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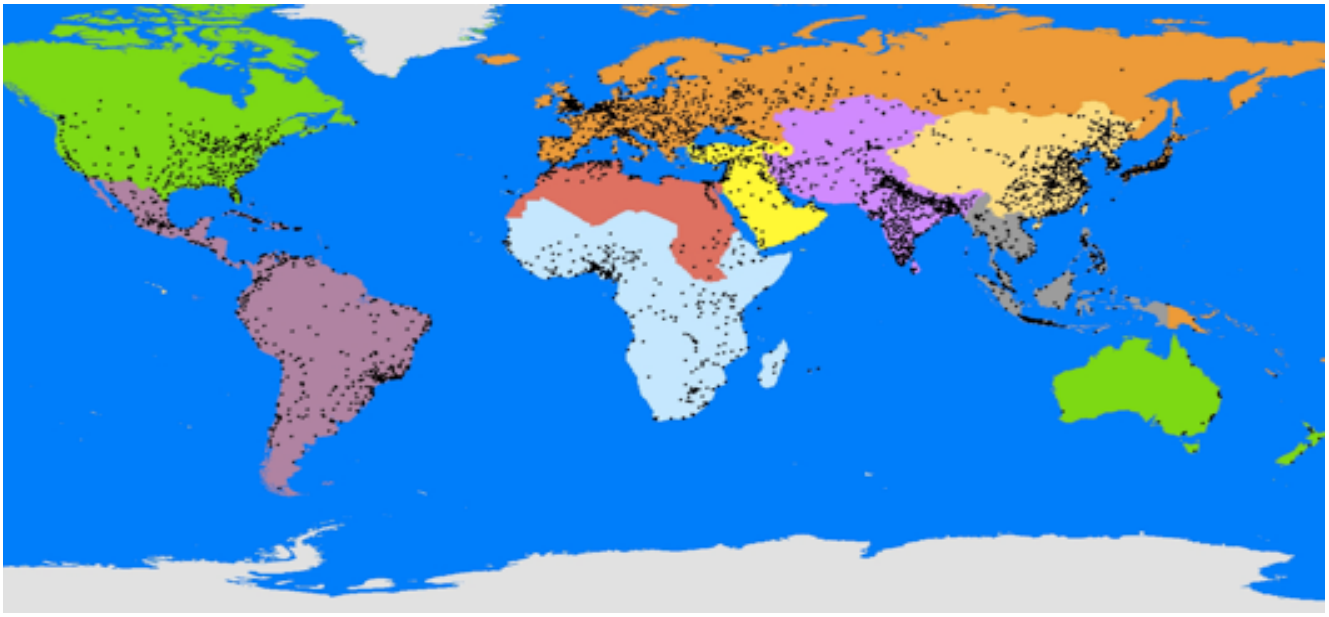
Making Room for a Planet of Cities

Transcript of Shlomo Angel's Remarks at World Urban Forum VI in Naples, Italy



3,646 cities with populations of 100,000 people or more in 2000

Thank you for inviting me to address this important subject, a subject I have been researching for the last decade.

Since the 1990s, urban planners in many countries have adopted a paradigm that I call the *Containment Paradigm*, also known as smart growth, growth management or the compact city paradigm. The essence of this paradigm is that the expansion of cities, often called by the derogatory name 'sprawl', should be contained and that instead the existing built-up areas of cities should be densified to accommodate all future population growth.

This paradigm may be appropriate in North America and Europe, where urbanization has largely come to an end, but I believe that it is inappropriate in countries still undergoing rapid urbanization. I will take the few minutes allotted to me to examine the evidence. Unfortunately, I cannot illustrate it to you with maps and charts here, as I hoped to do. For that you will have to consult my book, *Planet of Cities*, which was published by the Lincoln Institute of Land Policy today to coincide with this Forum, together with its companion volume, the *Atlas of Urban Expansion*.

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One key reason why the containment paradigm is inappropriate in rapidly urbanizing countries is that it fails to take into account the magnitudes of the expected global urban expansion. Let me begin with an historical example.

In 1811, New York had 100,000 people, living at the southern tip of Manhattan Island. That year, the city adopted an expansion plan, the iconic *Manhattan grid*, a plan that expanded its built-up area *seven*fold. Sevenfold! How many cities can claim this audacity of vision? By 1900, all of this planned area was largely built-up, densities almost tripled, and the city became overcrowded as never before.

New York then annexed its four neighboring counties – Brooklyn, Queens, the Bronx, and Richmond County, later renamed Staten Island. It then adopted a grid plan throughout the new area that again expanded its planned expansion area sevenfold. This area was filled up in only 30 years - not in 90 years as the one preceding it - as the city suburbanized, densities declined, and overcrowding became a thing of the past. Again, I ask you, what city can claim this audacity of vision?

Together with colleagues, I examined the expansion of a global sample of 30 cities, from Buenos Aires to Chicago, from Shanghai to Cairo, and from Bangkok to Lagos. On average, these cities expanded 16-fold during the twentieth century. In fact, they expanded 16-fold in 70 years, on average. In other words, from 1930 to 2000, the areas of each one of these cities expanded, on average, by sixteen times. I ask you: How could the expansion of these cities have been contained?

We also examined the expansion of a global sample of 120 cities between 1990 and 2000. Accra, the capital of Ghana, for example, offers a startling example of recent urban expansion. Between 1985 and 2000, the city's population grew from 1.8 to 2.7 million, a 50 percent increase, while its urban land cover expanded

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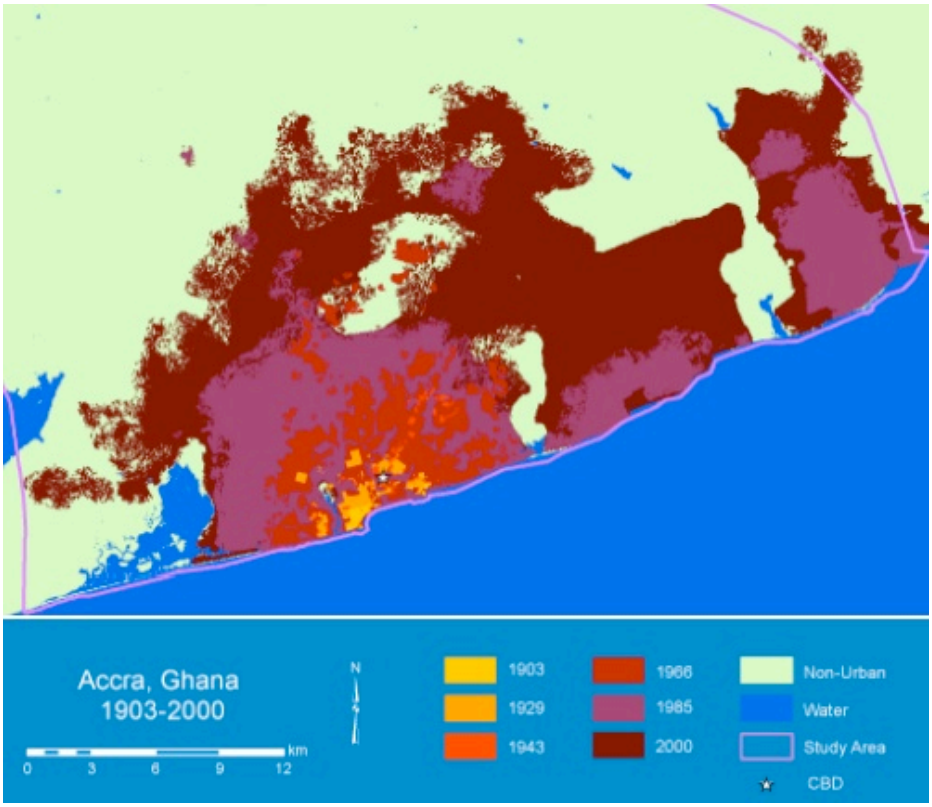
from 130 to 330 square kilometers, a 150 percent increase. Urban land cover in Accra grew at an annual rate more than twice as fast as its population.

Accra was not alone. The population growth rate of our sample of 120 cities averaged 1.6 percent per year, while the growth rate of their built-up area averaged 3.7 percent per year. The built-up area grew at twice the rate as that of the urban population. Why, because of the persistent decline in urban densities, a decline brought about by economic development coupled with cheap transport that can now be observed in many cities for a century or more. Given present trends, when the urban populations in cities in developing countries doubles in the next thirty years, their land areas can be expected to triple or quadruple. In Sub-Saharan Africa, urban land cover is likely to expand by 6 to 12 times.



Just as we cannot stop people from coming to cities, there is little prospect that we can stop cities from expanding. There is no evidence, to date, of any city that has succeeded in adopting policies that have resulted in significant densification. Even Portland, Oregon, that adopted an urban growth boundary in the late 1970s has become significantly less dense between 1973 and 2005.

And if containment in Portland, a city with a strong regulatory regime, has failed to create a more compact city, it is highly unlikely that containment will be successful in cities with weak regulatory

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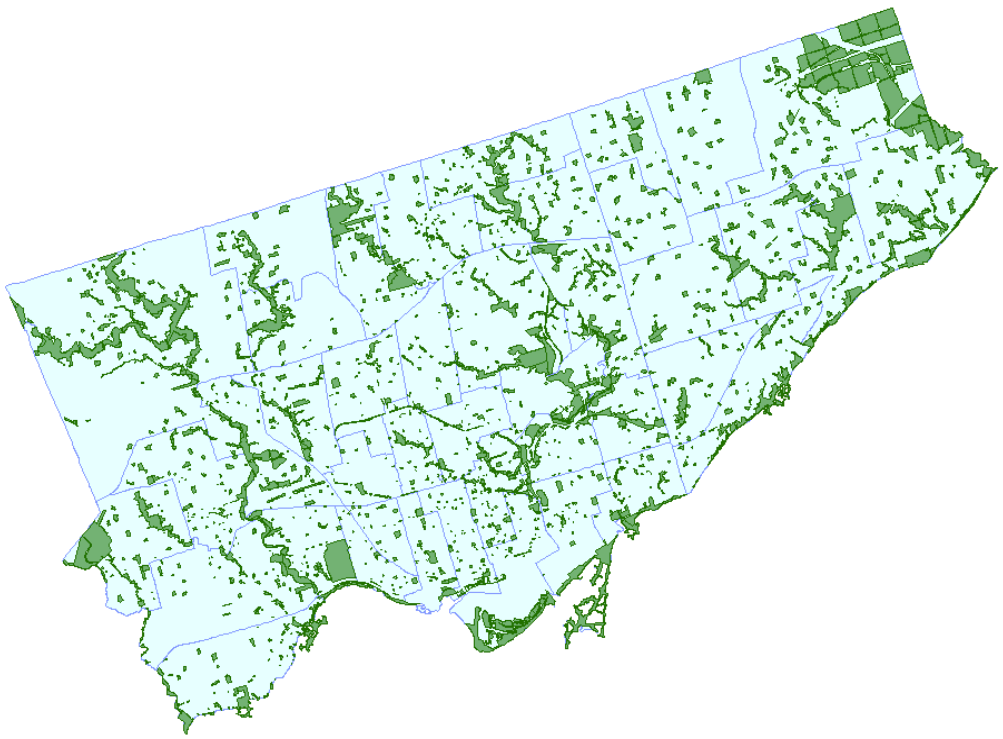
regimes and weak rule of law. And these are the cities that will experience rapid urban population growth. They are also the cities that already have high densities; that now have low energy use and low carbon emissions; and that therefore cannot benefit from containment and densification as cities in North America could, for example.

I worry that if containment is indeed successful then it will create land supply bottlenecks, as it did in Seoul, Korea, for example, in the 70s and 80s. These bottlenecks lead to increased land prices and quickly extinguish any hope that new land and housing on the urban periphery will remain affordable to the urban poor, the majority of new households in coming decades. Containment also leads to the demolition of the homes of the poor, as they did in Seoul and as it does in China today, to replace them with housing for the not-so-poor. China, which now effectively constrains urban expansion in the name of food security, is already experiencing a very serious housing affordability crisis.

I also worry that if containment is unsuccessful, urban expansion will take place in a disorganized, inefficient, and inequitable manner. More specifically, when cities expand without adequate attention to public works, arterial roads that carry public transport and trunk infrastructure will be in short supply. These arterial roads are typically not provided by the operation of the free market. Laissez-faire Bangkok, for example, suffers from a massive shortage or arterial roads and as a result it is one of the most congested cities in the world.



The hierarchy of urban spaces in Toronto, 2010

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The same is true for public open spaces. Unless a hierarchy of open spaces, large and small, is secured and protected aggressively in advance of urban expansion, cities will suffer permanently from shortages of public open space. Witness Sao Paulo, for example, one of the largest cities in the world with an area in access of 1,500 square kilometers largely devoid of any public open spaces.

I thus believe that instead of trying to contain urban expansion we should come to terms with it. Instead of the *Containment Paradigm* I propose to revive the *Making Room paradigm.* The making room paradigm, as I see it, is based on four propositions:

1. The inevitable expansion proposition states that the expansion of cities that urban population growth entails cannot be contained. Instead we must make adequate room to accommodate it.
2. The sustainable densities proposition states that city densities must remain within a sustainable range. If density is too low, it must be allowed to increase, and if it is too high, it must be allowed to decline.
3. The decent housing proposition states that strict containment of urban expansion destroys the homes of the poor and puts new housing out of reach of most people.
4. The public works proposition states that as cities expand, the necessary land for public streets, public infrastructure networks, and public open spaces must be secured in advance of development.

The Making Room paradigm can be readily transformed into an actionable program to help prepare individual cities for their expansion. At the conceptual level such a program may contain, at the very minimum, variations on four key components: a realistic projection of urban land needs; generous metropolitan limits enshrined in law; the selective protection of open space; and an arterial grid of dirt roads.

We estimate that if densities decline by 1 percent per year, 22 countries will have their urban land cover multiply tenfold or more by 2050. Under the 2 percent density decline scenario, 47 countries will be in that situation. The New York 1811 plan for a sevenfold increase in area may not be unrealistic after all for cities in rapidly urbanizing countries.

Urban land cover projections, even by sophisticated demographers willing to err on the high side, will be of little use unless they are put into practice by designating expanded administrative areas for cities and enshrining them into law. And the boundaries of these areas cannot be instituted by municipalities: They need to be created by State, Provincial, or National legislation.

The selective protection of open space is founded on the realization that there is no point in designating an area as public open space unless it can be aggressively protected from invasion by public and private developers. Simply painting it green on a plan is not enough. Sad to say, nothing remains of the linear open spaces in Le Corbusier's famous master plan for Chandigarh, India. They were all invaded.

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Arterial grid roads in Bangkok (R) and Detroit (L)

Finally, the essential element of the making room paradigm is securing the rights-of-way for an arterial grid of roads, 25-30 meters wide, spaced one-kilometer apart and covering the entire area of projected expansion. These arterial roads are needed to open up sufficient lands for urban expansion, so that land remains in ample supply and housing remains affordable. They are needed to organize the planning of the city, so that developers – formal and informal – build within a public plan, rather than the plan following their whims. They are needed to ensure an efficient public transport system covering the entire urban area, so that its carbon footprint can be reduced; and their rights-of-way need vto be secured *now*, when land prices on the urban fringe are still low and affordable.

This new or revisited paradigm, the Making Room Paradigm, is not a laissez-faire paradigm in the sense of allowing market forces to determine the shape of the cities of the future. It recognizes the importance of markets in the development of urban lands for residential, economic and civic activities, but it also recognizes their inability to ensure the creation of a hierarchy of public and private open spaces protected in perpetuity, or to establish an adequate network of arterial roads to make cities sustainable through the development of efficient public transport.

It is my hope that the evidence, the analysis, and the conclusions presented here may lay the foundation for a fruitful discussion of the fate of our planet of cities and what we can do to make it a better place for a long time to come.