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THE PLANNING AND GOVERNANCE OF ASIA'S MEGA-URBAN REGIONS*

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A. ASIA'S MEGA-URBAN REGIONS

By 2010, 12 of the 21 mega-cities in the world are expected to be in Asia. Tokyo, the largest, is projected to have a population of 35.4 million, followed by Mumbai (20.0 million), Delhi (16.9), Shanghai (15.7), Kolkata (15.5), Jakarta (15.2), Dhaka (14.6), Karachi (13.2), Manila (11.7), Beijing (11.7), Osaka-Kobe (11.3), and Istanbul (10.5). By 2015, Guangzhou with a population of 10.4 million, may qualify as a mega-city. Not too far behind are nine other Asian cities with large populations, including Seoul (9.5 million), Shenzhen (8.9), Lahore (8.3), Wuhan (8.2), Tianjin (8.1), Bangalore (7.9), Hong Kong (7.8), Bangkok (7.4) and Hyderabad (7.4) (United Nations, 2006).

The population figures for the mega-cities mentioned above are based on official country definitions confined to formal political boundaries. However, it is now increasingly recognized by researchers and government authorities that the actual “urban field” of economic, social and technological influences of mega-cities extends way beyond their formal boundaries. As described by John Friedmann, “urban fields typically extend outward from the city core to a distance of more than 100 km; they include the city’s airport, new industrial estates, watersheds, recreation areas, water and sewage treatment facilities, intensive vegetable farms, outlying new urban districts, already existing smaller cities, power plants, petroleum refineries, and so forth, all of which are essential to the city’s smooth functioning. City regions on this scale can now have millions of inhabitants, some of them rivaling medium-sized countries. This space of functional/economic relations may fall entirely within a single political/administrative space... More likely, however, it will cut across and overlap with a number of...political-administrative spaces of cities, counties, districts, towns, provinces, etc. (Friedmann, 1992).

T.G. McGee, noting the unique feature of Asian urban agglomerations has coined the term *desakota* development to describe their growth, combining the Bahasa terms *desa* (village) and *kota* (city) to indicate their mixed rural-urban characteristics. He observed that these city-regions tend to “produce an amorphous and amoeba-like spatial form, with no set boundaries or geographic extent and along regional peripheries; their radii sometimes stretching 75 to 100 km from the urban core. The entire territory – comprising the central city, the developments within the transportation corridors, the satellite towns and other projects in the peri-urban fringe and the other zones – is emerging as a single, economically integrated “mega-urban region” or “extended metropolitan region” (McGee, 1995).

Following Friedmann and McGee, I have noted in a recent book that most Asian mega-cities have expanded into mega-urban regions that encompass much larger territories and populations. Despite governmental efforts to restrict or even reverse the growth of mega-cities by using various administrative and economic measures (e.g., internal passport systems that limit benefits to bona fide urban residents in China and Vietnam; use of green belts to confine growth within highly urbanized areas in India and Malaysia; eviction and resettlement of inner city dwellers to outlying areas in the Philippines and Bangladesh; and transmigration schemes to move urban residents to frontier areas in Indonesia) mega-urban regions have continued to grow. While some inner city areas have lost populations because of out-migration and forcible eviction, suburban and exurban areas around mega-cities have continued to grow. This “spreading pancake” or “palm and fingers” expansion pattern has engulfed small towns, cities and other settlements in the urban periphery, joined the urban fields of other large cities, and formed city clusters or sprawling mega-urban regions (Laquian, 2005).

1. Types of Mega-Urban Regions

Based on their demographic, geographic and socio-economic characteristics, mega-urban regions in Asia fall into at least three distinct types:

(a) *Urban corridors* such as the Tokyo-Yokohama-Nagoya-Osaka-Kobe-Kyoto *Shinkansen* or “bullet train” corridor in Japan; the Beijing-Tianjin-Tangshan-Qinhuangdao transport corridor in northeast China; or the Mumbai-Pune development corridor in India.

(b) *Mega-city dominated city regions* such as Metro Manila in the Philippines, the Jakarta-Bogor-Tangerang-Bekasi (JABOTABEK) region in Indonesia; the Bangkok-centred region in Thailand; or the Dhaka metropolitan region in Bangladesh; and

(c) *Sub-national city clusters* such as the Guangzhou-Shenzhen-Hong Kong-Macau-Zhuhai region in the Pearl River Delta in southern China; the Surabaya-Surakarta-Semarang-Yogyakarta-Malang region in Indonesia; or the Daegu-Ulsan-Busan-Guangjiu region in the Republic of Korea.

a. Urban corridors

Urban corridors are contiguous highly urbanized human settlements linked together by trunk urban infrastructure and services. In some ways, they are similar to the “megalopolis” described by Jean Gottman in the north Atlantic seaboard of the United States that stretches from Washington, DC to New York and Boston. The best example of an Asian urban corridor is the *Shinkansen* or “bullet train” region on the main Japanese island of Honshu. The combined population of the mega-cities within this *Shinkansen* corridor has been estimated at about 60.6 million and, if the surrounding urban wards, cities and districts within the prefectures are included, it could easily exceed 70 million.

The Jing-Jin-Tang expressway that links Beijing, Tianjin, Tangshan and Qinhuangdao and connects China’s national capital to the port of Tanggu on the Gulf of Bohai is the major urban corridor in the People’s Republic of China (PRC). Along this main corridor are nine special economic development zones, science parks, hi-tech development enclaves and research and development centres. Also within this corridor are two major cities under the direct jurisdiction of the central government (Beijing and Tianjin), two intermediate-sized cities (Tangshan and Langfang) and hundreds of county seats and designated towns. The region’s population has been estimated at about 56.4 million.

b. Mega-city dominated city regions

Most of the mega-city dominated regions are found in Southeast Asia where urbanization is marked by primacy where the main city, usually the national capital, is many times larger than the next largest city. The Metro Manila national capital region, for example, is formally defined as including 22 chartered cities and the municipality of Pateros in Rizal province with a metropolitan area population of 11.7 million. However, Philippine urban planners argue that a comprehensive development plan for the national capital region should encompass a whole region covering seven provinces in Central Luzon (Rizal, Bulacan, Pampanga, Tarlac, Nueva Ecija, Pangasinan and Zambales), the three Southern Luzon provinces of Cavite, Laguna, Batangas and Quezon (CALABARZON) and the island provinces of Mindoro, Marinduque, Romblon and Palawan (MIMAROPA). This extended city region has been referred to as Mega-Manila by

Filipino mass media and marketing specialists who recognize the actual geographic extent and socio-economic influence of the mega-urban region.

c. Sub-national city clusters

In countries with very large populations and wide national territories, a number of sub-national city clusters have evolved as mega-urban regions. In the Pearl River Delta of the PRC, for example, the concurrent growth of cities like Guangzhou, Shenzhen, Hong Kong, Macau and Zhuhai has created the potential for a “southern China megalopolis.” This clustered cities development pattern includes a city under the jurisdiction of the national government (Guangzhou), a sub-provincial city also under the jurisdiction of the central government that is also a special economic zone (Shenzhen), two former colonial enclaves absorbed by the PRC as special administrative regions (Hong Kong and Macau) and a special economic zone (Zhuhai). By 2021, Hong Kong-based planners have projected the emergence of a poly-nucleated mega-urban region in the “Greater Pearl River Delta Region” with a population of 51 million, 18 per cent of which will be in Hong Kong (Enright and others, 2003).

2. Characteristics of Mega-Urban Regions

Although Asian mega-urban regions represent a wide range of human settlements, they share a number of common characteristics. First is their wide land area coverage and large population size. For example, the Beijing-Tianjin-Tangshan-Qinhuangdao corridor covers about 168,000 sq km and has a population of about 56.4 million. The six mega-cities that make up the “bullet train corridor” in Japan have a combined population of at least 60.6 million. In southern China, the sub-national urban cluster of Shanghai-Nanjing-Suzhou-Changzhou-Zhenjiang-Nantong-Yangzhou-Wuxi in the Yangtze River Delta had a population of 72.7 million in 1995 (Shi, Lin, and Liang, 1996) and the Guangzhou-Shenzhen-Hong Kong-Macau-Zhuhai region in the PRD had a population of 40 million in 2003 (Enright and others, 2003).

Moreover, some Asian mega-cities are continuing to grow at higher than the average annual urban growth rate of 2.4 per cent. Dhaka, for example, grew at an annual rate of 7.1 per cent between 1985 and 1995, continued to grow at 4.9 per cent in 1995-2005, and is projected to grow at 3.2 per cent in 2005-2015. Other Asian mega-cities with high annual growth rates in 1995-2005 were Hyderabad (4.0 per cent), Karachi (3.7 per cent), and Jakarta (3.6 per cent). These mega-cities are bursting their boundaries, jumping their confining greenbelts and becoming mega-urban regions (UNCHS, 2005).

Second, the “fields” of influence of mega-urban regions encompass both urban and rural areas. As pointed out by McGee, *desakota* development in the Greater Jakarta area has expanded beyond the boundaries of the Special Capital Region of Jakarta with its population of 11.4 million and includes rural sectors within the regencies of Bogor, Tangerang and Bekasi. Two Indonesian planners have even suggested that the Jakarta-centred region should actually include Bandung and the largely rural regencies (*kabupatens*) around it. If this is done, the JABOTABEK cum Bandung mega-urban region would have a population of 26 million, with 6.9 per cent living outside the urban built up areas (Dharmapatni and Firman, 1995).

As mega-urban regions expand, they engulf towns and cities in the urban periphery. For example, the Bangkok Metropolitan Area (BMA) had a population of only 4.7 million in 1980. However, the rapid expansion of the city covered areas within the provinces of Pathum Thani, Nontaburi, Samut Prakan, Samut Sakhon and Nakhon Pathom so in 1988, the Bangkok Metropolitan Region (BMR) was created, increasing the city-region population to 8.5 million.

Even though the United Nations had projected the population of Greater Bangkok to reach only 9.0 million by 2010, the National Economic and Social Development Board of Thailand had already formulated plans for an “extended BMR” that includes parts of the provinces of Ayutthaya, Saraburi, Chachoengsao, Chonburi and Rayong, resulting in a population projected to reach 17 million by 2010 (NESDB, 1990).

Third and finally, despite the obvious economic and technological inter-relationships among the urban places within the mega-urban region, there is usually no overall political or administrative structure with over-arching authority for comprehensive planning or governance. Even in the highly developed city-regions of Japan, governance mechanisms in the Tokyo to Osaka-Kobe development corridor are terribly fragmented. The city of Tokyo is made up of 23 special wards (*ku*), 23 cities (*shi*), five towns (*cho or machi*), and eight villages (*son or mura*). Each one of these local units has its own local government. The Greater Tokyo area includes the city and prefecture of Tokyo as well as parts of Kanagawa, Saitama, Chiba, Gunma, Tochigi, Ibaraki and Yamanashi prefectures. Greater Tokyo also includes 26 cities within Tokyo prefecture, the Tama area also known as Western Tokyo and the islands of Izu and Ogasawara. Functionally, the city of Yokohama, capital of Kanagawa prefecture and with a population of 3.6 million is well integrated with Tokyo Metropolis but is a separate local unit. The same governmental fragmentation is also found in Osaka, with its 23 wards and Kobe with its nine wards.

B. PLANNING ASIAN MEGA-URBAN REGIONS

The emergence of mega-urban regions in Asia has posed a number of challenges to city and regional planning. First, the traditional instrument for development of Asian cities has been physical planning, which is designed to control and guide the material elements in cities and towns (e.g., roads and transportation networks, waterworks, drainage, sewerage and sanitation systems, energy generation and distribution, garbage dumps, landfills and incinerators, housing, etc.). This approach is usually confined to “hardware” elements and fails to take into consideration the economic and social processes (“software”) that often exert stronger influences on the development of city regions.

Second, there is a shortage of planners who are adequately trained in comprehensive planning and take economic, social and environmental factors into consideration when formulating city region plans. Most city and regional planners in Asia are architects, engineers, surveyors and other technically-oriented individuals who often fail to appreciate the important role played by socio-economic processes in urban life. As observed by a former World Bank economist, most big city problems in developing countries may be traced to “wrong headed national urbanization policies promoted by physical planners with visions of optimal geography and very little sense of economics” (Hamer, 1994).

Third, urban and regional planning in Asia is deeply influenced by the concept of rural-urban dichotomy. Many government officials as well as staff members of multilateral and bilateral aid agencies firmly believe that the main issue in Asia is rural development and that the solution to alleviating absolute poverty is improving agricultural productivity, building farm to market roads, instituting land reform schemes, and encouraging farm mechanization. This belief persists despite the fact that about 42.0 percent of Asia’s population is already living in cities and towns and that by 2030, 54.1 per cent of the population is projected to be urban. Many policymakers are slow to acknowledge that rural improvements do not keep people down on the farm and that in fact, once the economic and social situation of rural dwellers improve, they tend

to migrate to urban areas. As shown in North America and Europe, people will stay in villages only if the full benefits of urbanization are made available to them in these settlements.

Fourth, the legal and institutional basis for local governance in Asia upholds decentralization and local autonomy. Because of this, urban areas suffer from extreme fragmentation among competing local jurisdictions. They are fragmented sectorally as line agencies in charge of functions such as transport, energy generation, and water and sewage jealously guard their respective turf. They are also fragmented hierarchically as agencies are organized at the district, town, city, prefecture, province and national levels. The fragmentation is often complicated by the creation of special authorities that look after specific functions such as railways, flood control, and ports and harbors that are designed to cut across jurisdictional lines but end up being autonomous agencies themselves. Because of extreme fragmentation, urban plans are confined to the formal boundaries of municipalities or metropolitan areas. Legal ordinances, zoning codes and land use rules and regulations promulgated by city councils and municipal boards are applicable only within their jurisdictional areas. As cities have become mega-cities and these, in turn, have evolved into mega-urban regions, traditional planning approaches have not kept pace with substantive and technical developments.

Fifth, and finally, most city region plans in Asian agglomerations are not formally adopted as legally binding enactments – many are primarily conceptual and regarded as “indicative guidelines” for the future development of mega-urban regions. This phenomenon is mainly due to the legalistic tradition that vests authority for planning and enactment of zoning codes and land use regulations in cities or municipalities that have their own specific charters. In India, for example, the 74th amendment to the Constitution decentralized authority to local government bodies. In the Philippines, the 1987 Constitution makes the creation of metropolitan governments extremely difficult because it requires voluntary consent of local units and the Local Government Code of 1991 and its amendments in 2007 continue to uphold local autonomy.

1. City and Regional Planning Approaches

Historically, city and regional planners in Asia have utilized various approaches such as classical city planning, colonial city planning, socialist planning and comprehensive strategic planning. Each one of these planning approaches has been based on specific assumptions, objectives and procedures. For example, classical city was essentially a component of rites and rituals extolling the divine rights of emperors. Colonial city planning simply tried to replicate in Asian colonies planning ideas and practices in the home country. Socialist planning was based on the assumption that future conditions were knowable and could be manipulated to achieve specific conditions. Comprehensive strategic planning, in turn, integrates socio-economic with physical planning elements and uses an iterative approach to get to targeted objectives.

a. Classical city planning

Cities in Asia have been planned and built for more than 3,000 years. Chinese cities like Chang’an (present day Xian), Luoyang and Shenyang were planned in accordance with classical principles based on the divine nature of the emperor, the metaphysical influence of wind and water (*feng shui*) and admixtures of Buddhist, Taoist, and Confucian traditions. Although the Chinese capital of Beijing is relatively new in the millennial context of Chinese history, the plans for the city are said to be derived from guidelines prescribed in the Zhou Li, which explicitly set down the principles and prescribed rites for city building practiced during the Zhou Dynasty (1051-403 B.C.) (Wright, 1977; Wu, 1999).

The key elements of Chinese classical city planning included four basic principles. First, the main axis of a city's structure had to be rigidly oriented in a north-south alignment directly oriented to the North Star. Second, the city had to be bounded by a city wall formed as a square or a rectangle. Third, the classical city building treatises demanded strict compliance with precise instructions on issues such as how many gates the city should have, the alignment of streets along a geometric grid, the balanced location of public buildings, temples and residences, and the provision of parks and open spaces. Finally, the exact location of a city as well as the time for initiating its construction were determined by prescribed rituals, usually tortoise shell divination ordered by the emperor. The physical structure of the classically planned Chinese city, therefore, had the imperial palace within the imperial city as the centre of everything. From this core, the emperor's powers radiated outward in the form of the imperial city, the important role of China as the "middle kingdom" and the position of the country in the world and the whole universe.

The same adherence to religious precepts governed the establishment of cities and towns in the Indus River Valley. Archeologists have suggested that the plans for Mohenjo-daro and Harappa reflected cosmological efforts to establish on earth an idealized notion of the universe. The Khmer cities and temples of Angkor Wat and Angkor Tom as well as the urbanized centers of Hinduized kingdoms in Indonesia (Borobudur) were also planned along cosmological lines. There have even been suggestions that the original plan for old Delhi was derived from the mythical city of Indraprastha, the capital of the Pandavas in the Mahabharata epic.

b. Colonial city planning

Through the centuries, of course, the planning and establishment of cities in Asia have been influenced by many factors. The physical features of most present-day Asian cities bear the marks of colonial rule by Western powers. In the Philippines, the walled city of Intramuros in Manila and the military forts in cities like Cebu and Zamboanga reflect the country's Spanish heritage. The so-called "plaza complex" town plan focused on the parade grounds around which are found the Catholic church, the residence of the governor, the municipal hall, the military barracks, the jail, and the grand houses of elite families. Similar colonial structures are found in many Indian cities, like Delhi with its Red Fort and Mumbai with its Maidan. In Indonesia, Dutch planners even tried to replicate their cities and towns in the colonies, right down to the canal networks in Jakarta that were copied from those in Amsterdam.

In the 19th century, city and regional planning in Asia was greatly influenced by British and American concepts and approaches. First, there was the "garden city" idea of Ebenezer Howard, who envisioned an ideal city based on agricultural production, industry and commerce that would retain its closeness to nature. This garden city plan was followed in the establishment of New Delhi by architects led by Edwin Lutyens. It also influenced the planning of Bangalore and Singapore. The second important influence on Asian city planning came from the United States, mainly through the work of the Chicago-based architect David H. Burnham. In making the master plan for Manila and the Philippine summer capital of Baguio, Burnham was inspired by the L'Enfant plans for Washington, D.C. that featured wide boulevards lined by monumental buildings.

A major shortcoming of the colonial city plans mentioned above was that they were essentially elitist because they mainly catered to the production, welfare and comfort needs of the colonizers. The plans ignored the organic nature of communities and cities. They did not take into consideration indigenous architecture, the use of local building materials, native construction techniques or the aesthetic values of the Asian populations. As such, the colonial enclaves became the original "gated communities" that were physically and functionally separated from

the indigenous city. When national elites took over the colonial enclaves after independence, however, the operation and maintenance of the urban infrastructure and services were not continued, generating inner city decay and dilapidation that characterize many Asian cities today.

c. Socialist city planning

It is interesting that in China and Vietnam, the transition from classical city planning to socialist planning happened with apparent ease because both planning processes were based on a “top down” approach. In ancient times, the planning authority came from the ruler and divine rites while in socialist planning it emanated from the state. Socialist planning was based on the premise that aspired for future conditions could be set – for example, by 2025, Hanoi would have a population of 5 million, per capita GDP of \$800 per year, each resident would have 12 sq m of living space, etc. From these targets, the planners simply calculated the material, financial and institutional resources required. However, because historical events did not usually unfold according to expectations, socialist planning encountered many pitfalls.

Socialist planning did have at least two salutary effects. First, the strong emphasis on providing urban infrastructure and services in cities helped the residents a lot. The concentration on heavy industries also provided useful outputs and employment to people although it generated serious environmental pollution. The location of housing adjacent to factories and other work sites cut down on travel time. Making work units responsible for the welfare benefits of their workers also ensured amenities needed for basic needs.

The other major benefit from socialist planning involved the state’s commitment to improving the lives of citizens and other underprivileged groups. Housing projects, schools, hospitals, old folks’ homes, and other social services institutions were built. Subsidized grain, cooking oil, and other basic needs were provided to urban residents. The human capital generated by policies and programs carried out under socialist planning may be regarded as mainly responsible for the tremendous progress currently being achieved in the transitional economies of China and Vietnam.

d. Comprehensive strategic planning

Unlike traditional planning approaches that focused on the physical structure of the city, comprehensive strategic planning (CSP) encompasses economic, social, and technological aspects of urban growth. Thus, it is concerned with population growth, internal and international migration, people’s productive behavior, trade and commerce, and social and cultural activities that determine the shape and geographic extent of the mega-urban region.

CSP is based on the idea that urban centres are the engines of development and they should be planned and managed to make them run in an efficient and sustainable manner. If urban centres are planned and managed properly, they can act as “transformational agents” that can energize whole countries. To achieve this, CSP calls for a holistic approach instead of segmented sectoral interventions. People’s productive activities, their travel habits, what they buy and where, and what leisure and cultural activities they pursue have spatial implications.

It is not surprising, then, that CSP has been mainly adopted in market-oriented countries like Indonesia, Malaysia, India and the Philippines. As used in these countries, CSP has the following characteristics: (a) it covers not just individual cities or metropolitan areas but whole city regions; (b) it is concerned with the full gamut of economic, social and environmental activities in the whole city region; (c) it follows an iterative rather than a linear process which

involves regular and periodic assessments and updating of planned activities based on feedback information gathered through monitoring and evaluation mechanisms; (d) it is formulated on the basis of inputs from citizens and concerned stakeholders who actively articulate their stand on key issues; and (e) it includes financing, management and governance provisions in the plan. In other words, comprehensive strategic planning does not draw a sharp distinction between the plan formulation and the implementation processes, both are considered necessary elements of the plan.

2. Issues in mega-urban region planning

As more mega-urban regions emerge in Asia, planning authorities face a number of problems created by their size and continued expansion. These are: (a) the decay and deterioration of inner city areas; (b) urban sprawl and uncontrolled peripheral area development; and (c) environmental pollution. A number of measures have been adopted by some urban authorities to deal with these problems but the accelerating pace of mega-urban expansion indicates the need for more effective interventionist policies and programs.

a. Inner city redevelopment

Unlike their Western counterparts, mega-cities in Asia tend to have thriving inner city areas where old-time residents live in active and vibrant communities. Because the inner city areas are usually the oldest parts of the city, however, they are subject to physical deterioration and decay. Basic services like water supply, drainage, sewage and sanitation originally installed when the cities were first set up have become inadequate. Narrow streets and lanes built before the coming of the private automobile constrict mobility and make solid waste collection and firefighting extremely difficult. As inner city areas have deteriorated physically, they have attracted poor urban residents seeking cheaper rent. Many inner city areas have also become notorious as centres for crime, juvenile delinquency, drugs, and prostitution.

Happily, the strong community ties among inner city dwellers in Asia have made it difficult for government authorities to simply use the “bulldozer” approach. Inner city squatters and slum dwellers have tenaciously fought campaigns to evict them and dump them into relocation sites on the urban periphery. In Chinese cities, there are programs to redevelop “dangerous and dilapidated houses” through community upgrading that maintains the traditional structures instead of demolishing and replacing them with high-rise apartments. In Indonesian cities, the Kampung Improvement Program (KIP) provides basic services like potable water, sanitary toilets, electricity and pathways but leaves the construction, repair and maintenance of dwellings to individual households. In most Asian countries, laws have been enacted prohibiting eviction of people from their communities without providing them with housing and other amenities that are acceptable to them. These have tended to slow down some inner city redevelopment schemes but served to avoid confrontations and at times violent incidents with urban poor groups.

Some Asian countries have adopted development schemes that seek to balance inner city redevelopment with peripheral area growth. In Beijing, Shanghai, Guangzhou and other large cities in China, public/private development companies have cleared sections of inner city areas and built hotels, luxury condominiums, offices, and commercial and tourism-related malls. These urban renewal schemes usually required the resettlement of inner city inhabitants to high-rise apartments in suburban areas. The families who choose to remain in the inner city are provided housing in new apartments or upgraded traditional courtyard houses. Those who agree to move to suburban areas are provided with larger apartments equipped with individual toilets, kitchens,

balconies, electricity, gas and other amenities. Both new apartments and upgraded homes in the inner city and the suburbs are financed by cross-subsidies from profits earned by the development companies from their up-market ventures and the private sale of the units to individual households who are extended low interest loans by banks and mortgage companies.

In other Asian cities, tourism development has been used as an instrument for redeveloping inner city areas. In Bangkok, for example, the area around the imperial palace and the temple of the Jade Buddha have been conserved and maintained to reflect traditional architecture and Thai community life. In Hanoi, a cultural conservation scheme for the area known as the “36 Ancient Streets” preserves the tree-lined lanes and the old “tube houses” that served both as residences and work places for families belonging to ancient craft guilds. Also, the preservation of old trees, traditional homes and small shops around Hoang Khiem Lake maintains the cultural atmosphere of the area even as it has become the city’s most popular tourist destination. In ultra-modern cities like Tokyo, Kyoto, Nagoya and Kobe, the pleasant atmosphere around palaces, temples and shrines in inner city areas have served as the main attractions to tourists and residents alike.

b. Controlling urban sprawl and developing peripheral areas

Most Asian cities do not yet have the huge number of private automobiles that have caused urban sprawl in most North America cities. However, as household incomes rise and globalization generates a revolution of rising expectations, the demand for private cars is escalating. Asian planners are now engaged in a hectic race to come up with measures to prevent what has happened in North America from happening in Asia. Some of the measures they have used to control urban sprawl include: (a) planned development of self-contained industrial estates, hi-tech zones, special economic zones and other productive enclaves to concentrate growth in selected urban nodes within the mega-urban region; (b) construction of trunk infrastructure systems linking clustered cities together; (c) conserving agricultural land and open spaces; (d) encouraging the establishment of high-density settlements where people can live, work, shop, and have access to cultural activities; and (e) creating area-wide metropolitan planning committees with open stakeholder participation.

The PRC has adopted as part of its national urban development strategy the establishment of five special economic zones (Shantou, Shenzhen, Zhuhai, Xiamen and Hainan Island), 14 “open coastal cities,” and three “open economic regions” (in the Pearl River Delta in Guangdong province, the Yangtze River Delta around Shanghai and Jiangsu province, and the Minnan Delta in Fujian province). SEZs are small areas “demarcated within a country’s territory and suitably insulated for adopting special and flexible policies to attract and encourage foreign investment in industrial and other economic activities” (Yee, 1992). In Shenzhen, for example, the government built a whole city from scratch, transforming a fishing village of 3 sq km and a population of 30,000 to a mega-city of 2,022 sq km with a population of 9.1 million. Shenzhen has attracted foreign investments not only from Hong Kong but from many other countries like Japan, Korea, the United States and Canada. Even as it developed into a compact urban region, it has served to energize surrounding urban nodes like Dongguan, Foshan, Zhongshan and Huizhou. It has also sparked visions of a southern China megalopolis linking it with Hong Kong, Macau, Zhuhai and Guangzhou (Laquian 2006).

India’s largest city, Mumbai, with a population of about 20 million has adopted a regional plan to control urban sprawl. As early as the 1960s, Mumbai planners had proposed a new settlement across the harbor called New Mumbai. Focused on the development of the port in Nava Sheva, the plan was designed to concentrate industrial and manufacturing activities so as to

form a “counter magnet” to the old city (Jain 1996). New Mumbai was established in 1972 as the largest new planned city in the world with a total land area of 344 sq km. Two bridges were built to connect New Mumbai with the old city and railway links were established with other urban nodes. The new city had a population of 1.5 million (2001 census).

An ambitious scheme to control urban sprawl in Malaysia involves creation of two “intelligent cities” linked to Kuala Lumpur by massive infrastructure facilities – Putrajaya and Cyberjaya. Putrajaya is being built on a green field site about 25 km from Kuala Lumpur where about 500,000 people are expected to be residing by 2010. Some 53 per cent of the buildings will be for government activities, 29 per cent for commercial use and the rest for private residences and services. About 38 per cent of the city’s land area will be devoted to green spaces and wetlands. Five km from Putrajaya is Cyberjaya, Malaysia’s centre for high-technology. It covers an area of 2,894 ha and developing it is estimated to cost \$5.3 billion. It is linked to Kuala Lumpur by the Shah Alam Expressway. As a settlement fully devoted to hi-tech development, Cyberjaya has a national fiber-optic backbone, broadband connectivity to all buildings, wireless hi-fi spot services in all public areas, local on-line electronic commerce portals and “smart” homes and schools (Yuen, Ahmad and Chin, 2006).

c. Dealing with environmental pollution

Environmental pollution does not recognize political boundaries and planning measures to prevent and control it demand area-wide authority. For example, one of the major costs of rapid development in the Pearl River Delta (PRD) has been air and water pollution. The air quality in both Hong Kong and Shenzhen has become a real problem. The Dongjiang River is the main source of water for both mega-cities but the rise of local industry and the rapid growth of urban settlements along the river have caused serious contamination. However, it has been extremely difficult to control this. To some extent, the lack of attention to pollution problems has been attributed by one study to political fragmentation among local units. From the point of view of a local unit, it does not make sense to impose fines on local polluters if other units are not doing this. Also, pollution fines in the PRD are relatively low so industries find it easier to pay the fines rather than curtail their productivity (Enright and others, 2003).

Unfortunately, while many Asian governments have promulgated environmental laws, enforcement of such laws has been a problem. To some extent, this is due to lack of technically qualified personnel who can clearly prove legal violations. Although environmental auditing and “green reporting” techniques have been developed in technologically advanced countries, these are not yet well known in Asia. Ideally, public and private agencies setting up urban projects together with domestic and foreign institutions financing such projects are legally liable for environmental damages. However, weak technical capabilities together with graft and corruption make such actions incredibly difficult to prosecute.

3. Resolving City Region Planning Issues

It is obvious from a careful study of urban planning in Asia that traditional approaches such as physical planning and the formulation of elaborate “master plans” are inadequate to face up to the many problems that mega-urban regions face. To make city and regional planning in the region more relevant to future development it needs to have the following elements:

- A future vision or desired goals to be achieved within a specified time period (short, medium or long term);

- A systematized process of choosing among various options to attain the desired vision;
- Specification of material, financial, human and organizational resources needed for plan execution and ways to mobilize such resources; and
- Processes and procedures for monitoring and evaluation to ensure that course corrections can be made based on information feedback.

An assessment of city region plans of many Asian mega-urban regions reveals that the most common vision held by key leaders is to achieve “global city” or “world class status.” This is seen in the development plans for Shanghai that is focused on the Pudong New Area, a 522 sq km zone on the eastern banks of the Huangpu River. When Pudong was inaugurated in 1990, the stated goal was “transforming Shanghai into one of the leading economic, business and cultural centers of Asia and the world.” The vice mayor of Shanghai at the time said he accepted “the historical heavy burden of developing China’s largest metropolis into a world class city...and take the lead in setting up a socialist market economy with Chinese characteristics” (Pudong New Area Administration, 1991).

The grand visions embodied in city region plans, however, are usually not matched by careful assessments of various options for achieving them. Most city region plans rely on the building of physical infrastructure and services that reflect the grand visions despite the availability of less ostentatious alternatives. For example, no less than 24 rail-based rapid transit systems are currently under construction in Asian cities and another ten are in the planning stages, despite the argument by many transport planners that such systems are very expensive to build, operate and maintain. The latest world-class transport mode preferred by top officials is the magnetic levitation (maglev) train capable of speeds of up to 900 km/hour. In 2002, Shanghai inaugurated the first operational high-speed conventional maglev train linking the downtown metro system to Pudong International Airport. The Chinese government has also approved another project for a maglev train system to Hangzhou to be finished by 2010. In Japan, there is a plan to build a maglev train system linking Tokyo to Osaka by way of Nagoya targeted for completion by 2025.

In India, rail-based rapid transit systems have been built in Mumbai, Delhi, Chennai, and Kolkata and new lines are currently under construction in Bangalore, Hyderabad, Mumbai and Thane. As pointed out by many Indian transport planners, however, the great bulk of transport users in Indian cities use bicycles, rickshaws and three-wheeled vehicles and most of them cannot afford to pay rapid transit fares. Geetam Tiwari has proposed a fixed route bus rapid transit system for Delhi that will have the advantage of a rail-based system but will entail much lower cost. By integrating this bus rapid transit system with more traditional modes like walking, riding bicycles and rickshaws, and three wheelers, Delhi can have a more cost-effective transport system (Tiwari, 2002).

To weigh various options to achieve planned goals, urban authorities in Asia have used various qualitative and quantitative methodologies such as cost-benefit analysis, cost-effectiveness analysis, and sensitivity analysis to assess the viability, effectiveness, efficiency and profitability of various options. They have also used tests of potential outcomes such as possible effects of projects on employment, capital investments, people’s mobility, and social class formation. Environmental impact and social impact analysis are also widely used in deciding what options to pick. One approach that has been used in Dhaka has been scenario building that was used to analyze the Metropolitan Area Integrated Urban Development Project. Scenario A focused on development of land close to the inner city providing for heavy investments for flood protection. Scenario B advocated land development in the urban periphery where localities were

not subject to flooding. Scenario C also proposed developments in the northern and western suburbs where flooding was not a problem. For each of these three scenarios, the costs of land acquisition, flood control measures, roads and other infrastructure, and operation and management were calculated. The expected benefits were also assessed, including employment creation, access to services, agricultural production and environmental improvement. After careful analysis of the costs and benefits, the planners concluded that a combination of Scenarios B and C were the most appropriate ones for the Dhaka city region.

A common problem of mega-urban region plans in Asia is that they are great in expressing grand visions but terribly vague about what financial, material, human and institutional resources will be required to achieve these. In reality, most city and metropolitan governments in the region do not have adequate resources and from a third to more than half of their incomes are in the form of grants in aid and their shares of tax revenues allocated by central governments. The potentials for relying on “user charges” to pay for urban infrastructure is quite limited because of the low incomes and capacity to pay of most citizens. In some Asian mega-urban regions, private-public partnership has been used to finance urban infrastructure and services and there have been quite a few successful cases showing the viability of this approach. Programs and projects that have tapped the material and human energies of the people themselves in such schemes as garbage collection, composting, recycling and disposal as well as community-based sewage and sanitation schemes have also proven successful in cities like Dhaka and Karachi.

C. THE GOVERNANCE OF MEGA-URBAN REGIONS

The recent literature on urban governance has been mainly concerned with how public affairs in city regions can be conducted effectively and efficiently. This is probably because most studies have been conducted in technologically advanced countries where provision of urban services is very important. In most Asian countries, however, city regions are not just settlements that rely on efficient delivery of services – they are the engines of economic growth, the agents for transformation of societal values, the loci of authority and power, and the source of national leaders. Thus, the governance of Asian mega-urban regions goes beyond mere management of urban services. In the words of a recent study: “urban governance is the relationship between civil society and the state, between rulers and the ruled, the government and the governed” (McCarney and others, 1995). As such, it is concerned with political activities such as articulation of a common vision for the city region, selection of political leaders, formulation and adoption of development policies and programmes, mobilization of resources, and the implementation and evaluation of government programs and projects.

1. Governance problems in mega-urban regions

a. Fragmentation and jurisdictional conflicts

Political and administrative fragmentation of local units in Asia is often related to the survival of indigenous local units that encourage a spirit of localism among the people (e.g., *barangays* in the Philippines, *kampung*s in Indonesia and Malaysia, *panchayats* in India, or *upazilas* in Bangladesh). Fragmentation is also a legacy of colonial governance structures such as municipal corporations, military cantonments, special service wards and development trusts. In national capitals, most urban functions are carried out by central government ministries, special purpose authorities or quasi-governmental corporations. The governance structure is also hierarchically fragmented at ward, district, municipal, metropolitan, prefecture, provincial, and central levels.

In India, Bangladesh, and Pakistan, the tradition of local autonomy is deeply rooted in indigenous local units, legal norms and political processes. Local leaders often members of dominant families try to preserve their bailiwicks and contribute to political fragmentation. Local governments jealously guard their autonomy and central government agencies are reluctant to devolve some of their functions to metropolitan bodies. In Dhaka, for example, proposals for metropolitan consolidation started as early as 1951 with the creation of the Dhaka Improvement Trust (DIT). The DIT was charged with formulation of a regional master plan but political turmoil caused by Partition disrupted this process. After independence in 1971, the Dhaka Metropolitan Development Ordinance created another metropolitan authority. The Dhaka Municipal Authority (DMA) established in 1982 proposed a single metropolitan organization to govern the metropolitan area but local government leaders rejected the idea. The creation of RAJUK (Capital Development Authority) in 1987 revived the idea of a unified body to carry out planning and management functions but the agency's efforts failed. The main objections to metropolitan consolidation came from no less than 42 organizations operating in the metropolitan area including central government agencies (Ministry of Housing and Public Works, Ministry of Local Government), specialized boards (Dhaka Electric Supply Authority, Dhaka Water and Sewerage Authority), local government units (Dhaka City Corporation, Dhaka Cantonment Board), and traditional local units (*pourashavas* or municipalities and *upazilas* or rural sub-districts).

In Metro Manila, metropolitan consolidation efforts were started in 1975 with the creation of the Metro Manila Commission. However, because the MMC was headed by the former First Lady, Mrs. Imelda Marcos, it was abolished in 1986 when the Marcos dictatorship was toppled. So strong was the antipathy to metropolitan governance that the 1987 Philippine Constitution, promulgated under former President Corazon Aquino, made the creation of metropolitan governments extremely difficult by requiring that such structures can be established only upon the voluntary and complete concurrence of all local government units in the metropolitan area. The present Metro Manila Development Authority (MMDA) is weak and dependent on financial contributions of the 17 local governments in the national capital region. In 2002, the Chairman of the MMDA complained that the problem of flooding in Metro Manila could not be solved because of lack of cooperation of Mayors and City Councils. He complained that some Mayors did not even attend meetings of the MMDA Council but sent junior staff members instead (Laquian 2002a).

b. Lack of financial capacity

Most local governments in Asia are dependent on tax revenue allocations, grants in aid, and other forms of financial assistance from central or provincial governments. The local revenue base is weak. Income from real estate taxes, the usual source of local government revenue is low – a study carried out for the Asian Development Bank found that most real properties in Asian cities are under-assessed and that less than 5 per cent of real property taxes are based on real market value (Roberts and Kanaley, 2006). Most Asian governments do not allow local government units to borrow from foreign and domestic sources for capital investments. Institutional and private sector investors are also hesitant to lend money for public infrastructure and services without national government (sovereign) guarantees, which governments are often reluctant to give. While public agencies provide urban services like water, sanitation, and transport, cost recovery through user charges and fees is often inadequate. For example, a large proportion of potable water supplied in many Asian cities is unaccounted for. So-called non-revenue water (NRW) has been estimated at 62 per cent in Metro Manila, 53 per cent in Delhi, and 51 per cent in Jakarta. The huge water loss is attributed to leakage from ancient pipes,

unauthorized and illegal tapping of water mains and public standpipes, and the non-payment of user charges by public and private enterprises (Brennan-Galvin, 2007).

c. Popular participation

Most Asian governments are committed to people's participation in public decision-making, but many local government theorists fear that urban governance structures on the scale of metropolitan areas or mega-urban regions are too big and too bureaucratic to make this possible. In India, for example, the 74th Amendment to the Constitution decentralized authority and powers to local governments in 1992. The amendment was designed to provide for a participative platform in metropolitan planning and governance. However, popular participation was focused on the establishment of urban wards because there was "a growing feeling that in the larger municipal bodies the citizens do not have easy access to the elected representatives since the ward sizes become very large." Cities with a population of more than one million were supposed to organize metropolitan planning committees where various stakeholders could participate in decision making but as of the middle of 2007, only the Kolkata Metropolitan Planning Committee had been established (Sivaramakrishnan, 2007).

Similarly, the Local Government Code of 1991 decentralized powers to local government units in the Philippines in an effort to encourage "grassroots democracy." However, like other decentralization measures before it, the law devolved powers to units like the *barangay* or village council, municipalities and cities. These local units, however, did not have the financial resources, tax base, or the human and managerial resources to actually bring about positive development. The law was silent on the issue of setting up metropolitan or mega-urban governance arrangements, perhaps because the 1987 Constitution required that such units of governance required the common agreement of local government authorities to voluntarily create a federation of local units, a near-impossible move in a country where acute political partisanship at the local level is the norm (Laquian, 2002b).

d. Transparency and Accountability

Because most urban infrastructure projects in mega-urban regions are big ticket items, they offer excellent "rent seeking" opportunities for government officials. Although most governments have passed legislation to enhance transparency and accountability, graft and corruption continues to be a serious problem. The reasons for this are well known: (a) political officials have to spend large sums of money to win elections and they have to recoup these "investments" once they get elected; (b) administrators and civil servants have low pay and they are tempted to augment these by engaging in graft; (c) economic and political life in most cities is dominated by powerful families and "political dynasties" that remain in power by sharing rent seeking opportunities with petty leaders in their political machines; (d) military groups who have control over the official use of violence gain political power and use these for economic advantages; and (e) the judiciary is often weak and also corrupted, thereby becoming ineffective in demanding accountability. Research on graft and corruption in Asia has revealed the complex cultural factors that underpin its prevalence. The strong kinship ties in Asian societies is said to encourage family and clan members to protect each other. The tradition of gift giving and reciprocal granting of favors makes it difficult to differentiate between gifts and bribes. A value system based on avoiding shame and loss of face rather than suffering from guilt makes not getting caught a stronger motive than not doing something because it is wrong. Finally, the real or imagined belief that all officials (especially top level ones) are all corrupt encourages potential grafters.

In some Asian city regions, of course, judicial reforms have helped in enhancing accountability and controlling corruption. In Hong Kong, research on corruption found that one of the main reasons for corruption was the overly cumbersome process for deciding city affairs. The study found that if there are too many steps in decision making, corruption is encouraged because each step opens up opportunities for rent seeking. Aside from streamlining bureaucratic processes, Hong Kong also created the Independent Commission against Corruption (ICAC) and gave it strong powers to punish erring officials. In Singapore, the certainty that corrupt acts are going to be punished and that sentencing would be done transparently and quickly have also served to inhibit corruption.

In the Philippines, a strong civil society and an unbridled mass media has been a factor in efforts to limit graft and corruption. Non-governmental organizations (NGOs) have taken on a watchdog role and exposed cases of corruption. The Philippine Center for Investigative Journalism (PCIJ) has been instrumental in exposing many cases that have resulted in the indictment of a number of officials. Despite these efforts, however, corruption continues to be a fact of life especially in Metro Manila. Lack of transparency and accountability is particularly widespread in the awarding of large contracts for urban infrastructure and services, procurement of supplies and materials, tax assessment, collection and audit, and appointment of individuals to lucrative posts such as the customs bureau or the internal revenue service (Laquian 2002b).

3. Types of mega-urban region governance

There are essentially three approaches to governance of mega-urban regions in Asia: (a) autonomous local government systems; (b) mixed regional governance approaches; and (c) unified governance systems. These systems are based on the types of political structures used to perform specific functions, where formal authority is located and the relationships among local units with each other as well as with the central government.

a. Autonomous local governance

In an autonomous local governance system, individual cities and municipalities in a city region function independently of each other. Responsibility for urban infrastructure and services is lodged in each local government unit. A good example of autonomous local governance was Metro Manila before the creation of the Metro Manila Commission (MMC) in 1963 when four cities with their own city charters and four towns belonging to the Province of Rizal ran their own affairs. In those days, a road built in one local government jurisdiction ended at the border and was not continued by another. If a fire broke out in one city, the fire department of another did not come to help, especially if the mayors of both localities belonged to different political factions. This local fragmentation was supposed to have been solved by the creation of the MMC which had been replaced by the Metro Manila Development Authority (MMDA) in 1995 but fragmentation continues. The MMDA, however, continues to be a weak agency. It is formally in charge of comprehensive planning, land use control, urban renewal, traffic and transport management, solid waste disposal, flood control and drainage, engineering and public works, and public safety but it does not have the financial and human resources to carry out these function. It has prepared a metropolitan development plan but this has not been formally adopted and made into law. Thus, individual local government units pass their own zoning codes and regulations without any reference to the plan (Laquian, 2002a).

b. Mixed regional governance

In a mixed regional governance system, authority and power over city region affairs are shared by local and central government bodies. For example, services such as public works and construction, education, public health and environmental protection are vested in central government ministries; some area-wide functions like water supply, electricity, solid waste disposal, and traffic control may be lodged in a metropolitan authority, and purely local functions like garbage collection, police, and fire protection may be the responsibility of local government units.

The Special Capital City District of Jakarta or *Jakarta Raya* is a good example of a mixed regional governance system. There are at least four levels of governance in the capital district: (a) central government ministries; (b) Jakarta Raya itself which is a Level 1 unit (with the status of a province); (c) municipal level bodies called *kabupaten* or *kotamadya* such as Tangerang, Bekasi and Bogor; and (d) village level governments. In areas within Jakarta Raya that belong to the Province of West Java, however, there are smaller local government units such as (e) administrative zones called *wilayah kota*; (f) sub-districts or *kecamatan* within each administrative zone; (g) local units called *kelurahan* within each sub-district; and (h) neighbourhood and street level bodies called *rukun warga* and *rukun tetanga*. The sheer number of governmental bodies in Jakarta Raya has created coordination difficult. For example, problems like environmental pollution, over-drawing of ground water for commercial, industrial and household use, and the uncontrolled activities of private housing developers especially in the outlying areas require closer cooperation and coordination among the local bodies (Dharmapadni and Firman, 1995).

c. Unified regional governance

To cope more effectively with problems created by local government fragmentation, unified regional governance has been proposed in a number of Asian mega-urban regions. However, there are no examples as yet of such a broad-based governance structure. At most, there are unified *metropolitan* governance systems such as the Bangkok Metropolitan Administration (BMA), the metropolitan governments of Beijing, Shanghai and Tianjin, and the national capital authorities of Delhi and Dhaka. In these metropolitan areas, an institution is vested with the authority and power to manage urban affairs. Central government agencies continue to carry out specific functions in the region but, in general, most functions needed for the smooth functioning of the area are lodged in the metropolitan body.

One problem posed by unified regional governance is the sheer size of mega-urban regions and the complex variety of local units included within their territories. Fears have been expressed that the existence of a second governance tier between autonomous local units and the central government will hinder citizen participation and cause delays in decision-making. There are those who argue, however, that hi-tech innovations in electronic communication will enable citizens, assisted by civil society activist groups and mass media to participate more easily in public decision making. This is certainly the vision in the planned developments of Cyberjaya and the new administrative capital of Putrajaya in Malaysia that are linked together by “smart” communication networks.

Some advocates of mega-urban region governance are hoping that the formulation of comprehensive city region plans will eventually lead to the creation of unified mega-urban region governance. For example, in the Pearl River Delta, there is a call for closer integration of public decision making among the metropolitan governments of Guangzhou, Shenzhen, Hong Kong,

Zhuhai and Macau. Planners who have cooperatively initiated the formulation of a mega-urban region plan envision a future where they will be able to achieve their development goals of “competing together rather than competing against each other” (Yeh, 1996).

D. INCLUSIVE DEVELOPMENT IN MEGA-URBAN REGIONS

As the forces of globalization dominate developments in the 21st century, mega-urban regions have become key foci of economic growth, technological innovations and societal change. As John Friedmann has observed, to understand the functioning of the world economy, it is more instructive to consider what is happening in 30 or 40 mega-urban regions or quasi-city states rather than events in 185 nation-states. Mega-urban regions are “linked to each other in a global system of economic, social and political relations.” They are “vital command centres, switching points, and global investment hubs through which the national economy is articulated – a network of city-regions that function as the new core areas of the world economy” (Friedmann, 1998).

The main challenge in the world at present, as noted by the presidents of both the World Bank and the Asian Development Bank is how to achieve “inclusive development” that encompasses all sectors of society. Advocates of mega-urban region development in Asia and elsewhere are hoping that inclusive development can be achieved by using planning and governance mechanisms for mega-urban regions. As they begin to understand the dynamics of economic and social processes in these mega-urban regions, they envision them as the generators not just of economic development but of genuine social and technological changes.

Careful analysis of mega-urban regions reveals that inclusive development can be achieved in these places in at least five ways: (a) by closely integrating rural and urban areas within mega-urban regions; (b) by including all levels of local governments in the city region in planned development and governance schemes; (c) by including all sectors of society, especially the poor and underprivileged in city region development; (d) by integrating all urban infrastructure and services in area-wide networks; and (e) by conceiving of city region development as a policy instrument for achieving economic, social and environmental sustainability.

Past approaches in mega-urban region planning and governance have been negatively influenced by an approach that drew a sharp distinction between urban and rural areas. Inclusive development realizes, however, that both urban and rural sectors are essential parts of a mega-urban region. It recognizes that food is a basic necessity and it should be produced as close to consumers as possible to cut down on transport, packaging, preservation and handling. Efficient urban waterworks systems require protection of watershed areas outside the political boundaries of the city. The disposal of solid and other types of urban waste demand sanitary land fills or incinerators located far from population centres. Forests, green areas, parks and open space act as the lungs of the city and have to be included in the mega-urban plan to achieve environmental sustainability.

City region development requires that all types of governance structures including big cities, small and medium-sized cities, provincial and state units and agencies of the national government should be included in the whole development strategy. Decentralization and adherence to local autonomy fragments governance structures and makes cooperative and coordinated action difficult. Improved communication technologies in mega-urban regions enables citizens, with the assistance of civil society groups and the mass media make it possible for citizens to receive information they need for active participation in public decision making.

Policies and strategies that achieve the welfare of the whole society rather than the particularistic interests of specific groups are needed for inclusive city region development.

Planning and governance of mega-urban regions should include all sectors of society within the expanded territory. It should not create separate and well-serviced “gated communities” for the rich in some areas and ghettoized slums and squatter communities of the urban poor on the other. It should treat as stakeholders men, women, the young, the elderly, ethnic groups, cultural groups, and all other segments of society who should be free to participate in decision-making.

Unified development requires an integrated approach to providing urban infrastructure and services in mega-urban regions. Planning a waterworks system, for example, requires careful consideration of energy generation (as in hydroelectric projects), food production (irrigation for agricultural crops), health and sanitation (fecal matter contaminates sources of water supply), solid waste management (uncollected garbage dumped into rivers and streams clogs up waterways, hampers drainage and pollutes surface and ground water), and transport systems (air and water pollution from vehicle exhausts causes acid rain that degrades surface water sources).

Finally, inclusive development calls for strategies for achieving economic, social and environmental sustainability. Economic sustainability requires the full valuation of natural resources, the maintenance of capital stock, promotion of growth with equity, poverty reduction and the internalization of the impact of economic activities. Social sustainability requires consideration of “social capital” which enhances the capabilities of human beings (education, good health, skills training), means for achieving social stability, the empowerment of disadvantaged people, and preventing social disorganization. Environmental sustainability addresses ecosystem integrity, habitat conservation, the preservation of species and consideration of the carrying capacity of ecological systems. By including all these aspects of sustainability in the planning and governance of mega-urban regions, the role of these city regions in overall development will be enhanced.

REFERENCES

- Brennan-Galvin, Ellen (2007). The coordination of infrastructure and public services for the urban poor in Asia. In *The Inclusive City: Infrastructure and Public Services for the Urban Poor in Asia*. Aprodicio A. Laquian, Vinod Tewari and Lisa Hanley, eds. Washington, DC: Woodrow Wilson Center Press, and Baltimore, MD: Johns Hopkins University Press, pp. 249-277.
- Dharmapatni, Ida Ayu and Tommy Firman (1995). Problems and challenges of mega-urban regions in Indonesia: the case of Jabotabek and the Bandung metropolitan area. In *The Mega-Urban Regions of Southeast Asia*, T.G. McGee and Ira M. Robinson, eds. Vancouver: University of British Columbia Press, pp. 296-314.
- Enright, Michael J. and others (2003). *Hong Kong and the Pearl River Delta: The Economic Interaction*, Hong Kong: The 2022 Foundation.
- Friedmann, John (1996). The common good: assessing the performance of cities. In *Urban and Regional Governance in the Asia Pacific*. John Friedmann, ed. Vancouver: Institute of Asian Research, University of British Columbia, pp. 1-16.
- Friedmann, John (1992). *Empowerment: The Politics of Alternative Development*. Cambridge, MA: Blackwell. See also, John Friedmann (1987). *Planning in the Public Domain: From Knowledge to Action*. Princeton, NJ: Princeton University Press; and John Friedmann (1998). The common good: assessing the performance of cities. In *City, Space and Globalization: An International Perspective*. Hemalata Dandekar, ed. Ann Arbor: University of Michigan Press, pp. 15-21.
- Hamer, Andrew (1994). Economic impacts of Third World mega-cities; is size the issue? In *Mega-City Growth and the Future*, Roland Fuchs, Ellen Brennan, Joseph Chamie, Fuchen Lo and Joha I. Uitto, eds. Tokyo: United Nations University, pp.172-191.
- Jain, A.K. (1996). *The Indian Mega-City and Economic Reforms*. New Delhi: Management Publishing Company.
- Laquian, Aprodicio (1995). The governance of mega-urban regions. In *The Mega-Urban Regions of Southeast Asia*. T.G. McGee and Ira M. Robinson, eds. Vancouver: University of British Columbia Press, pp. 215-241.
- Laquian, Aprodicio (2002a). Metro Manila: People's participation and social inclusion in a city of villages. In *Urban Governance Around the World*, Blair Ruble, R. Stren, R. Tulchin and D. Varat, eds. Washington, DC: Woodrow Wilson Center Press and Baltimore, MD: Johns Hopkins University Press, pp. 74-110.
- Laquian, Aprodicio (2002b). Urban governance, some lessons learned. In *Democratic Governance and Urban Sustainability*. Joseph H. Tulchin, Diana Varat and Blair Ruble, eds. Washington, DC: Woodrow Wilson International Center for Scholars, pp. 97-125.
- Laquian, Aprodicio (2005). *The Planning and Governance of Asia's Mega-Urban Regions*. Washington, DC: Woodrow Wilson Center Press and Baltimore, MD: Johns Hopkins University Press.

- Laquian, Aprodicio (2006). People's Republic of China. In *Urbanization and Sustainability in Asia: Case Studies of Good Practice*. Brian Roberts and Trevor Kanaley, eds. Manila: Asian Development Bank and Cities Alliance, pp. 101-134.
- McCarney, Patricia and others (1995). Toward an understanding of governance: the emergence of an idea and its implications for urban research in developing countries. In Richard Stren and Judith K. Bell, eds. *Urban Research in the Developing World: Vol. 4, Perspectives on the City*. Toronto: Centre for Urban and Community Studies, University of Toronto.
- McGee, T.G. (1995). Metrofitting the emerging mega-urban regions of ASEAN: an overview. In *The Mega-Urban Regions of Southeast Asia*. T.G. McGee and Ira M. Robinson, eds. Vancouver: University of British Columbia Press, pp. 3-26.
- National Economic and Social Development Board (1990). *National Urban Development Policy Framework*, Vol. 1, Final Report. Bangkok: Joint NESDB-UNDP and Thailand Development Research Institute (TDRI).
- Pudong New Area Administration (1991). *Shanghai Pudong New Area – Investment Environment and Development Prospects*. Shanghai.
- Shi Peijun, Lin Hui and Liang Jinshe (1996). Shanghai as a regional hub. In *Shanghai: Transformation and Modernization under China's Open Policy*, Yue-man Yeung and Sung Yun-ming, eds. Hong Kong: Chinese University Press, pp. 529-549.
- Sivaramakrishnan, K.C. (2007). Municipal and metropolitan governance: are they relevant to the urban poor? In *The Inclusive City: Infrastructure and Public Services for the Urban Poor in Asia*. Aprodicio Laquian, Vinod Tewari and Lisa Hanley, eds. Washington, DC: Woodrow Wilson Center Press and Baltimore, MD: Johns Hopkins University Press, pp. 278-302.
- Tiwari, Geetam (2002). *Urban Transport for Growing Cities: High Capacity Bus Systems*. New Delhi: Macmillan India, Ltd.
- United Nations (2006). *World Urbanization Prospects: the 2005 Revision*. Department of Economic and Social Affairs, Population Division. New York.
- United Nations Centre for Human Settlements (2005). *Global Report on Human Settlements, 2005*. Nairobi: UNCHS-Habitat, Table B-1.
- Wright, Arthur (1977). The cosmology of the Chinese city. In *The City in Late Imperial China*, William G. Skinner, ed. Stanford, Cal: Stanford University Press.
- Wu Liangyong (1999). *Rehabilitating the Old City of Beijing: a Project in the Ju'er Hutong Neighbourhood*. Vancouver: University of British Columbia Press.
- Yee, Francis (1992). Economic and urban changes in the Shenzhen special economic zone, 1979-1986. Unpublished Ph.D. dissertation, Department of Geography, University of British Columbia: Vancouver.
- Yeh, Anthony Gar-On (1996). *Planning Hong Kong for the 21st Century*. Hong Kong: Centre for Urban Planning and Environmental Management, University of Hong Kong.

Yuen, Belinda, Supian Ahmad and Chin Siong Ho (2006). Malaysia. In *Urbanization and Sustainability in Asia: Case Studies of Good Practice*. Brian Roberts and Trevor Kanaley, eds. Manila: Asian Development Bank and Cities Alliance, pp. 223-243.