Smoke and steam pours from the sprawling Mumbai slum of Dharavi. India is home to a third of the world's poor, and migration to city's is fast swelling the ranks of urban poor. **Photo: EPA**

21st Century Asian Cities:

Unique Transformation, Unprecedented Challenges

By Bharat Dahiya

The sustained economic growth of Asian economies in recent decades has brought into focus the important role played by cities. The first-ever United Nations report on *The State of Asian Cities 2010/11*[1] shows that they have led a unique transformation that is characterized by explosive demographic expansion, economic dynamism, local and national development and reduction of overall poverty in the region.

But unprecedented challenges remain, warns Bharat Dahiya, including growing urban poverty and inequality, environmental management, disaster risks and climate change, urban and regional planning and development, finance and governance.

1 UN-HABITAT (2010), *The State of Asian Cities 2010/11*, UN-HABITAT, Fukuoka. The report was prepared jointly by the United Nations Human Settlements Program (UN-HABITAT) and the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), in co-operation with the United Nations Environment Program and United Cities and Local Governments — Asia-Pacific Regional Section. The report reviews and documents the trends in inclusive and sustainable urban development throughout the Asia-Pacific region. Its preparation

drew on the latest data, good practices and examples, the rich knowledge of a broad range of specialists, and peer reviews by experts. The report is available online at: www.unhabitat.org/pmss/listItemDetails.aspx?publicationID=3078
2 The source of all demographic data mentioned in this article is: United Nations (2010) *World Urbanization Prospects: The 2009 revision. CD-ROM Edition — Data in digital form (POP/DB/WUP/Rev.2009)*, Population Division, Department of Economic and Social Affairs, United Nations, New York.

3 In 1990, four out of the 10 mega-cities in the world were in Asia. By 2010, Asia had half (12 out of 21) of the world's mega-cities.
4 Indermit Gill and Homi Kharas (2007) *An East Asian Renaissance: Ideas for Economic Growth*, The World Bank, Washington, DC.

ASIAN CITIES ARE HOME to over half of the world's urban population, or 1.76 billion people (2010 figures).[2] With such a large demographic base, Asia is urbanizing rapidly, and recorded the fastest urban growth across all regions in the world, from 31.5 percent of population living in cities to 42.2 percent between 1990 and 2010. Estimates show that Asia will reach 50 percent urbanization in 2026. Notwithstanding these striking statistics, Asia is still predominantly rural; 57.8 percent of its population lived in the countryside in 2010 (compared to 60 percent in Africa, the least urbanized region).

The Asian urbanization has some unique defining features, but two are worth noting here. First, Asian cities are in a constant state of flux, particularly given the scale of their demographic expansion. From 1990 to 2010, Asian urban population increased by over 754 million people, equal to the combined population of the United States and the European Union. No other continent has experienced such population growth in such a short span of time.

The rapid demographic expansion of Asian cities that came with sustained economic growth made it a textbook example of the positive co-relation between urbanization and economic growth. Not that this equation was unknown before, but many national governments took a long time to realize it, and since the mid-20th century the policies and investments remained broadly focused on the development of rural areas than "rich" cities. The turning point came in the 1990s when national policies started to link urbanization and economic growth. In the increasingly integrated world economy, many Asian economies saw cities as the "spatio-economic links" between national and global economies, and supported them with infrastructure investments.

Second, Asian urbanization is broad-based rather than concentrated in just a few cities, and

505m
Asians currently living in cities are slum-dwellers

519,000
premature deaths a year as a result of predominantly urban air pollution

the challenge lies in finding and implementing suitable solutions for balanced sub-national development. A lion's share — 60 percent — of the region's urban population lives in small- and medium-sized cities (49 and 11 percent, respectively), and will continue to do so for the next two decades. These cities will require improved urban planning and investments in the development of their basic infrastructure and services. Metropolitan cities (with populations between one and 10 million) are host to 29 percent of Asia's urban population and will continue to pose daunting challenges of efficient urban and regional planning and development, and environmental management. Along with small- and medium-sized cities, the metropolitan cities need evolving city development strategies that are based on their comparative advantage related to economic, socio-cultural and environmental resources.

The remaining 11 percent of the region's urban population resides in mega-cities with over 10 million inhabitants, the number of which has trebled from four to 12 in the past two decades.[3] The concomitant emergence of mega-urban regions and urban corridors makes manifest the restructuring of the urban territorial space that comes with globalization. Mega-cities, mega-urban regions and urban corridors will have to improve multi-jurisdictional co-ordination along with regional spatial planning and development, and cope with horizontal fiscal disparities.[4]

THE ECONOMIC ROLE OF ASIAN CITIES
Asian cities are highly productive. Just over 40 percent of the region's population living in cities contributes over 80 percent of its gross domestic product (GDP). In the period 1990 to 2010, the region's GDP almost doubled from $8.7 trillion to $15.3 trillion, which made it a significant contributor to the world economy. Although the global economic crisis of 2008-2009 affected

the region, growing domestic demand and fiscal stimulus packages have kept the national economies buoyant.

Given the crucial role they have played in the region's economic transformation, Asian cities are recognized now as "engines of economic growth" at both local and national level. They have capitalized on the opportunities provided by their own demographic expansion as well as the forces behind globalization. Five related factors act as key drivers of the region's urban economies: export-led growth, though domestic demand is growing; improved urban infrastructure and services; investment in and competition among cities; connectivity to domestic and international markets; and, good, and improving, business practices.

A defining feature of Asian urban economies is the synergies between formal and informal sectors. Asian cities host well-developed formal sectors in manufacturing and services — that resemble those in Western economies, simultaneously with large informal economies. In Singapore and India, for instance, the share of informal jobs in non-agricultural/urban employment in 2005 stood at 10 percent and 85 percent, respectively. The flexible inter-linkages between formal and informal sectors underpin the remarkable success of the Asian urban economy in the fast-changing circumstances of globalization. In fact, a significant informal sector has been a feature of the early phases of urbanization in almost all economies around the world, and therefore is seen as a prerequisite in the transition from developing to developed economies. Nevertheless, Asian countries will need to make concerted efforts to ensure that informal sector workers receive adequate wage, good/safe working conditions, and social protection.

Another characteristic of the Asian urban economy is its ongoing diversification from manufacturing to innovative services. Since the 1980s, Asia

5 Martin Ravallion, Shaohua Chen and Prem Sangraula (2007) *New Evidence on the Urbanization of Global Poverty*, World Bank Policy Research Working Paper 4199, Development Research Group, The World Bank, Washington DC.

6 Gini index increased in China from 26 to 35 percent (1990-2005), in India from 34 to 38 percent (1993-2004), and in Indonesia from 35 to 40 percent (1990-2005).

7 "By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers."

8 Bai, Xuemei (2003) "The process and mechanism of urban environmental change: an evolutionary view," *International Journal of Environment and Pollution*, Vol.19, No.5, pp.528-541.

has enjoyed the unique status of being the "factory of the world," as export-oriented manufacturing bases, particularly so-called special economic zones, were developed. Many Asian cities now function as "knowledge economies." That Bengaluru (formally Bangalore) in India and Cyberjaya in Malaysia are examples of Silicon Valleys in the region is well known. Major Western companies have located their research and development (R&D) centers in Beijing, Shanghai, Bengaluru and Hyderabad, which is an effective recognition of Asian cities' growing potential for innovation. Seoul and Singapore have made efforts to develop themselves as centers of digital and multimedia industries. Moreover, a few Asian cities, such as Shanghai and Mumbai, aspire to become international financial centers, emulating the success of Tokyo, Singapore and Hong Kong.

While Asian cities lead economic growth in the region, they are expected to develop and implement complementary strategies for three interrelated purposes: readjust their own economic specialization based on comparative advantage; improve vocational education and training for new entrants to labor market, especially those who are poor; and develop quality education systems that can promote critical-thinking and problem-solving abilities, in addition to information technology skills.

POVERTY AND INEQUALITY IN ASIAN CITIES

Building on its sustained economic growth, Asia more than halved its poverty rate from 50.2 to 23.1 percent from 1990 to 2008. Given the region's demographic size, the number of poor stood at 945 million in 2008. But the picture is quite different with regard to urban poverty and inequality.

First, Asia is experiencing the *urbanization of poverty*. In South Asia, for instance, the number of urban poor increased from 107 to 125 million between 1993 and 2002. Moreover, urban poverty

in Asia is declining more slowly compared to its rural counterpart. In East Asia-Pacific, for instance, rural poverty declined from 407 million to 223 million (or from 35 percent to 20 percent), while *urban* poverty declined only from 29 to 16 million (or from 6 percent to 2 percent).[5] Why was this so? Three factors lie behind this phenomenon:

(1) Patterns of urban development. Local, national and, increasingly, foreign profit-seeking enterprises drive city-based economic growth in the region. But the redistributive channels through which urban poor could benefit from such wealth creation are simply lacking in Asian cities.

(2) Poverty measurement. Income required for essential goods for a family of four in urban areas is relatively higher than that for a similar rural household. The added deprivation in cities is owing to inadequate income (commodity prices are higher in urban than rural locations), inadequate — and hence more expensive — housing, and lack of access to basic services.

(3) Policies on poverty. Given the predominant rural population in many Asian countries, governments have often considered poverty as a rural, not an urban, problem and, therefore, poverty alleviation policies have focused more on rural than urban populations — as evidenced in the different outcomes. As the region continues to urbanize, national governments would do well to address the above factors.

Second, inequality is relatively high and on the rise in the Asian cities. In the region's three largest countries — China, India and Indonesia — urban inequality increased from 1990 to 2005.[6] Rising urban inequality in Asia again reflects a policy focus on economic growth, and efforts to reduce inequality at the city level have been lacking.

Third, Asian cities are host to 505 million slum-dwellers — more than half of the world's slum population (2010). Slum-dwellers suffer from insecure land tenure, poor housing and overcrowding,

and they lack adequate provision of basic services such as safe drinking water, sanitation, waste collection, energy, transportation and health. This is despite the fact that governments and other stakeholders improved the lives of an estimated 172 million slum dwellers, which, in turn, helped achieve the "slum target" under the UN's Millennium Development Goals.[7] Successful approaches used by public authorities include awareness and advocacy, long-term political commitment, policy reforms and institutional strengthening, proper implementation and monitoring, and scaling-up of successful local projects. Citywide pro-poor policies and strategies for settlement upgrading have aided this effort. Moreover, the "people's process" of housing and slum improvement, spearheaded by dedicated civil society groups and supported by the UN and other international development agencies, has empowered urban poor communities to improve their settlements.

URBAN ENVIRONMENT AND CLIMATE CHANGE

Asian cities face a unique set of challenges related to environment and climate change. This is because the pace of economic development in Asian countries is much faster than that experienced by the industrialized world. Challenges related to poverty, environmental pollution and consumption — often related to different stages of development and that were faced by the industrialized countries over a longer period of time, are confronting Asian cities within a short time span.[8] Moreover, the region's unique geography and climate combined with high population densities and a lack of adequate planning make Asian cities highly vulnerable to the effects of climate change. This phenomenon is unprecedented, and Asian cities find themselves in territory unknown in human history.

In the quest for economic growth, Asia has

An outsized, gold-plated statue of a winged chariot adorning the entry of a luxury apartment block in Beijing's central business district provides an unambiguous statement of the sort of life that the swelling numbers of Asia's city-dwellers are supposed to be striving for.
Photo: Adrian Bradshaw/EPA

become the factory of the world with massive immigration of labor-intensive and often environmentally hazardous industries from developed regions. Rapid industrialization and large-scale urbanization has led to the pollution of natural resources. Power plants, industries, transportation, and residential and commercial buildings are the main sources of air pollution, which causes as many as 519,000 premature deaths every year in the region. Unregulated and over-exploited water resources have rendered a number of Asian cities water-scarce (when total withdrawals are greater than 40 percent of annual water resources). Industrial effluents and municipal wastewater continue to pollute both surface and groundwater in many Asian cities, as most lack the capacity or resources to deploy large-scale wastewater treatment facilities. Poor solid waste management is an oft-cited urban environmental problem, and is owed to technical and financial constraints. All countries in the region have environmental legislation and policies to control pollution and protect natural resources, but their enforcement is far from satisfactory.

Consumption of energy has grown along with, and fuelled, economic growth in Asia. Over 80 percent of the region's primary energy supply comes from fossil fuels. In recent decades, with improved incomes has come the increased use of private vehicles and changes in consumption patterns — often following Western standards. Although calculations are yet to be made, cities' share of Asia's contribution to greenhouse gas emissions could be as low as 40 percent or as high as 78 percent — depending on how the estimates are made, corresponding to the share of urban areas worldwide to these emissions. Cities such as Delhi and Rizhao have made concerted efforts to reduce greenhouse gas emissions, and Asian cities will benefit greatly from such efforts.

Asian cities stand to be most affected by the increased frequency and intensity of natural disasters, as evident by the prolonged floods that affected Southeast Asia in 2011. Estimates show that in 2010, 304 million people lived in cities located in Asia's Low Elevation Coastal Zone (i.e. less than 10 meters above sea level), which, as a result of climate change, is potentially exposed to rising sea levels and storm surges.[9] Urban poor, who live in informal settlements located in fragile environmental areas on shorelines and major river basins, are disproportionately affected by and are the most vulnerable to disaster risks and climate change. On the one hand, there is a need for mainstream climate change adaptation for cities in national policies and programs, including resource allocation. On the other hand, climate-change adaptation issues need to be integrated into urban and regional plans, and followed up through proper implementation.

URBAN GOVERNANCE, MANAGEMENT AND FINANCE

In Asia, national or provincial governments, para-statal agencies and local governments have traditionally dominated urban governance. The *modus operandi* of urban governance has focused on administrative structures and processes, such as regulations and standards, provision of basic services, infrastructure, development programs (often aided by central governments), personnel management and internal audits. With regard to spatial planning, city and regional plans, zoning codes, building bylaws and planning schemes have governed urban development. The outcomes of such governance have often been inadequate basic urban services, unreliable energy systems, haphazard and often market-led urban expansion, traffic gridlocks, and environmental pollution — in sum, poor liveability in Asian cities.

Since the early 1990s, a number of Asian countries have implemented constitutional and

50%
of Asia predicted to be living in cities by 2026

$10t
estimate of needed spending on Asian cities' infrastructure in next 10 years

statutory changes that have decentralized and devolved authority to local governments, and broadened the sphere of urban governance to recognize the vital role of civil society participation. In many Asian cities, local governments are putting to good use the following principles of urban governance: participation and representation (most Asian countries), participatory budgeting (India), mechanisms for accountability and transparency (China, Pakistan and Singapore), and new technologies and e-governance (Malaysia). This "learning by doing" is helpful for further improvements in urban governance.

In Asian cities, governance of metropolitan cities and mega-urban regions differs considerably from that of towns and smaller cities. Metropolitan cities and mega-urban regions are often governed by what could be called a mixed system of urban and regional governance, where authority is vested in multiple institutions, including sectoral departments of central government, metropolitan/regional authorities, special-purpose agencies and local governments. In towns and smaller cities, governance structures include a policymaking body (often an elected council) and an executive arm (mayor). Many towns and smaller cities find it difficult to achieve development goals due to poor political leadership and inadequate financial, technical and institutional capacities; this needs urgent attention because 60 percent of Asia's urban population will continue to live in medium to small cities and towns in the next two decades.

Asian cities would need to invest close to $10 trillion over 10 years in order to meet their requirements for physical and institutional infrastructure. It is often said that many Asian cities are "rich" but have economically poor city governments. If they are to meet such investment needs, Asian cities will have to explore all sources of finance, including local revenue sources (such as property-based taxes), domestic and foreign borrowings, land as a

10 Asian Development Bank (2011) *Asia 2050: Realizing the Asian Century*, Asian Development Bank, Manila.
11 Bharat Dahiya and Danai Thaitakoo (2011) Why indigenous knowledge can help climate change adaptation, *Urban World*, Vol. IV, No.4, pp.18-19.

resource for development (especially in China and Vietnam), and public-private partnerships.

Last but not least, local government associations in Asia have become important stakeholders to lobby for devolution of powers to local authorities, and must step up their efforts — both at a regional and national level, in their quest for good urban governance. Moreover, local government associations need to continue promoting city-to-city ("C2C") co-operation in order to support sharing and exchange of lessons learned and good practices in sustainable urban development.

FUTURE PERSPECTIVES

Asia 2050: Realizing the Asian Century, a recent publication by the Asian Development Bank,[10] notes on its opening page: "Asia is in the midst of a truly historic transformation … It holds the promise of making some 3 billion additional Asians, hitherto commonly associated with poverty and deprivation, affluent by today's standards. By nearly doubling its share of global GDP (at market exchange rates) from 27 percent in 2010 to 51 percent by 2050, Asia would regain the dominant global economic position it held some 250 years ago, before the Industrial Revolution. Some have called this possibility the 'Asian Century.' "

If the 21st century does turn out to be the "Asian Century," the dynamic and vibrant Asian cities will have to shoulder the Himalayan task of leading the region's economic growth. In this process, Asian cities will have to readjust and refocus their economic specialization, whether it is in low- or high-end manufacturing, knowledge economies, cultural and creative industries, or other innovative services. New urban economic niches will evolve through learning and experience, or will be invented as needs and opportunities arise.

Asian cities need to play a key role in providing better employment to the informal sector workers and lifting more people out of urban poverty.

This has to go hand in hand with the endeavor of addressing urban inequality and improving the lives of over half a billion slum-dwellers.

Continued economic growth within and outside the region, and the attendant increase in energy consumption and greenhouse gas emissions, will exacerbate the pace of climate change. Asian cities will have to explore all possible sources of ideas, including indigenous knowledge, to tackle the daunting challenges of worsening disaster risks and impacts of climate change.[11]

By 2050, Asian cities will accommodate an additional 1.6 billion people (about 41 million people every year) and its urban population will be 3.4 billion. To accommodate such phenomenal demographic expansion, Asian cities will need improved urban and regional planning and development, environmental management, urban governance and massive investments.

The first-ever *State of Asian Cities 2010/11* report represents a benchmark against which we could all measure the progress Asian cities will make in rising up to these unprecedented challenges.

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