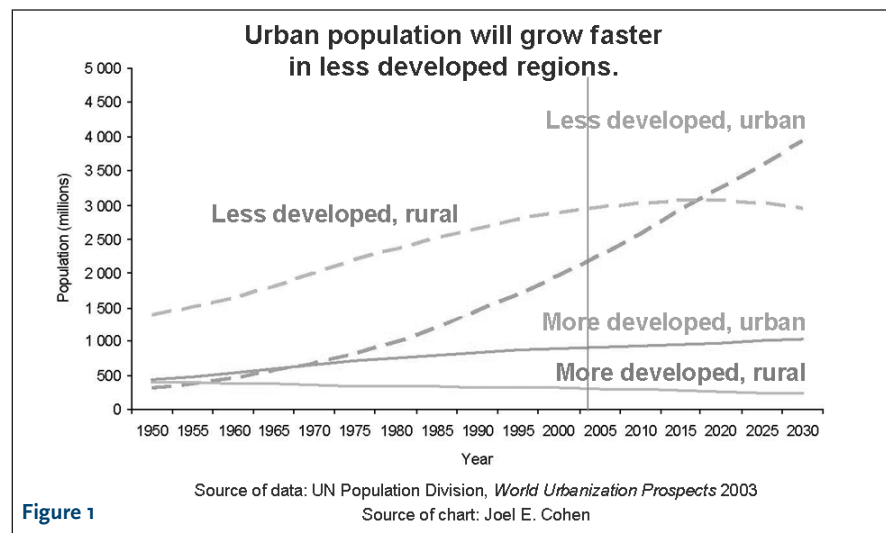

Figure 1

The second challenge cities face is aging, especially in developing countries, where rapid aging will interact with rapid population growth.

The third major concern is environmental changes, including climate change; vulnerability to infectious diseases; and limitations in resources like water, energy, and food.

A fourth challenge is governance. When a city outgrows its official political boundary, its government loses the capacity to solve the problems its people face, because governance is shared with surrounding entities. New York City has partially solved this problem by incorporating the five boroughs and by creating institutions of shared governance with neighboring states; a hierarchy of collaboration is necessary, from local commu-

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nity boards through state, regional, national, and international relations. Thus boundary overflow is one major challenge to governance. Another governance issue is congestion. A third is security in two senses: internal security to assure public order and protect the rights of minorities within a city, and external security to protect a city against its enemies. Employment to assure that people have the means to live in the city is a fourth issue. Fifth, and foundational for me, is inequity – ensuring that there are not such raw gaps between the rich and the poor that the city becomes unstable.

In my limited time here, I am going to talk only about the first two of these challenges: rapid urban population growth in developing countries and population aging (the increase in the *proportion* of elderly people in the population). The challenges of the environment and governance are equally important topics for another conversation.

The urban population of the world will grow roughly twenty-two-fold from 1900 to 2030.

In 1900, 210 million people lived in cities (about two-thirds of the current U.S. population). According to the UN Population Division's *World Population Prospects*, just under 5 billion people will live in urban areas in 2030. Over the next few decades, the urban areas of less developed regions are projected to absorb nearly all the population growth expected worldwide. Virtually all of the increase in the world's population is going to happen in cities in presently poor or middle-income countries.

This projected increase depends on assumptions about the future. Which future we get depends on which assumptions turn out right. The world's population is now about 6.7 billion. If fertility rates continue as they are today, global population will grow to almost 12 billion by 2050. But the UN Population Division anticipates that the average number of children born per woman in a lifetime will continue to fall approximately as it has over the last half century. If so, the global population of 2050 is projected at 9.1 billion (in the so-called "medium" projection). If the average woman has half a child more than anticipated in the medium projection, then the population will grow to 10.6 billion by 2050 (in the so-called "high" projection). If the average woman has half a child less than anticipated in the medium projection, then the population will grow to 7.7 billion by 2050 (in the so-called "low" projection). A difference, on average, of one child per woman per lifetime from now to 2050 entails a difference in 2050's world population of 2.9 billion people – the difference between 10.6 billion people and 7.7 billion people.

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The future is very sensitive to what we do starting now – and in particular to how much we invest in the education and health of children worldwide, especially girls, especially the poor. In general, people who are educated take greater interest in the quality than in the quantity of their children.

Are the added billions of people going to live in big cities or in villages? About half of the world's people live in cities of 500,000 or fewer. Mid-sized cities, with populations of half a million to a million, have been the central trend for the last 25 years, and we expect that to remain the case in the future.

Between 1900 and 1950, the world added a million urban people every 35 days. Between 1950 and 1980, a million urban people were added every 12 days. Between 1975 and 2000, every seven days. Between 2000 and 2005, every six days. From now to 2030, the world will need to accommodate another million urban people in poor and middle-income countries every five days. That is a great challenge.

Where are those new city folks going to live? China is the country with the largest population now, but not for long. India's population will overtake China's within the next couple of decades. Soon after that, Africa's people will outnumber both India's and China's. While Africa and Asia are the least urbanized areas in the world today, by 2030, Asia and Africa will rank first and second in the number of urban dwellers. By 2030, almost seven of every ten urban residents in the world will live in Africa or Asia.

The difficulties inherent in this colossal transformation are obvious, but it could have a bright side. Cities reduce the economic incentives for families to have many children. And it is easier to reach children with education in cities than in the countryside.

The second challenge I mentioned above is aging. From now on, the world will have

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fewer young people (up to age 4 years) than old people (aged 60 plus). By 2050 there will be three would-be grandparents for every young child. Globally, between now and 2050, the number of people aged 80 and older will increase by a factor of 4.5, while the number of people aged 60 and older will increase by a factor of 3. If the total population grows by a factor less than 1.4 between now and 2050, as the medium projection expects, the proportion of elderly people will

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rise dramatically. Because developing countries are starting with fewer elderly people now, their numbers of old people will increase even faster than the global average, by factors of 6 for those 80 plus and 4 for those 50 plus. The biggest increases in aging will be in the places least equipped to deal with it, namely, the developing world.

While the relative increase of elderly is most rapid in some developing countries, the greatest numbers of elderly are presently in more developed countries. Cities in developing countries will face an unprecedented confluence of rapid population growth and rapid aging. Will the world's cities be ready? How will whatever is in scarce supply be allocated between tomorrow's children and tomorrow's elderly?