Managing Asian Cities

Asian Development Bank
Managing Asian Cities
Sustainable and inclusive urban solutions

Asian Development Bank
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The challenge of urbanization in Asia is unprecedented—some 1.1 billion people will move to cities in the next 20 years. Cities themselves are the economic powerhouses of nations and are becoming increasingly confident, competent, and self-reliant. Providing jobs and services to this rapidly expanding urban population, and to improve the livelihood and quality of life for those already in the cities, is a management task of a magnitude never before attempted. And, this has to be achieved without over-stretching the earth’s critical ecosystems, and responding to the impacts of climate change.

Although existing institutional structures are adequate for managing stable or slowly growing cities, the level of change required to improve current living conditions is overwhelming, and already many cities cannot cope.

The technology, money, and skills necessary for tackling the challenge of urbanization are available.

But, to build cities that can cope, self-reliant cities, governments at all levels must adopt an “enabling approach” to:

- **Act on the environment**—adopt the 3Rs: reduce, recycle, and reuse; and respond to the adaptation and mitigation imperatives of climate change;
- **Maintain economic growth**—prepare and implement a city-region economic development plan that involves all government, business, and community stakeholders; build on strengths and opportunities; and plan to overcome technical, competitive, environmental, and disaster risks; and
Self-reliant cities will provide social services and physical infrastructure in partnership with the private sector and communities, through:

- **Ensure sustainable communities**—foster inclusive service delivery and provide the organizational structures for community-driven development.

- **Effective coordination**—through layered special coordination companies undertaking strategic planning, identifying a priority set of investments, and forming special purpose vehicles (SPVs) to implement these investments.

- **Structuring appropriate financing**—for SPVs within the context of strengthened local government finances; and

- **Capacity development**—for implementing SPVs and other supporting organizations.

At the national level, additional enabling frameworks are needed, particularly those for:

- **Capital markets**—focus on incentives to use pension and life insurance funds in infrastructure finance;

- **Intergovernmental transfers**—foster intergovernmental coordination and efficient use of assets, increase local government own-source revenues, and provide for infrastructure investment; and

- **Civil service reform at the local level**—focus on incentives for efficient use of human resources and the acquisition of needed skills.

The international community, too, must find ways to engage more strongly and flexibly with cities, supporting them to establish this enabling approach. The social and environmental costs of failure to manage the Asian urbanization process will be global in scope and unthinkable in magnitude.

ADB hopes that the Managing Asian Cities report will, first, represent a useful management resource, canvassing key issues and pointing managers to appropriate responses to problems; and, second, provide the initial step in a new phase of ADB’s continuing support to Asian cities under its Strategy 2020, focusing with its development partners on overcoming their main constraints to improved management and service delivery.
Asia’s urban challenge and how to respond
Managing Asian Cities
Overview

I. Asia’s Urban Challenge

Rapid growth could overwhelm the management systems of Asian cities.

The urban population of Asia is growing faster than ever before. There will be over 1.1 billion more Asian urban residents in 2030 than there were in 2005—an average increase of 44 million people every year. London took 130 years to grow from 1 million people to 8 million; Bangkok took 45 years; Dhaka, 37; and Seoul, only 25. Asian megacities have populations and economies as large as some countries. They are magnets for people, functions, businesses, and organizations. As they expand into their hinterlands, they bring both the benefits and the problems of urbanization. The management challenges they generate are enormous and affect all facets of life: the economy, the environment, and society.

Some Asian megacities are merging into megaregions, urban settlements on a scale never before seen. Tokyo–Nagoya–Osaka–Kyoto–Kobe, for example, is likely to have 60 million people by 2015. By 2010 the population of the Hong Kong, China–Shenzen–Guangdong megaregion could reach 120 million. Because they span many administrative boundaries, these regional urban systems raise the need for complex coordination of water, transport, and communications infrastructure. The scope, range, and complexity of these issues and others that megaregions face were previously associated only with national states. They demand new systems of management.

City regions power Asia’s economy.

Rapid urbanization has been the key driver of Asia’s dynamic growth—and of the poverty reduction that has resulted. East Asia’s urban population produces 92% of its wealth, with Southeast Asia not very far behind at 77%, and South Asia at 75%. This means that the efficiency with which its cities are managed can determine how fast a country’s economy grows. Large cities are more productive than smaller ones and labor productivity generally increases with city size. With the greater integration of global production systems, there has been progressive concentration, specialization, and integration of production and capital flows in cities or city regions that offer competitive advantage to investors, buyers, transnational corporations, and other producers of wealth. In Asia, for example, Singapore; Hong Kong, China; Shanghai; and Tokyo dominate regional finance and transport logistics.

Asia’s cities are growing at a pace unseen before in human history. They are the engines of the region’s economic development. But as cities expand rapidly into the hinterlands and merge with neighboring city regions, coordination across agencies and jurisdictions becomes more complex, and vital services are at risk.
Our cities devour resources and are the Earth’s worst polluters.

Cities occupy only 2% of the world’s land but consume 75% of its resources. They produce a similar percentage of its waste. An ecologically sustainable footprint is thought to be 1.8 hectares per person. The average footprint in the People’s Republic of China (PRC) is 1.6, despite its huge population. But Shanghai’s is already 7.0 and is fast approaching that of a typical American city—9.7. Cities are also major contributors to climate change. They consume most of the electricity and fuel used by transport, industry, and households for domestic heating and cooking, as well as most of the energy used in construction of buildings, infrastructure, and other fixed assets. Cities produce close to 80% of all carbon dioxide and other greenhouse gases (GHGs). Almost 80% of carbon emissions from fossil fuels and cement manufacturing arise from energy and building activity in cities, and 76% of industrial wood used worldwide ends up in urban areas. Asian cities are likely to contribute more than half the rise in GHGs over the next 20 years. Cities are also highly vulnerable to the consequences of climate change, including flooding, landslides, heat waves, and shortages of water. Asian cities that are vulnerable to rising sea levels include Tianjin in the PRC, Jakarta in Indonesia, Manila in the Philippines, Dhaka in Bangladesh, Chennai in India, and Bangkok in Thailand. The potential indirect impacts of climate change on Asian cities range from increased energy demands for heating or cooling to large in-migration of environmental refugees and food shortages.

Poverty in Asian cities presents special challenges.

Between 240 million and 260 million people in Asia’s urban areas live on less than $1 a day. That is about one third of the total number of absolute poor in Asia, which in turn accounts for about 70% of dire poverty the world over. Many of Asia’s urban poor live under high-density conditions in degraded, informal, or squatter settlements located in both built-up districts and periurban areas on the edge of cities. Projections are that, if nothing changes, the population of these slums will grow by an average 110 million people a year, reaching 692 million by 2015. This could further accentuate the large gaps between the rich and the poor that are characteristic of urban areas in both developed and developing cities. The urban poor are more vulnerable to shocks than their counterparts in the countryside because there is no nearby farm to provide food. Traditional family support, common in rural areas, is generally absent. The poor are further handicapped in cities by lack of access to health care, education and training, as well as to productive assets and social networks. Their fragile asset base is a key factor in their relative inability to withstand risks and improve livelihoods. Housing—including security of tenure—is one of the most important elements in a family’s asset base.

Economic and environmental infrastructure is already inadequate in Asian cities, and now growing demand is greatly outstripping growth in supply.

Our cities suffer from inadequate institutions and infrastructure. Institutional weakness and poor and insufficient infrastructure put the future growth of Asia’s cities in danger. Crucial areas of urban management—planning, environmental management, and
financial management—lack capacity, and the structures, institutions, and incentives to acquire skills and expand these capabilities cannot meet the need. Economic and environmental infrastructure is already inadequate in Asian cities, and now growing demand is greatly outstripping growth in supply. Traffic jams and pollution reduce the efficiency of economic activity in cities and lower worker productivity. Inadequate infrastructure is among the most serious threats to sustaining the development of Asian cities in the future.

II. Meeting the Challenge: Liveable and Sustainable Cities

Part 1 describes ways to meet Asia’s urban challenges, addressing the three dimensions of sustainable development—economics, environment, and society. The organizational changes required to effectively implement these actions are in Part 2.

A. Sustainable Economic Growth

The paradigm for a city’s sustained economic growth should focus on developing competitive industrial clusters, on fostering rural-urban linkages, on improving productivity and conditions in the informal sector, and on infrastructure development.

The city and its region must foster competitive clusters.

Cities grow because they have productivity advantages due to location, including proximity to natural resources, and efficiency advantages that result from the clustering of firms. A city must assess its productivity advantages and identify the key industry clusters that can drive its economy and growth. Tools for such analysis include: area profiling; sector-based forecasting at the city, region, or local level; sector productivity and linkage analysis, such as cluster analysis; labor market analysis; and risk assessment analysis, which would encompass disaster preparedness.

An urban region can identify sources of competitiveness by preparing a cluster map. This involves assessing groups of related firms—or clusters—rather than individual companies, and analyzing supporting infrastructure. Successful strategies for the economic development of cities adopt several key principles. They pursue market-led development by creating an enabling environment for investment in the clusters. They integrate economic development with spatial planning. They focus on matching people’s skills to available jobs. They ensure that efficient infrastructure is sustainable through economic pricing of community and municipal services—i.e., the external benefits and costs are reflected in these prices.

Urban–rural linkages help the hinterland.

Because urban and rural areas are, in fact, interdependent, policies based on the traditional separation of rural and urban economies can inhibit economic growth and damage spatial planning. Improving transport and communications links for coordinated development of urban and hinterland economies should be a priority.
Raising productivity and wages in the informal sector, which provides employment for 60% of the urban population, is important for expanding the opportunities of the poor in the cities.

Cities should support the informal sector.

Asian countries and their cities have large informal economies, which contributed an average of about 26% of gross national product in 26 Asian countries recently studied. This hidden yet diverse part of the economy employs up to 60% of the urban population and serves the needs of an even greater proportion of the population by providing a wide range of goods and services. And when local economies are affected by structural adjustments or global shifts in demand, the informal sector provides a safety net for those made redundant or unemployed. City governments and other local agencies can play an important role in raising productivity and wages in the informal sector by establishing general support structures, reducing or eliminating restrictions on informal enterprises, supporting creation of community-based financial institutions, coordinating nongovernment organization (NGO) activities in credit or training support, and providing basic health and education to informal sector employers and workers.

Cities need to vastly expand their infrastructure.

Almost more than anything else, success in urban economic development depends on sufficient good-quality infrastructure. Developing infrastructure is critical for generating growth, supporting industrial clusters, strengthening connectivity and linkages, and increasing a city’s international competitiveness. National governments can help by providing—or facilitating the provision of—strategic and trunk infrastructure, including national electricity and gas grids, telecommunications networks, and bulk water supply. Cities must maximize the benefits of such investment by ensuring that their own infrastructure programs and plans are integrated with national priorities through connecting and secondary infrastructure. Effective maintenance programs are essential.

B. Improved Environment

Improving a city environment requires anticipating and planning for future urban growth, aligning transport and land use planning, choosing appropriate modes of transport, building environmental infrastructure, and emphasizing energy saving.
Cities must plan their suburbs efficiently and well in advance.

As cities expand, they inevitably create suburbs. Making a city environmentally sustainable requires a long-term view. Cities must anticipate and prepare for this change and ensure that these suburbs are planned well and developed efficiently. Unplanned sprawl causes congestion and serious environmental problems, including adverse affects on air and water quality. Planning for future urban growth is integral to successful city development—and must extend well beyond the core city. Critical problems gestate and grow on the periphery. Managing the fringes of urban areas is very important and involves the crucial planning of major and secondary roads, utility networks, and other infrastructure well in advance of development.

Successful cities coordinate plans for transport and land use.

Efficient public transport is fundamental to efficient urban growth. Infrastructure planning reinforces overall urban development schemes because new housing, commercial, and industrial areas tend to follow infrastructure development. For example, development of Pudong, Shanghai’s hinterland, has followed an infrastructure-goes-first strategy. On the other hand, the demand for urban public transport infrastructure is rooted in a city’s layout, housing densities, and the location of centers of employment. Systematic planning in land use can therefore radically alter mobility patterns and have major implications for the city environment.

Cities must favor appropriate modes of urban transport.

Accessibility is at the core of any transport strategy, which must also take into account traffic demand and affordability. In determining accessibility, all modes of transport—walking, cycling, public transport, private cars, and trucks, for freight—must be considered. The mix of modes most used in a city’s transport systems has a huge bearing on the city’s environment and, in particular, on the levels of congestion, air quality, and GHG emissions. The worldwide experience shows that controlling congestion requires that restraints on automobile use be combined with the development of acceptable public transport alternatives. In most developing cities, buses provide that alternative. Efficiently operated buses that have priority over other traffic can offer moderate fares and a sustainable transport system. Many developing cities in Asia, therefore, should pursue the following priorities: (i) early introduction of traffic restraint measures; (ii) development of bus services, and, where possible, development of busways along radial corridors, and (iii) greater provisions for pedestrians and cyclists.

As cities develop, demand increases with growing incomes, and capacity improves, cities should expand and intensify traffic restraints and, where possible, upgrade busways to rail-based rapid transit. Beijing’s north-south corridor bus rapid transit (BRT) system provides an example.

Urban regions need to better control their waste.

In general and where it can be afforded, sewerage should be constructed where densities are over 100 persons per hectare. Elsewhere, a viable sanitation system may comprise of septic tanks and upgraded storm water and/or drainage systems that can function as a combined storm water and wastewater network. Deforestation and climate change suggest that infrastructure...
planning and design must incorporate provisions for more frequent, intense flooding in the future. Floods in Jakarta in February 2007 provided an example of the damage climate change and inadequate management can cause.

Improvements in solid waste management (SWM) must focus on three Rs—reduce (minimize waste), recycle, and reuse. Successful systems will offer effective incentives to encourage appropriate behavior by generating communities, disposal organizations, and receiving communities. Cash for trash helps ease waste problems. Informal recycling and recovery industries already thrive in most Asian cities. They should be bolstered. Community-based collection at the neighborhood level and contracting out of collection and transport services have also proved effective in many cities.

Industrial symbiosis offers another waste solution. It mirrors a process common in nature. Waste or a by-product of one enterprise becomes the resource or input of another. A number of PRC cities are piloting circle-economy planning based on this principle. Eco-industrial parks like the one in Kalundborg, Denmark, recycle by-products, reduce consumption of resources and environmental strain, and improve the use of energy resources—by, for example, employing waste gases in energy production. There are important opportunities in relation to SWM for incorporating co-generation and/or methane recovery that can enhance financial viability of projects through the clean development mechanism-based financing schemes.

Cities must innovate to save energy.

Cities can save power by adopting technical innovations like automatic switching and energy-saving bulbs for street lights, and the use of effective building insulation. They can improve management and operational arrangements, and contract maintenance services. They should quickly adopt the new techniques of energy efficient design that are being developed in many countries. Great energy savings can be achieved, or at least encouraged, through development and enforcement of appropriate planning and building regulations, and through utility pricing and land tax. For example, building codes should focus on maintaining densities, encouraging use of natural light, harvesting of water, utilizing alternative energy, and dealing appropriately with waste water.

Urban governments can use economic instruments to fight pollution.

Governments can deploy economic instruments to support sustainable environment management in cities. A tax on carbon, for example, which shows up in higher costs for energy or fuel, provides an incentive to use energy more efficiently. There is a wide variety of such instruments, including user charges and emissions, or effluent, charges. Product charges are put on products that pollute during or after consumption. Tradable rights establish markets for the rights to use a quantity of a resource such as
Marketable permits are tradable rights, usually for pollution sources. Deposit refund systems are set up for commodities packaged in potentially polluting or reusable containers. These instruments in general adopt the polluter-pays principle, which is important for establishing sustainable development—polluters should meet the costs of dealing with pollution they are responsible for.

Cities must lead the battle against climate change.

Climate change is primarily an urban problem. If the challenges of climate change and reduced GHG emissions are to be met, it is essential to understand how to reduce energy demand in cities. Cities should be developed in patterns that reduce the need for private cars by increasing densities. The sustainable cities and factories of the future will need low-carbon transport alternatives, energy efficient buildings and industrial processes, and new approaches to wastewater treatment and solid waste management to reduce their GHG emissions. Depending on the extent of the need, adaptation measures should be initiated in all cities to build knowledge and capacity, avoid future investments in areas at risk, and, where needed, construct infrastructure like sea barriers and dikes.

C. Inclusive Social Development

Community involvement in basic service delivery and the provision of low-income housing solutions are essential for poverty reduction and inclusive social development in the cities. Cities should become sustainable societies.

Cities should be places where people want to live, and where they can have safe, secure, affordable houses and neighborhoods that are appropriately serviced and have adequate access to social services. City governments need to help the poor by ensuring access to services and supporting equity in asset distribution, maximizing the use of national programs like social funds. This means designing and implementing systems that allow local communities to make decisions on key facilities they will use, especially for health and education. Cities must also prepare and implement housing and urban renewal strategies to provide affordable shelter and basic needs. This includes the upgrading of slums. With the help of concerned communities, cities should more rigorously enforce laws against land occupation and illegal construction to prevent the reappearance of illegal settlements in the future.

Urban communities should participate in their own service projects.

Successful undertakings like the Self-Employed Women’s Association and PRC = People’s Republic of China

At the core of the poverty and vulnerability in cities is the poor asset base of many citizens, a problem that centers on housing and lack of security of tenure. Enabling the markets to deliver low-income housing solutions and to resolve land tenure issues is essential for poverty reduction and inclusive development in the cities.

Cities must provide low-income housing.

Low-income housing solutions build a key family asset and are critical to reducing poverty and making the poor less vulnerable. It is important that governments adopt policies and practices that enable housing markets to work for the poor. These include developing property rights, developing mortgage finance, rationalizing subsidies to better target the poor, providing utilities and services infrastructure for residential land development, systematically regulating land and housing development, encouraging competition in the building industry, and developing an institutional framework for managing the housing sector. At the local level, city governments need to prepare and implement strategies to provide shelter. Key components of a low-income shelter program would be: (i) comprehensive area upgrading to resolve land tenure and security issues; (ii) provision of new housing at prices that can be afforded by all groups and, in particular, those with low and middle incomes; and (iii) development of mechanisms to increase access by the poor to formal mortgage finance for house, lot and apartment purchases, and to small loans or microcredit for house improvements.

Cities should regenerate communities in decline.

The goal of urban regeneration is to enable communities that have suffered from economic, social, and environmental decline to function well again. Effective models can be found in the United Kingdom and are being adopted in Europe. Sustained regeneration creates wealth by revitalizing the economy and funding long-term renewal and prosperity. Urban regeneration requires a wider vision and a broader package of programs and projects than speculation-led, property-focused physical regeneration, from which the poor are often excluded. It involves finance, education, training, enterprise development, and social provision. Private sector investment is
an essential component and must be a central theme in government policy.

III. Organizing to Meet the Challenge

Improving city management requires change. Most technical solutions to urban problems are well known but they need to be brought up to scale. For this to happen, the institutions involved in city management must change. Coordination and financing structures that support equitable, efficient, and sustainable development must be put in place. The three key priorities of city management are coordination, finance, and capacity but the details of the actual policies and approaches will vary between countries and cities. In general, city managers need to be more self-reliant—able to make good decisions and mobilize the resources to see them through.

Coordinating city regions demands a clear vision. Cities in clusters and corridors are growing and merging rapidly—thereby generating management and coordination challenges never seen before in Asia. National governments need to respond proactively to this trend if their city regions are to achieve their full productive potential. Nations must have a vision for the future development of their cities that is set within the context of national economic growth and its spatial implications. A national urban sector road map should show the way for the development of cities. To improve coordination in development and planning for services, cities themselves also require a clear vision for the future—one based on strategic planning. Investment road maps for individual cities should ensure that development plans support their particular competitive industrial clusters within national urban development objectives.

Urban regions need new or restructured coordination organizations. Coordination structures based on the unchallenged mandate of government are now often ineffective. It is important in rapidly growing cities and city regions that city organizations be structured to facilitate effective coordination of interjurisdictional and intersectoral issues. The new paradigm requires the establishment of city organizations and structures that involve all the key stakeholders, including the private sector and civil society. Asia should be open to innovative ideas based on experience in other parts of the world. That experience shows that what is needed, in the context of a decentralized political environment, is a two-level coordination structure. At the first level would be a broad, umbrella entity with a board comprising local government political heads, such as governors and mayors, as well as representatives of the private sector and civil society. It would coordinate the city region development activities, including preparation of a strategic development plan, by obtaining a consensus on

The institutional structures for managing the cities in the region are weak, even though the technologies are well known and abundant finance is available. The core capacities required for city management fall into three interdependent groups: planning and policy formulation, program and project formulation, and management of service delivery.


Organizing for Sustainable Development

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Coordination structures based on an unchallenged mandate of government are not always effective in times of globalization and rapid change. New coordinating structures are needed to reach out to diverse stakeholders, including the private sector and civil society.

Managing Asian Cities

strategic priorities across the region. The establishment of the second-level sector, or purpose-specific, investment coordination organizations would follow. These entities should be nonprofit corporations structured to ensure the active participation of the private sector and civil society. These organizations could deal with specific issues—public transport, energy conservation, or cultural heritage, for example. For each investment or related set of investments, the second-level organization should establish special purpose vehicles (SPVs) for implementation. SPVs would enable urban services to be managed as businesses and facilitate public-private partnerships. Private and public agencies that are embryos of such umbrella entities and purpose-specific investment organizations already exist in many cities. They simply require redirection and greater involvement and representation from outside the public sector. Examples in the Philippines illustrate this point. The Metro Naga Development Council is an umbrella entity, while the Pasig River Commission is a purpose-specific investment organization.

Cities must tackle the complexities of landownership.

Managing land is the best way to implement a city strategy and an investment road map. But land tenure is one of the biggest, most difficult development issues facing the cities of Asia. In most cities, more than 50% of urban populations live on land where title is disputed, unknown, or undergoing litigation related to tenure and/or land-use rights. Land registration and information systems require urgent improvement. It is not unusual in Asia for only 10% to 20% of land transactions to be formally registered. Cities will need to adopt land policies that not only continue to promote economic development but also limit the negative impact of development on the environment and the poor. This calls for appropriate zoning, subdivision policies, building regulations, and enforcement.

City regions need stronger institutions, managers, and staff.

Managing city regions and broad stakeholder involvement demands a new type of manager. It also requires better systems in institutions and improved staff skills and capacities. The core city management capacities fall into three interdependent areas: planning and policy formulation, program and project formulation, and management of service delivery. These competencies must be created through capacity development programs for all stakeholder groups. In particular, managers must be able to effectively engage with the private sector, create enabling environments for entrepreneurs and infrastructure investment, and facilitate the process of getting government out of the business of providing direct services.

At the national level, central agencies should establish a national support mechanism and international networks to sustain capacity enhancement. The national government can establish a national urban institute and provide
resources for it to link effectively with local governments and international organizations. Urban and Regional Development Institute, established in Indonesia in 1995, is an example. National and local governments can draw upon the resources of domestic and international training and education institutes, networks of cities and local governments, peer networks, and research institutes. Links should also be established with local academic and professional bodies for independent advice on urban issues.

**IV. Financing to Meet the Challenge: How to Invest in Sustainable Cities**

Local governments need to reform and expand their finance tools.

Decentralization has left local governments with increased responsibilities for financing services. Local government funds flow from tax sharing with, and transfers from, their national governments, and their own taxes and earnings. City governments often lack the financial resources to provide appropriate infrastructure and services to their residents. This calls for local government reforms. Financial management and expenditure control must be improved, which, in turn, will require upgrading both systems and their capacities. Local governments also need greater control over tax policy. They must be able to set rates and define the tax base. Many cities must also administer their local tax system better and reduce high rates of noncompliance. City governments generally collect much less property tax than what the tax base indicates is due. Very often, the most effective way for local governments to improve revenues is simply to collect the arrears on current billings.

Asia’s capital markets.

Today, Asian capital markets are generally flush with funds. For example, the total amount of domestic financing, comprising domestic credit of the banking sector, local currency bonds outstanding, and total equity outstanding in the major markets of East Asia was estimated to be some $29.4 trillion at the end of 2005. The local currency bond market comprises $7.4 trillion, or 36% of this total. Nevertheless, capital markets are not developed enough to provide significant funding for infrastructure. Most important, the lack of long-term debt constrains financing of city infrastructure.

Local governments need to attract funds from the capital markets.

The revenue sources of local governments are usually insufficient to meet the large, long-term financing needs of infrastructure. Their infrastructure investment has often come through grants or loans from central governments but these governments also face resource limitations. The result is an infrastructure deficit. Capital markets represent a potential answer to this problem but local governments have not been able
Local governments need to improve their creditworthiness and ability to borrow to increase their financing options. This requires financially sound entities, improving revenue streams, and more commercially viable investment projects.

Capital-market financing for urban infrastructure is critical. Special purpose vehicles and appropriate financial structuring are needed to achieve it.

Governments should create new agencies to mobilize funds.

The SPVs that governments should establish to implement specific urban development investment projects can also play a key role in the mobilization of funds. SPVs have proven very effective around the world in mobilizing financing in most key sectors of infrastructure. When SPVs are structured as companies, capital markets can finance projects either through equity—the purchase of company shares—or debt, through loans to the company. The proper financial structuring of an SPV is about matching the instruments available in the capital market to the characteristics of the project, and thereby helping raise the necessary funds. National governments should take several steps to ensure that enabling frameworks exist for this purpose. Local and provincial or state governments should be legally empowered to establish and participate in SPVs. National governments should provide incentives to local governments and SPVs, usually in the form of tax breaks, since structured financing by the SPVs will support local revenue generation, and the development of local capital markets and financial innovations. To enable and encourage the superannuation and life insurance companies to invest a significant part of their portfolios in infrastructure, restrictions on their eligible investments should be amended. Mechanisms for rating the creditworthiness of local governments and SPVs must be set up. Incentives will also be needed within the civil service to develop skills for the designing and structuring SPVs.

Governments and cities need a plan for tapping capital markets.

There are four key considerations in approaching capital markets for urban

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$ = US dollar.
Source: Asian Bonds Online website.
projects. First, a project’s developers and financiers should specify asset risks narrowly to encourage trading and liquidity. Since a part of any infrastructure project’s cost-base is highly risky, the high-risk portions should be suitably packaged to increase their appeal to appropriate investors. Secondly, financing should be planned by project developers around the asset’s life cycle because financing structures should change as risk declines. A staged approach to finance avoids burdening the operating infrastructure with the high cost of initial start-up finance throughout its life. Thirdly, financial intermediaries involved in infrastructure development should offer a variety of different products to allow risk diversification by investors. The use of structured finance vehicles, such as the pooling of several mature infrastructure assets that have established stable cash flows, can provide suitable investments for risk-adverse investors. Fourth, the government should support accountability, adaptability, and learning mechanisms in infrastructure projects. This requires continuous improvement in a city’s ability to communicate plans, decisions, and actions to users and investors. Municipal governments should place a high priority on establishing independent agencies or specific utility companies for the fiscal administration of infrastructure.

V. Urban Opportunities in the 21st Century

Cities are the key drivers of Asia’s economic growth. The focus now must be on how to take advantage of the opportunities Asia’s cities offer while addressing the threats to their sustainable development.

- Many Asian cities have populations and economies of the size of countries. Their management challenges can be addressed because the resources are available. But new management structures are needed to integrate the economy, environment, and society into their operations, to benefit their hinterlands, to coordinate across agencies, and to reach out to diverse stakeholders, including the private sector and civil society. These structures need to make cities can be made more self-reliant—able to flexibly analyze and solve their individual problems.
- Anticipating and planning for future urban growth holds the key to successful development and management of cities, and to protecting their environment. Aligning transport and urban land use planning, and development control—the maintenance of viable densities—constitute probably the most important requirement for sustainable and livable development of Asian cities. Improving transport and communications linkages for coordinated development of urban
Managing Asian Cities

and hinterland economies should be a priority. Special attention is needed for the development of fringes of urban areas, which are expected to accommodate much of the growth of cities.

- Energy savings are crucial for the sustainability of Asia’s cities. There are well-known techniques and innovations in utility pricing, energy efficiency, building codes, regulations, and in other areas, that can profoundly change energy consumption patterns. Their adoption in Asian cities is now a priority.

- The economic and environmental infrastructure of Asian cities is inadequate and expanding much more slowly than the growing needs. Infrastructure funding requirements—some $60 billion per year—are unlikely to be met without mobilizing large amounts from capital markets in Asia, where trillions of dollars are available, or internationally, where there are trillions more. Bankable projects are lacking. Appropriate financial structuring and creation of new finance-ready entities (i.e., SPVs) are crucial steps. Local governments can increase their financing options by improving their creditworthiness and capability to borrow. This requires financially sound entities, improving revenue streams, and the formulation of more commercially viable infrastructure investment projects.

- The poor can be engaged as partners in development, but their needs must also be met—growth must be inclusive. Poor health, education, housing, and a lack of security of tenure are at the core of poverty and vulnerability in cities. Tackling the complexity of landownership and enabling the markets to deliver low-income housing solutions are essential for poverty reduction and inclusive development in the cities. Basic services should be available to all. City governments need to ensure access by the poor to basic services through the design and implementation of systems that allow local communities to participate in decision making on key facilities they use, especially for health and education. Raising productivity and wages in the informal sector, which provides employment for 60% of the urban population, is also important.

VI. Sustainable urban visions in an era of climate change

Asia shares a vision of one day making all its cities liveable. The knowledge and financial resources needed to realize that vision exist. But climate change looms as a growing threat. Climate change is the product primarily of the very cities whose future it endangers. If the challenges of climate change and reduced GHG emissions are to be met, it is essential that we reduce energy demand in cities, and reduce the undesirable environmental impacts associated with energy production. To reduce energy demand, we must manage urbanization, city form, design, development density, and logistics systems more efficiently and effectively.
We have learned through the past 50 years of development that it is institutions, their capacity, and the incentives that operate on decision makers within them, that determine success or failure in achieving positive change. Urban managers in developing countries do not have the necessary incentives to change the development pattern of their cities—to reduce the need for private cars, for example, or increase densities, or encourage energy efficiency in buildings. This is particularly the case in rapidly growing Asian cities, which are already stretched to breaking point, and which will contribute over half the increase in GHGs over the next 20 years. A technology-driven approach will not work in isolation from self-reliant, well-resourced, and effective urban institutions. National and international actors need to ensure that these institutions are in place.

The changing environment will force change in cities. The urban managers that are now in place will have to cope with this change. For these managers—the mayors, the urban development ministries, the city engineers and planners—business as usual is not an option. Billions of urban Asians are living with the less-than-satisfactory outcomes of current practices. Their livelihoods and even their lives are in jeopardy. They will hold managers who fail to protect them to account.

The good news is that the right investments will almost always enhance the sustainability and liveability of the city.
Brief Preview of the Book

The study is organized in two parts. The first reviews the existing situation. The second presents options for improved urban management practice.

Part 1 sets out the key issues and problems arising from the growing economic power of Asian cities, their impact on the environment, and their roles as centers for innovation and diversity. It also examines financing, capacity development, and coordination challenges involved in servicing Asia’s new city regions, and concludes with an analysis of the most important improvements needed in urban management to meet these challenges.

Part 2 describes the most promising ways of addressing these issues and problems. It provides examples of good practices from all parts of the globe. These new approaches are organized under the topics of economics, environment, society, financing, and capacity development. Part 2 concludes with an analysis of the implications of these approaches and good practices for development partners.

Throughout the report, when options for solving problems are suggested, we distinguish between cities of differing wealth, size, and capacity. Approaches to better urban management need to be tailored to the specific circumstances of cities. We also focus on a city’s self-reliance, suggesting ways in which different types of cities can take on more responsibility for their own development. Finally, we focus on how to establish enabling frameworks for urban development. Rather than suggesting prescriptive interventions, we concentrate on government as less of a doer and more of a facilitator for the community and private sector.
Part One:
Asian cities have driven their economies forward under globalization—BUT problematic disparities have emerged and they are increasingly becoming VICTIMS OF THEIR OWN SUCCESS.

21\textsuperscript{st} century Asia faces a CHALLENGE unprecedented in human history—URBANIZATION.
Chapter 1
Asia’s Urban Challenge
Asian cities are growing rapidly. Another 1.1 billion people will live in the region’s cities in the next 20 years.

Effective urban management is needed to address this unparalleled growth. But it’s lacking, and the results include worsening pollution, no ready drinking water for over 50% of urban residents, the half a billion people forced to live in slums, and crippling traffic congestion.

Megacities, with inhabitants of over 10 million, are magnets for people, enterprise, and culture. And some are expanding even more, into megaregions.

Although cities on average provide 80% of the national economic base, large disparities have emerged as poverty has urbanized. More than 200 million impoverished people live in Asia’s cities and many more are vulnerable to economic and environmental shocks.

Managing cities in this context requires a new approach. Current practice is manifestly unsustainable—economically, environmentally, and socially.

The eternal lure . . .

There is a new challenge facing humanity and Asia is its frontline. It is the challenge of urbanization. The problems of towns and cities are not new. Roman cities had their congestion, foul air, and slums. Plato wrote in 400 BC: “Any city, however small, is in fact divided into two: one the city for the poor, the other of the rich.” Cities come and go. Some have continuously prospered, reinventing themselves over time, while others have faded away, returning to dust, desert, or forest. Those that have endured have succeeded in one or more of the key functions that cities have always served: ceremony, security, and commerce. These city roles, their reasons for being, have remained remarkably persistent over time and will continue to drive Asia’s urbanization.

Asia’s dynamic growth is propelled by this rapid, relentless urbanization. It is based on the higher productivity of urban jobs and it can provide a better life for many millions. This realization has driven the tidal wave of humanity to the cities. Their vision of freedom from poverty and of prosperity for their children holds great promise for coming generations.

. . . and often harsh realities

But the bright prospects are neither guaranteed nor universal. Visitors to many Asian cities are shocked by the uncollected garbage, the traffic congestion, the beggars, and the squalid living conditions of vast squatter areas. Many Asian governments are criticized for lacking effective urban policies. Even cities in the developed world, however, suffer from the pervasive urban afflictions of poverty and deteriorating infrastructure. The linkages of family, faith, civic culture, and neighborhood that make a city successful are weakening everywhere. If this continues, the future will be bleak. As Kotkin¹ notes, “the study of urban history suggests that even

affluent cities without moral cohesion or a sense of civic identity are doomed to decadence and decline.”

Given the magnitude and the multiple human dimensions of the problem, the remedy may lie more in a new, goal-driven mission for better cities than in simple technical responses to a series of problems.

**The biggest city rush of all time**

Urban populations have never grown as fast as they are growing today. “Humanity has not been down this road before,” say Peter Hall and Ulrich Pfeiffer. “There are no precedents, no guideposts.” In 1950, the Asia and Pacific region was predominantly rural, with only 17% or 232.0 million of its 1.4 billion people living in towns or cities.

The United Nations (UN) estimates that by 2030, 55% of 4.9 billion Asians, or 2.7 billion people, will live in urban areas. Starting in about 2015, all of the region’s population increase will effectively occur in urban areas. By mid-2022, the urban population will surpass that of rural areas.

There will be over 1.1 billion more urban residents in 2030 than there were in 2005. The urban population will grow by an annual average of 44.0 million people over the next 25 years. In 2005, almost 50% of the urban population lived in cities with less than 0.5 million people, while 39% were in those with more than 1.0 million. Similar proportions are projected for 2015. The share of the megacities is projected to remain steady at about 10%.

**For better or worse, here come the megacities**

As most of Asia’s cities get bigger, some are becoming super-sized—the megacities, human settlements with more than 10 million inhabitants that work as magnets for people, functions, and organizations. Their social and economic dynamism provides the structure of a country’s economy and often its culture as well. Megacities are where the global and the local interconnect. New technology has opened up worldwide flows of information, capital, and labor, yet people continue to live their daily lives locally in their neighborhoods.

Megacities constitute a new, distinctive spatial form. Their scale itself creates new dynamics. They expand into their hinterland, integrating other areas into their economy. Such cities generate employment and nurture

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innovation and entrepreneurship, but their expansion can often be accompanied by environmental degradation. In developing countries, most megacities grow faster than their infrastructure, which results in uncontrolled urban sprawl that destroys established communities and increases costs of service provision.

The balance between the benefits of urbanization and the cost needs to be managed since, in the future, it is clear that the quality of life for most people will be determined by the nature of cities.4

...some with mega management problems

Towns and cities develop, grow or decline within national, continental, and global urban systems. Settlements differ in their economic structure/social and demographic characteristics and functions. Their roles and functions and spatial organization are being redefined as a result of competition, migration, and the globalization of culture, trade, and investment. A recognition of different city typologies, population, economic activity, and land use dynamics is essential to understand urban development.

Clearly, there are distinctive management needs for different urban areas during their transition from small towns to large cities and from spatially separate settlements to their integration as regional and global urban systems. Roles and functions also determine these needs, for example, capital cities are different from financial centers and these differ from secondary cities. Even within mega cities, local, national,

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<table>
<thead>
<tr>
<th>City</th>
<th>Country</th>
<th>Population 2005 ('000)</th>
<th>Economic Product 2004 ($M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shanghai</td>
<td>China, People's Republic of</td>
<td>12,665</td>
<td>89,980</td>
</tr>
<tr>
<td>Mumbai</td>
<td>India</td>
<td>18,336</td>
<td>83,528</td>
</tr>
<tr>
<td>Jakarta</td>
<td>Indonesia</td>
<td>13,194</td>
<td>24,592</td>
</tr>
<tr>
<td>Manila</td>
<td>Philippines</td>
<td>10,677</td>
<td>32,277</td>
</tr>
<tr>
<td>Bangkok</td>
<td>Thailand</td>
<td>6,604</td>
<td>63,088</td>
</tr>
<tr>
<td>Tokyo</td>
<td>Japan</td>
<td>35,327</td>
<td>740,000</td>
</tr>
<tr>
<td>Stockholm</td>
<td>Sweden</td>
<td>8,855</td>
<td>255,400</td>
</tr>
<tr>
<td>Copenhagen</td>
<td>Denmark</td>
<td>5,300</td>
<td>174,400</td>
</tr>
<tr>
<td>Phnom Penh</td>
<td>Cambodia</td>
<td>5,300</td>
<td>26,990</td>
</tr>
<tr>
<td>Dhaka</td>
<td>Bangladesh</td>
<td>136,600</td>
<td>56,600</td>
</tr>
</tbody>
</table>

$ = US dollar; M= Million. Source: UN-Habitat database.

Today, there are 12 megacities in Asia.5 In 1950, there were only two in the world: New York and Tokyo. By 1975, this had grown to four with two of them in Asia. By year 2000, there were 18, of which 10 were in Asia. Projections are that by 2015 there will be 22 mega cities worldwide and 12 of these will be in Asia.6

Some are the size of small countries...

Mega cities in Asia are nation size in population and economic product. For example, the table above shows that Mumbai has more people than Sweden and Denmark put together; Shanghai’s economy is almost 150% of that of Bangladesh.
and economic circumstances change. Increased competition has to be met by innovative responses; for instance how do Hong Kong, China and Singapore change now that they face competition from Shanghai and the cities of Viet Nam?

Furthermore, priorities of stakeholders will change as economies develop, increasing the pressure for settlements to become better places within which to live. In these circumstances, the environment becomes a key concern. Other cities are declining, losing population and economic opportunities, and at the same time, requiring explanation for the causes of this decline and the development of policies to attract investment. Effective policies are likely to differ not only according to the type, role or size of the settlement but also in line with change or growth of population and economic activity.

**Megacities to... mega regions**

With the emergence of mega cities, development is encroaching onto more agricultural land and forests. Cities, towns, and villages are merged into the ever extending city. Faster trains, expressways, and ubiquitous communications are extending the economic influence of a megacity over a continuously increasing area. In fact, mega cities are merging in parts of Asia, creating urban settlements on a scale never before seen. Mega regions are emerging, for example, Tokyo–Nagoya–Osaka–Kyoto–Kobe, which is likely to have some 60 million people by 2015. Another example is the Hong Kong, China–Shenzen–Guangdong region, which could have perhaps 120 million people by 2010.

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**Hierarchy of Urban Settlements**

1. Global cities: typically with 5 million and more people within their administrative boundaries and up to 20 million within their hinterlands, but effectively serving very large global territories: London, Paris, New York, Tokyo.
2. Sub-global cities: typically with 1–5 million people and up to perhaps 10 million in their hinterlands, performing global service functions for certain specialized services (banking, fashion, culture, media) and an almost complete range of similar functions for more restricted national or regional territories: all European capitals apart from the global cities, together with “commercial capitals” (Milan, Barcelona) and major provincial cities in large nation states (Glasgow, Manchester, Lyon, Marseille, Hamburg, among others).
3. Regional: population of approximately 250,000–1 million; some of these have characteristics as “showing evidence of world city formation.”
4. Provincial: population of approximately 100,000–250,000.


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**Settlement Transition**

**Town Focus.**
Urban hierarchy: small cities town-based urbanization dominant.

**Provincial City Focus.**
Urban hierarchy: usually capital plus provincial cities with tributary towns.

**Regional City Focus.**
Urban hierarchy: dominant Regional City (semi-global) with town and city tributaries.

**Regional Urban Systems (megapolis).**
Urban hierarchy: strong interconnection of provincial-level cities usually with dominant global megacity at core.

From scattered villages grow merging metropolises—but how and why?

To understand such growth, a taxonomy of settlements is needed. From a variety of sources it is possible to develop such a classification which reflects the specific characteristics of different urban systems. One recent example has used cities of the People’s Republic of China (PRC) as a basis (see figure below). This defines functional urban areas and provides a clear distinction between settlement regions, regional urban systems, and macro-level urban systems of national and global significance.

At the base are settlements that range from isolated dwellings, hamlets, and villages with up to 5,000 residents, to a metropolis with a population of more than 100 million. Settlements are components of regions or territories over which there are clearly identifiable, regular social and economic interactions between and among settlements. At the lowest level, households and enterprises interact at broader scales to form a settlement region of villages, focused on a town. The second stage of urbanization comes when these towns begin to focus economically and culturally on a provincial city.

Next are the larger city regions focused on a big city where regional development policy, particularly that related to strengthening of urban-rural backward and forward linkages, has relevance. Many regional urban systems cross administrative boundaries and comprise nodes of more than one settlement region. Links of physical infrastructure, mainly inter-city roads, railways, navigable waterways, and power grids connect nodes; and reflect the extended market areas of settlement regions. Regional urban systems can be a single city-centered system where one urban or metropolitan region plays a major role in regional production, employment, and distribution, and encompasses villages, towns/townships, small cities, and intermediate cities; regional clusters of villages, towns, and cities at or below the metropolis scale where no single town or city plays a dominant role; or regional corridors, which are similar to regional clusters but stretch in a linear form along a major road or rail line.

**Urban Hierarchy**


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From Fisherman’s Wharf to World Manufactory: Globalization as an opportunity for development in Shenzhen and the Pearl River Delta

Less than 30 years ago, Shenzhen in the Pearl River Delta was a poor fishing village. Now it is one of the People’s Republic of China’s (PRC) most competitive cities. It ranks fourth in terms of GDP among all PRC cities, third in terms of government revenue, and first in terms of per capita GDP, per capita income, and volume of foreign trade. Exports and imports account for almost 6% of the national total. The Pearl River Delta was an undeveloped agricultural province up to 20 years ago and now it has the fastest-growing manufacturing base in the world and is the richest areas in the PRC, accounting for over 10% of national GDP and nearly 33% of the country’s exports.

The rise of the Pearl River Delta economy is a story of integration into the world. When the PRC opened up fully to the international community in the early 1980s, the delta began to develop in close economic cooperation with Hong Kong, China, where manufacturing land was scarce and labor costs high. With the transfer of manufacturing, first to Shenzhen and then through the entire delta area, Hong Kong, China, successfully transformed itself into a service-centered economy, while the Pearl River Delta quickly developed an export-oriented economy. By 2006, 60,000 Hong Kong firms were in the delta, employing 10 million people. In collaboration with Hong Kong, China, the Pearl River Delta extended its market ties with other economies, and diversified its manufacturing base from textile and garment products to electronic, mechanical, and other products. Now half of the top 500 global multinationals have branches in the delta. With new factories rising with the inflow of foreign and domestic investment, the demand for labor rose dramatically and Shenzhen and the Pearl River Delta began to recruit migrant workers in the mid-1980s. Shenzhen grew from a settlement of 300,000 in 1978 to a megacity of 8 million people in 2006, more than 75% of whom were migrants. The migrant population of the Pearl River Delta is more than 25 million, 25% of the national total. Now, after more than 20 years of intensive development, the Pearl River Delta is itself facing competition from emergent urban areas as textile and garment manufacturing relocates to central and western regions of the PRC.

Regional urban systems also interact with other higher levels of settlements. For instance, the Yangtze Delta and Pearl River Delta megalopolises play a crucial part in processing, distributing, and providing quaternary services to cities across the PRC.

Big new cities demand big new ideas

All the countries of Asia have long histories of local governance, but their current systems and structures, which are either inherited from the colonial powers or based on older, mostly western models, must change to better manage the region’s larger, rapidly growing cities and towns. Local government management often reflects a centralized administrative form...
The Fragmented Nature of Metro Manila Governance

In the Philippines, the best known example of the multistage development of metropolitan governance is Metro Manila. The formation of metropolitan arrangements has its legal basis in the country’s Constitution, which states: “Local government units may group themselves, consolidate or coordinate their efforts, services, and resources for purposes commonly beneficial to them in accordance with law.” It adds: “The Congress may, by law, create special metropolitan political subdivisions, subject to a plebiscite. . . .” However, the Constitution also safeguards the basic autonomy of the component cities and municipalities, which continue to have their own local executive and legislative assemblies. It further states that the jurisdiction of a metropolitan authority will be limited to basic services that require coordination. These provisions were included in the 1991 Local Government Code.

The Metropolitan Manila Development Authority (MMDA) was created through an act in 1995 that declared Metro Manila a special development and administrative region covering 17 cities and municipalities. MMDA has planning, monitoring, and coordinative functions, and exercises regulatory and supervisory authority over the delivery of metro-wide services. Its functions cover: development planning, including preparation of medium- and long-term development plans; transport and traffic management; solid waste disposal and management; flood control and sewerage management; urban renewal, zoning, and land use planning and shelter services; health and sanitation; urban protection and pollution control; and public safety, including rescue and response to emergencies and disasters. There is a Metropolitan Manila Council, which is the policy and decision-making body of the MMDA. It comprises all the mayors of the constituent local governments, the president of the Metro Manila Vice-Mayors League, the president of the Metro Manila Councilors League, and heads of key national government agencies. Financing is from a seed fund; annual budgetary appropriations from the Office of the President; fines, fees, and charges; and contributions from member local governments of 5% of all regular revenue net of their respective Internal Revenue Allotment (central transfers).

Dr. Aprodicio A. Laquian says that the “fragmented and particularistic nature” of Philippine society and politics is reflected in the very operation and dynamics of Metro Manila’s governance mechanisms. The MMDA “prepares comprehensive development plans that are neither officially adopted nor followed. Municipalities and cities issue zoning codes and regulations that are not coordinated with metro-wide plans. MMDA is supposedly in charge of transport and traffic management but the central government controls the financing, construction, and maintenance of roads and bridges. MMDA is in charge of garbage disposal but provinces and municipalities will not allow it to set up sanitary landfills or dumps within their territories. MMDA is responsible for urban renewal but housing funds are controlled by the National Housing Authority and other agencies. MMDA has no control over the water system, which has been privatized, nor over the design and construction of rapid transit systems and toll roads, which have also been privatized.” This disjointed and fragmented setup also abets parochial behavior and negates the agglomeration benefits of effective metropolitan governance.

Decentralization

Three levels/options:

- **Deconcentration**—transfer of responsibility from central agencies and ministries to their regional or field units. Some discretion is allowed but they are subordinate to the central authority.
- **Delegation**—functions moved from central government to semi-autonomous public authorities and corporations granted the authority of planning and implementation.
- **Devolution**—transfer of decision-making power and authority to local governments which have the power and resources to perform relatively independently from central agency intervention.

that is more suited to command, maintenance of law and order, and revenue extraction than to the open governance and participation at the local level that is favored by the more modern—and more appropriate—management style.

**Debating decentralization: central power vs. local government**

Many countries in Asia have embraced decentralization, although few fully recognize the right of local communities to determine their own affairs. In practice, most decentralization has been more a transfer of administrative responsibility than a real commitment toward local governance. In some countries, central control over local government is characterized by financial control, in others by the appointment of senior staff. The degrees of dependency on central transfers and of control of financial resources vary. Some countries simply do not have the financial resources to support local governments. The levels of central government involvement in the collection and subsequent distribution of revenue vary too.

Asian local governments operate under legislation promulgated by higher levels, whether the central government in a unitary form of national government or the state or provincial legislative body in a federal system. This structure determines the powers, authorities, duties, functions, and forms of local government. But local self-government is more than structures and instruments of government. It must include the engagement of citizens in voluntary associations, networks, and alliances.

**The appeal of grassroots government**

All countries have grown more conscious of the importance of local self-government in providing services and promoting local democracy. The basic concept of local self-government is the right and the ability of local authorities, within the limits of the law, to regulate, manage, and take responsibility for a substantial share of public affairs in the interest of the local population. This right is exercised by councils or assemblies whose members are freely elected by secret ballot on the basis of direct, equal, universal suffrage.

**Drawing the boundaries of authority**

Local governments are often controlled by higher levels of government in Asia, although the degree of local independence varies. The Philippines has relatively strong local autonomy. Local governments prepare budgets, subject to review by higher levels. There is some local discretion in salaries, although civil service regulations have national coverage. Most staff are hired locally and a few senior positions are appointed by the elected mayor—the city administrator and city secretary, for example. But national governments appoint the treasurer and budget officer. In the PRC, local budgets are approved by a people’s congress at the same level but this power is offset by the hierarchical linking of budgets, limited local tax autonomy, directives from above, and earmarked funds. Local officials are appointed by the local people’s congresses but higher levels of government appoint senior local government officials. Although Viet Nam is similar to the PRC, the major cities have been allowed greater autonomy. Overall, the transitional countries of the former Soviet Union in Central Asia feature less local autonomy, and there is more local independence in countries with extensive experience of market mechanisms, such as Indonesia, Philippines, and Thailand.

**Managing a metropolis calls for multiple methods**

Major cities throughout the region face challenges posed by growth across local government boundaries. In response, they have developed arrangements that attempt to manage and coordinate the efforts of many central or subnational agencies whose mandates often conflict or overlap. Some solutions involve cooperation between stakeholders, including collaborative urban development and multi-organizational partnerships, or simple cross-border cooperation agreements. In other cases, there is an additional level of metropolitan government. Manasan and Mercado9

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### Coordinating Structures of Government

<table>
<thead>
<tr>
<th>Approach</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metropolitan governance overlapped by one or two autonomous agencies</td>
<td>Centralization—planning, economies of scale, internalizing externalities</td>
<td>Neglect of diversity throughout the urban area</td>
</tr>
<tr>
<td>(central coordination and control)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of public service agencies with local governments</td>
<td>More professional management</td>
<td>Problems with coordination</td>
</tr>
<tr>
<td>(technical efficiency)</td>
<td>Less political interference</td>
<td>Government far removed from citizen</td>
</tr>
<tr>
<td>Many municipalities operating in an urban area (local control and</td>
<td>Recognizes local differences in demand</td>
<td>Cannot provide uniform services and taxes</td>
</tr>
<tr>
<td>participation)</td>
<td>Most suitable for citizen participation</td>
<td>Difficulties in overall planning and coordination of capital investments</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Problems with externalities</td>
</tr>
</tbody>
</table>

The division of responsibility between central, federal, and local governments is the vertical dimension of decentralization. The horizontal dimension relates to how large cities are organized to finance and deliver services in their areas. Experience in Asia shows that large cities deliver services and raise revenues according to a combination of three arrangements, one of which generally dominates. They are: (i) an area-wide general purpose government where a single local government is responsible for most local services within a boundary that includes the entire urban area; (ii) use of autonomous agencies that provide specific services citywide, although service areas may differ, and then delivery split with local government; and (iii) a system of smaller cities and municipalities that make up the urban area, where the same local services are provided by many local governments in the area.

have identified a number of forms in Asia. First is a metropolitan city in the form of a single local government that is responsible for all local functions. It has either evolved from a previous political jurisdiction whose administrative area was sufficient to contain the city's built-up area, or has resulted from the amalgamation or annexation of a number of political jurisdictions to create a single unit. Examples include the Bangkok Metropolitan Authority, as well as administrations in Seoul, Kuala Lumpur, Surabaya, and Jakarta. This arrangement eases the coordination and implementation of plans and programs, although, as is the case in Bangkok, national government service providers may not come under local government jurisdiction.

The second form is described as “jurisdictional fragmentation.” In these cases, responsibility for local services falls onto the local governments of the metropolitan area but they lack the necessary resources and capabilities. Several local governments cooperate with a higher level of government that provides wide metropolitan government. Metro Manila in the Philippines is an example.

The metropolitan agency takes a number of forms:

- **Metropolitan Development Council (MDC),** which allows the constituent local governments to retain their powers and whose leadership rests on a governing council of mayors, with a chair appointed from among them. An example is the Metro Naga Development Council in the Philippines.

- **Metropolitan Development Authority (MDA),** with corporate powers and functions, revenue sources that are often from the national government, and a technocratic administrative structure. The council of mayors can be the policy-making body (Metro

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**Local Government and Its Many Variations**

Areas of local government authority normally include public schools, local roads and drainage, municipal services, and some aspects of social welfare and public order. More specifically, local governments are mandated to undertake urban planning; land use and building regulation; socioeconomic development; local physical infrastructure; water supply and sanitation; public health and solid waste management; fire services; slum upgrading and urban renewal; and provision of public amenities, including open space, street lighting, parking lots, public conveniences, and bus stops. But there are differences across the region that stem from the structure of government, and the varying powers given to each level of local government.

In general, local government in Asia falls into two types.

- **The centralized model,** which has clear lines of authority, from the central government's ministry of the interior through a centrally appointed head of a first tier/regional body, to the municipality, which either has a locally elected or an appointed mayor and council. The head of the region, as the local chief executive and the representative of central government, has the authority to overrule local councils and supervise local expenditures. Variants of this system are found throughout Central Asia and the former French colonies of Southeast Asia.

- **The devolved model** is often seen in British colonies and involves local government through elected councils at the county and sub-county levels. This system has less central government interference and greater local budgetary authority than the other. A key feature, often, is the committee system of decision making instead of a strong executive, for administering public services.

Some countries, particularly the city states, including Singapore, and the small island nations of the south and north Pacific, have no real system of local government. Because of their size, functions can be carried out under island or small area delineations. Here, it is not viable to introduce a full-fledged system of local government because of limited revenue-raising powers and a small population.
Local government throughout the region usually involves several tiers. At the top is the province or district or county, which is divided into a number of municipalities that may be classified as urban or rural. Below them is a neighborhood jurisdiction. Most lower levels are controlled by the higher tier. But in some countries, larger, and usually more urbanized, municipalities are semi-independent and neither report to nor are controlled by the authorities at the higher levels. Some countries have community development councils and most make special arrangements for their very large cities and capitals.

Examples of three local government systems:

**Philippines**

Although the local government system originates from the Spanish and American colonial periods, decentralization over the past 50 years is the main basis of the current system. At its lowest level is the barangay, headed by a barangay captain, who presides over the barangay council. Next are the more than 1,600 municipalities or towns. Each is headed by an executive mayor, and has a municipal council headed by the vice mayor, and comprising eight councilors and the presidents of the youth council and the local barangay. All are elected for 3 years and may not serve more than three consecutive terms. Cities belong to the same sub-tier as the municipalities but receive greater central government subsidies to fulfill their responsibilities. Three metropolitan areas exist, including the National Capital Region of Manila, which consists of the city of Manila and 16 other cities and municipalities. The Metropolitan Manila Development Authority is a division of the central government, with a chair appointed by the president. The 79 provinces are the highest level of local government and are largely modeled on the three branches of central government, with an elected executive governor and vice governor presiding over the provincial legislature. National government control and oversight come from the Department of Interior and Local Government, which is divided into 17 regions for administrative purposes. Two regions—the Autonomous Region in Muslim Mindanao in the southwest and the Cordillera Administrative Region of the indigenous Igorot in the north—are autonomous.

**Singapore**

Singapore is a republic with a unicameral parliamentary government. The bulk of the executive powers rest with the Cabinet of Singapore, comprising ministers headed by the Prime Minister. The President of Singapore was historically a ceremonial head of state, but the Constitution was amended in 1991 to create the position of a popularly elected President with veto powers in a few key decisions, including the use of the national reserves and the appointment of key judiciary positions. The legislative branch of government is the Parliament. Prior to secession from Malaysia in 1965, there was a Singapore city council and a Singapore rural board. The city authority was the administrative council responsible for the provision of water, electricity, gas, roads and bridges, and street lighting. Both, however, were abolished in 1965. Specific local services, including housing, economic development, water and sewerage, and public transport, are run by boards.

**People’s Republic of China**

Executive power in the PRC rests with the General Secretary of the Chinese Communist Party (CCP). Below the Premier and the State Council, within the National People’s Congress (NPC), is a system of provincial level entities. There are four levels of local government—province, county, city or municipality, and town or village—apart from national autonomous regions and special administrative districts. In general, the purpose of all levels of local government in the PRC is to achieve socioeconomic objectives, including short and long-term plans for development. They are responsible for all elements necessary to meet those ends, including finance, creating and maintaining infrastructure, and ensuring rule of law. City and county governments are headed by their respective people’s congresses, with functional bureaus below them to implement policy in areas such as health and education, as well as other city offices or committees for such issues as family planning and transport. The election process at all levels is indirect. Representatives to the people’s congresses are elected by the population, and those representatives then elect the holders of the various local government positions.

Forms of Metropolitan Governance

Bangkok Metropolitan Authority

Metropolitan Bangkok, governed by the Bangkok Metropolitan Authority (BMA), represents the unitary model of metropolitan governance. The first BMA was created in 1972 by amalgamating the functions and activities of the municipalities of Krung Thep and Thon Buri, the Krung Thep and Thon Buri provincial administrations, the Metropolitan City municipality, and the Sanitation Administration. By 1985, the law enabling the current BMA came into effect. Its primary responsibility was managing the city of Bangkok. The BMA's comprehensive responsibilities are typical of an urban governance authority. These include local development planning; promotion of investment activities and management of BMA enterprises; provision of transportation services; provision and maintenance of infrastructure—roads, waterways, drainage systems, including those connecting local authorities; solid waste management; provision of social services; coordination of various activities with other local authorities; and promotion of public participation in local development. These services are delivered through BMA's 14 departments. The BMA council is the legislative body for the metropolitan area whose members are elected as representatives by the local residents based on proportional representation. The council enacts laws, sets policies, and reviews and approves the annual budget of the BMA.

Metro Naga Development Council

The Metro Naga Development Council (MNDC) is a voluntary grouping of Naga City and 14 contiguous rural municipalities. Originally a voluntary, cooperative undertaking, Metro Naga and the MNDC were formally organized in 1993 under a presidential executive order. The goal was to share resources among member governments and promote the area as “a singularly attractive investment alternative.” MNDC is governed by an executive committee of all the mayors of the constituent local governments. A project development unit led by an executive director handles the day-to-day operations of the council. The structure includes the Metro Naga Investment Promotion Center, comprising all 15 local government investment coordinators to promote the city region as an investment hub.

Mumbai Metropolitan Region Development Authority

The Mumbai Metropolitan Region Development Authority (MMRDA) is responsible for the development of Mumbai Metropolitan Region, and covers the city and its rapidly developing hinterland. MMRDA was set up by legislation in 1975 to plan and coordinate development in the region. The authority prepares plans, promotes alternative growth centers, strengthens infrastructure facilities, and provides development finance. In particular, it is tasked with accelerating economic development by formulating and implementing key projects for developing new growth centers and improving transport, housing, water supply, and environmental services.

MMRDA consists of 17 members from various ministries, the mayor of Mumbai, councilors of the Municipal Corporation of Greater Mumbai, members of the Maharashtra Legislative Assembly, the metropolitan commissioner of MMRDA, and representatives of other bodies. They oversee and control all the activities of MMRDA. This governing structure is an example of a metropolitan federation, wherein the metropolitan authority undertakes functions that are distinct from those of other local authorities, in this case the Municipal Corporation of Greater Mumbai. But MMRDA covers the whole megacity region. The MMRDA has a legal character and access to funding, including the power to borrow from multilateral institutions. There has been loan assistance from the World Bank for a number of projects, including the Bombay Urban Transport Project and Mumbai Urban Development Project. These projects brought together other public sector agencies, including local governments, as implementation partners. The success of these initiatives led to the establishment of a revolving fund that the MMRDA utilizes to cofinance slum improvement projects, projects and programs for improving local government services, and as equity participation in commercial projects. Recently, the MMRDA has provided funding for municipal councils in the region to improve water supply, roads, storm water drainage, and to procure vehicles and equipment.
Tokyo Metropolitan Government

The relationship of the TMG with its constituent municipalities is characterized by a division of functions. TMG handles the broader administrative work, while the municipalities deliver services that closely affect the everyday lives of the local residents. TMG oversees the provision of firefighting and water supply, except in certain municipalities; collection of metropolitan taxes; urban development; environment; social welfare and public health; industrial and labor affairs; construction; transportation; infrastructure—ports and the harbor, and sewerage; public safety; and the provision of financial and technical assistance. Capital-intensive services, such as transportation, water supply, and sewerage, are managed by three public corporations.

TMG is governed by the Tokyo Metropolitan Assembly, which is the elected legislative decision-making body of the metropolis. The assembly is led by a president who is elected from among its members, and has the authority to enact, amend, and repeal metropolitan ordinances and approve the budget. It sets up standing and special committees for specific issues. The executive branch of the metropolitan government is led by the governor, who is directly elected by the citizens. The governor’s official functions include overall control of metropolitan affairs and maintaining the collective integrity of the metropolitan administration. In addition to representation in the assembly, local residents are able to express their views and concerns in the public hearings organized by the Bureau of Citizens and Cultural Affairs.

A special administrative arrangement exists between the wards and TMG for managing the delivery of water supply, sewerage, and firefighting services through the special ward system. Outside the TMG, these services are typically provided at the level of municipalities, but the densely populated wards required a single body that delivers uniform, efficient services.

Seoul Metropolitan Government

The metropolitan area of Seoul has a population of some 10 million people and covers 25 autonomous districts or gu and 522 villages or dong. Recently, the status of the gu was upgraded from an administrative suborganization of the city government to an autonomous district that performs both local autonomous governance functions and those commissioned by the city. The metropolis is governed by the Seoul Metropolitan Government, which performs the executive and administrative functions, and the Seoul Metropolitan Council, the policy-making body.

The Seoul Metropolitan Government is led by a mayor and three vice mayors, who are assisted by four policy advisors for women’s issues, welfare, environment, and urban management. Bureaus, divisions, and affiliate offices complete the bureaucratic setup. Urban services are delivered in the metropolitan city through three project offices, six public works corporations, and 29 organizations, including 21 fire stations, under the direct control of the Seoul Metropolitan Government and its various bureaus. The project offices undertake water supply, infrastructure management, and subway construction. The Seoul Metropolitan Subway Corporation, Seoul Metropolitan Installation Management Corporation, Gangnam Hospital, Seoul Agricultural and Marine Products Wholesale Market Management Corporation, Seoul Metropolitan Development Corporation, and Seoul Metropolitan Rapid Transit Corporation are the function-specific public corporations. The Seoul Metropolitan Council is made up of 106 members, of whom 96 are elected from the autonomous districts and 10 are chosen according to proportional representation. The council enacts and revises municipal ordinances, examines and decides on budget bills, verifies execution of works, deliberates on administrative affairs, and accepts and acts on petitions submitted by citizens. The latter is the vehicle for citizen participation.

Managing Asian Cities

Keeping tabs on city assets

The assets of a city comprise those of the administrative units—including their financial assets, land, real estate, infrastructure, and human resources; those of all its other stakeholders—including people, businesses, and other organizations; and the city’s natural resources and environment. There is a clear distinction between the assets owned by or under the control of the local government and those of everyone else. This distinguishes between managing the city’s administration and managing the city’s economy and life.

The property rights of local governments over city assets may be prescribed by law or established by accepted practice. The asset base can be built up through processes of decentralization, nationalization, donation, purchase, transfers, or foreclosure through the enforcement of sanctions for nonpayment of dues. And yet many local governments and their agencies have neither asset inventories nor valuations. Physical assets generally relate to water supply, sanitation, and sewerage, flood control and drainage, roads, public transport, houses and buildings, and telecommunications, among other things. Their ownership is usually well established but decentralization and asset ownership are not explicit in some cases and local governments often are unsure of who owns them.

A cure for asset stress: unbundling

For much of the 20th century, state monopolies deliver infrastructure services. These monopolies often provided very poor services, especially in developing and transition economies, and were particularly bad at servicing low-income citizens. Typical problems were low productivity, high costs, low-quality service, lack of asset maintenance, insufficient revenue, and levels of capital investment that fell far below the needs. Over the past 20 years, many countries have implemented major institutional reforms that have restructured, corporatized, and privatized these entities, and have established new approaches to regulation.

It is now more widely accepted that network utilities should be unbundled so that potentially competitive functions are under separate ownership from natural monopoly components where there is substantial invested capital.

Booming cities, flagging infrastructure

Despite the wide range of metropolitan coordinating mechanisms available in the region, provision of urban infrastructure at the local level has failed to keep pace with rapid urbanization. Urban infrastructure requires strong planning and coordination. Effective land use management is crucial to urban planning but a lack of legal frameworks, poor enforcement of rules and regulations, and political interventions frequently result in irrational planning decisions. Weak outcomes can be exacerbated by poor timing. When urbanization precedes the infrastructure, the required retrofitting usually means much higher costs and greater disruption. Coordination between multiple agencies and across urban boundaries presents additional challenges.

Manila Development Authority, or this body can be composed of representatives appointed by national or state government (Chennai Development Authority) but the authority is run and operated by a chief executive officer.

Metropolitan government, where the local governments comprising the metropolitan area are under a higher jurisdictional authority—usually the state or the province—whose leadership, as governor, for example, is typically elected.

An example of a highly structured system is found in Tokyo. It governs the 23 special wards and 39 municipalities (26 cities, 5 towns, and 8 villages) that comprise the metropolitan area. The Tokyo Metropolitan Government (TMG) has two distinct governance systems: a special administrative arrangement with the 23 wards, not found elsewhere in the country, and an administrative arrangement, typical of other prefectures, with the municipalities. An example of a voluntary council arrangement is the Metro Naga Development Council in the Philippines.


Privatization can be justified as a trade-off in which potential losses of coordination and possible increases in transaction costs through unbundling are exchanged for potential efficiency gains from competition and increased transparency.13

What is Asset Management?

The management of the acquisition, use, and disposal of assets; maximizing their service delivery potential; and the management of related risks and costs over their lifespan. Asset management requires an inventory that is recorded in a central register; valuation; life-cycle costs from initial capital, through operating and maintenance costs to salvage and disposal costs. It requires a plan. An example is an asset management improvement plan for road management, which identifies 12 steps:

- Establish road asset database.
- Establish road hierarchy and classification.
- Establish road condition standards.
- Determine current road condition.
- Identify risks.
- Establish maintenance standards and practices.
- Establish renewal/upgrading program to ensure network meets standards.
- Determine resource requirements.
- Determine organizations’ capacity to provide required resources.
- Review standards having regard to organization capacity.
- Establish monitoring and inspection program.
- Establish complaints and action process and tracking system.


Examples of Unbundling

Electricity: Transmission and distribution split from generation.
Telecommunications: Local network split from long-distance mobile and valu-added services.
Water: Source development separated from distribution and both from wastewater treatment.
Natural gas: High pressure transmission and local distribution separated from production, supply, and storage.
Railways: Tracks, signals, stations, and other fixed facilities separated from train operations and maintenance.

The high price of neglecting infrastructure maintenance

Proper maintenance of infrastructure and other built assets is essential to improving city sustainability. And effective asset management is vital for urban systems. But maintenance gets low priority from most Asian cities both in funding and attention.14 Neither regular nor periodic maintenance takes place in a timely manner. Newly constructed assets often deteriorate rapidly. The problem is made worse by the fact that much of the infrastructure in Asia’s cities is near the end of its serviceable life.

There is a capital cost to this absence of adequate maintenance and failure to set aside money for major rehabilitation. A lack of funds is often quoted as the reason for deferring maintenance, but this leads to unrecognized future funding requirements for many utility agencies and local governments. Little work has been undertaken to establish the scale of the maintenance deficit. But using annual requirements ranging from 2% of the estimated value of infrastructure for electricity, roads, and railways, to 3% for water and sanitation, to 8% for telecommunications stock, Yepes15 estimates that the annual maintenance requirement from 2006 to 2010 for infrastructure16 in East Asia17 to be about $58 billion, or some 54% of the capital investment requirements. This amounts to an estimated 2.3% of gross domestic product (GDP), but it relates to all infrastructure. Specific estimates for urban infrastructure were not prepared. If the PRC is excluded, the figure is about $14 billion, or 70% of the capital investment maintenance clearly requires additional investment to that needed for new capital works. Not carrying out appropriate maintenance will mean shorter

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14 Many Asian Development Bank (ADB) project completion reports support this conclusion.
16 Covering electricity, telecommunications, roads, rail, water, and sanitation.
17 For People’s Republic of China (PRC), Indonesia, Republic of Korea, Lao People’s Democratic Republic (Lao PDR), Malaysia, Mongolia, Papua New Guinea, Philippines, Singapore, and Thailand.
Corporate and Privatization

A partnership approach has been adopted for services such as electricity, water and sewerage, and public transportation which smaller local governments are hard-pressed to finance. Such local entities may assume a corporate character that encourages management by professionals rather than politicians. Many of these special purpose entities were set up as a result of the transfer of power from local authorities through corporatization, or privatization. The former refers to the reorganization of a publicly owned service to operate according to private sector, corporate principles. Privatization is the transfer of a function, or part of it, to the private sector, but generally this leaves a local government retaining some control. There are many examples of corporate agencies, including the local water districts of the Philippines, the water companies (PDAMs) in Indonesia, electric utilities, and public bus companies. Nevertheless, they all have common characteristics, including a continuing organization, the authority to undertake public services, the ability to enter into contracts, the right to sue and be sued, and the ability to collect taxes or charges and determine a budget. In other countries, local governments simply regulate a service which is, or always has been, provided by the private sector. There are a significant number of publicly owned markets, bus terminals, and slaughterhouses in the region, although many are now operated or owned by the private sector.

Various aspects of the modalities are shown in the table but whatever arrangement is adopted, each one relies on a specific contract between a public (government) entity and a private company.

These arrangements take different forms in different sectors. For example, in the water sector, privatization has generally fallen into six categories:

- The disposal by government of public water delivery and treatment systems through the sale of shares, often on the stock market, as undertaken in the United Kingdom in the 1980s.
- A long-term lease agreement with a private company to design, build, and operate water/wastewater systems.
- Awarding concessions or leases to corporations to take over the delivery of the service. As developed in France, the corporation bears the costs of operating and maintaining the system, collects the revenues, and keeps the surplus as a profit.
- Another form of long-term agreement is a build-operate-transfer (BOT) arrangement. Here, a government entity contracts with a private company to construct a water or wastewater facility and to operate it under a long-term agreement. At the termination of the contract, the public utility gains all rights to the facility and its operation. Under many concessions or BOT agreements for water services, the government enters into a take-or-pay arrangement, where the government must pay for a specific amount of water at an agreed price whether it uses the water or not.
- Contracting with a private entity to manage, operate, and maintain some or all of its water/wastewater treatment facilities and services. Generally, this involves the public sector retaining the water rights and setting the charges while paying a fee to the private entity to manage the system.
- Outsourcing operational tasks, including meter reading, billing and collection.

Another form of water privatization involves private entities supplying raw water to public water companies or local governments.

### A Range of Privatization Models Adopted in the Region

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<tr>
<th>Public ownership &amp; provision</th>
<th>Service contract</th>
<th>Management contract</th>
<th>Leasing (Affermage)</th>
<th>BOT</th>
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<th>Private ownership &amp; provision</th>
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<td>Duration</td>
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lives for infrastructure assets, resulting in system failures, safety and health costs, and additional repair and replacement costs later.

**City governments’ struggle for authority, efficiency . . .**

Asian coordination mechanisms, including city planning, development control, and service management, are often too government-driven and fragmented to respond effectively to change. There is also a tendency to micromanage cities when strategic thinking is required. Management styles in Asian cities can be closed, unresponsive, and regulating. More effective local governance is also constrained throughout the region by the factionalism that results from the dominance of local politics by powerful families and strong interest groups. Many service entities are independent fiefdoms. Planning is generally short-term and physically oriented. There is limited consultation with communities and participation is often not encouraged. Local and national government agencies have limited accountability and many show weak leadership.

Despite the coordination efforts, urban growth is fast overflowing local government—and metropolitan—boundaries that were delineated during times of slower growth when there were clear distinctions between urban and rural areas. Increasing economic integration of rural areas within the urban economic system and fabric suggests the need for improving both cross-border and cross-sector coordination without the costly redrawing of local government boundaries. Cross-border coordination is related to the size and spatial extent of a city relative to administrative boundaries and the local government system. Cross-sector coordination relates to decentralization that determines the roles and responsibilities of the levels of government and includes public participation. For many large cities, the separation of some services from the local political process through the creation of autonomous service agencies or companies has been a partial solution.

. . . demand more public involvement

Two prerequisites for good governance are public participation in decision making and public oversight of government functions. Public participation at the local level varies considerably across the region. Some countries allow full participation, while others permit none.

Most Asian countries have legislated for participation but citizen involvement differs largely according to how well developed civil society is. Indonesia and Thailand have active civil societies, but their involvement with local government is limited. In other countries like India and the Philippines, civil society is stronger and more active at the local level.

There are several channels for public participation. The most common, traditional system is the fully or partially elected local council. In some countries, organized civil society groups interact with local governments on issues of interest to them. However, the existence of a civil society is not a guarantee that public participation will take place. Systems need to be devised to provide all groups in society an effective voice in decision making.

**Public and private: potential partners for progress**

Partnerships between the public and private sectors are becoming more important. Progressive city administrations are increasingly joining forces with the local business community to tackle urban challenges together. While this type of partnership usually goes under the term “public–private partnership” in the United Kingdom (UK), it is not to be confused with the other “PPP,” designed to drive private finance initiatives. The rise of partnerships between the public and private sectors has largely arisen because enterprise needs successful cities, and becoming directly involved in improving a city is important for the business community. By participating, business leaders not only bring their entrepreneurial skills
Urban Partnerships in Action

Partnerships in London

Central London Partnership (CLP) was established in 1997 and brings together the private sector, eight central London local authorities, and other public bodies, including the Metropolitan Police. CLP aims to improve the center of the capital city. Business members contribute to CLP through a membership fee, and provide in-kind support and sponsorship for programs and events. CLP provides a channel of information and consultation to the business community, engaging business leaders in city issues that have a direct effect on their operating environment, from congestion charging to planning and local authority service provision. The partnership also works on projects to tackle broadly ranging specific problems, including transport, management, skills, and economic development.

The Circle Initiative was the UK’s first pilot Business Improvement District (BID) program, set up to bring private sector engagement and funding into managing and improving local areas. Established by CLP in 2001, five private sector-led partnerships were set up across central London to test the concept. Four partnerships are operating as formal BIDs, supported and funded through businesses that pay an additional levy on their business rate. BIDs work closely with public sector agencies, bringing additional private funding and resources. Services focus on a “clean and safe” agenda.

Paddington Waterside Partnership was launched in 1998 to drive urban regeneration. It comprises the major developers, landowners, commercial occupiers, and transport operators in the Paddington area, working closely with the local authority, Westminster City Council, and other public agencies. Members of the partnership subscribe voluntarily and drive the direction of the partnership’s vision and activities, through a developer forum and an occupier forum.

Building London Creating Futures is a partnership between members of London’s construction and development industry, central London authorities, and regeneration partnerships. It aims to find long-term employment for local people in central London, helping the construction industry with its recruitment needs. The partnership was established in 2001, responding to the shortage of skilled labor in the central London construction industry and the difficulties experienced by many local people, particularly ethnic minorities and other disadvantaged groups, in finding and sustaining employment.

Urban Regeneration Companies

In England, toward the end of the 1990s the need for effective urban regeneration partnerships led to the creation of Urban Regeneration Companies (URCs). Seen as an effective means for delivering major regeneration projects in key urban areas, three pilot URCs were organized in Liverpool, East Manchester, and Sheffield. URCs are “independent organizations uniting national, regional, and local public and private stakeholders in key towns and cities” through a corporate structure. Their principal aim is to revitalize urban areas by engaging the private sector in a mutually determined and/or agreed-upon regeneration strategy, including the formulation of a comprehensive approach for addressing problems and promoting new opportunities in the area.

A key factor in the operations of the URCs is the preparation of a business plan for regeneration and the prioritization of public sector funding over a given period with a goal of attracting private sector investments. A URC will cease operations upon completion of the outputs of the strategic plan. The operating costs of URCs are funded by the concerned regional development agency, local authorities, and English Partnerships, the national government’s regeneration agency. URCs are formal corporations or partnerships that are expected to treat the local authorities involved at arm’s length.

This is to show a measure of independence. URCs are independent companies with the liability of the contributing parties limited by guarantee and not by shares. They have a governing board that typically consists of the local authority, the regional development agency, a representative from English Partnerships, and the private sector. Also inherent in the URCs is the focus on public consultations to firm up the linkages between public sector bodies, businesses, and the public. The chairman of each URC is from the private sector. There are now 23 URCs. Liverpool Vision was the first and its Strategic Regeneration Framework aims to restore the city’s status as a premier commercial and retail center, redesign its physical beauty, and renew its infrastructure. Its main partners are the Liverpool City Council, the North West Development Agency, and English Partnerships.

Source: Brown, Patricia. The Role of Public-Private Partnerships in Managing Cities.

Source: Urban Regeneration Companies. Available: www.urcs-online.co.uk
to the city but also demonstrate a commitment to their employees. Indeed, competitiveness is intrinsically linked to a good business operating environment, which in a high-income and advanced service economy is as much about a high quality of life as it is about levels of business taxation or supply chains. Public-private partnerships can be established to undertake many activities—from strategic, city, and regional urban infrastructure development to local urban regeneration and social inclusion initiatives. What is critical is a shared vision and genuine desire by each party to work collectively to improve or manage an area.

Partnership arrangements organized through public-private sector collaborations may be centered on economic activities or industrial clusters, infrastructure, transportation, land use planning, traffic, housing, environmental and waste management, and increasingly, urban regeneration functions. Structurally, they adopt a myriad of forms, including boards, councils, companies, and networks. These arrangements may span traditional jurisdictions and co-opt the participation of other critical stakeholders, including the business sector, civil society, technocrats, academe, and communities.

Public-private partnerships fill a gap created by management arrangements that are so rigidly tied to local government boundaries that they fail to cover essential functional linkages and geographical space needed for key activities. The approach is similar to functional unbundling, which limits the local government’s scope of service delivery while authorizing autonomous local entities with corporate powers to undertake specific services on a city-region or metro-wide basis.

**Accepted: change is essential and improved management the starting point**

To achieve change in city management, an effective city administration will foster a strong interaction with the wider community that it serves and manages. Institutions must offer the public easy access. Their decisions must be made openly and the lines of accountability clearly defined. Effective institutions provide people with information about plans and proposals. These institutions will often delegate the management of the city to the local level so that citizens can gain easy access to those who make decisions and provide services. The city of Vancouver in Canada provides a good example of urban management that enables its citizens and businesses to participate in its decisions. In Pakistan, under the citizen community boards, residents are given the funds to undertake local projects if they provide 20% of the project cost. This kind of approach offers an opportunity for community groups that are normally excluded from the planning process to take part in it.

**Facilitate, not regulate, for success**

Institutions must listen to and learn from their communities. They need to establish mechanisms that enable communities and business to make suggestions and receive responses, including opportunities to participate in debates on the future planning of the city and its local areas. Effective institutions learn from the experience of others. They find ways to learn about the city, including research and monitoring activities. This ability to listen and learn will become increasingly important if cities are to be successful. Indeed, some cities call themselves “learning cities.”

Institutions must be enabling—that is, they must actively help others make their own decisions and carry them out. This means a role change from being regulators that tell people what and what not to do to acting as facilitators that offer people and business advice and support so they can operate efficiently. An example of facilitation: a city government provides a brief that indicates its broad planning desires but, within those parameters, allows developers to carry out the development according to their own designs and details. In this way, the city achieves its overall objectives but those objectives are implemented flexibly, allowing for innovation. This leads to more effective and interesting forms and styles of development.

Institutions can also set up partnerships with stakeholders, including business, nongovernment organizations (NGOs), and community and social groups. These partners will work together on projects, sharing information and powers. Each partner brings its own resources, knowledge, and skills into the partnership and uses these to achieve jointly agreed goals.
To achieve these goals, institutions must span the whole urban area—a difficult challenge for government entities in rapidly expanding cities. They must also reduce the transaction costs of doing business with government, and must balance strong leadership with collective responsibility and support both with a strong civil service.

A strong economy, society, environment: it’s all about strategy

Planning for sustainable development as a whole is the key to successful city management. City development strategies (CDSs) are examples of planning instruments that can provide the planning context for a city or city region and enable a better understanding of the city’s current problems and future development. Key lessons learned have been documented in an ADB review.18 The key to CDS is participation, and this takes time. Many strategies have been prepared too quickly and simply follow a standard model, often only to satisfy outside objectives. They often lack economic content, a major failure. Too little time is spent on consultation, participation, and seeking originality. A CDS needs to be a true reflection of the collective vision of its stakeholders.

A CDS must be built on an economic foundation. Such a strategy can change the way a city is managed by focusing on a new economic structure that promotes the city as an attractive destination for regional, national, and global investment. A successful CDS highlights new and unique features of a city and builds upon these for future development. Thinking globally, regionally, and long-term is essential, but funds are needed to maintain momentum. There is more than one way to prepare a CDS program.

A key output of a CDS is an investment program to support the vision. It must have the commitment of stakeholders, including funding support from the national and local governments. These programs need to be implemented within the context of economic and social objectives, which will provide the basis for prioritizing investments.

Planning is always subject to risks, including events that could impact on the continuing success of Asia’s cities as economic powerhouses. They are part of a globalized world, both contributing to and depending on its growing prosperity. They are thus vulnerable to falling demand for

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**How an Empowered Woman Changed a Pakistan Community**

Yasmeen Tariq is a well-educated, 38-year-old mother who was elected to the union council in Kakul in Abbottabad district. Although elected in a reserved seat, she considers everyone in the community part of her constituency. She has been actively involved in social welfare work in her area for some time. Her husband is a banker. His support and influence have complemented her dedication to serve the people and made it possible for Yasmeen to formally enter the political arena. Since assuming office, her links with nongovernment organizations and government agencies have been strengthened. As a council member she faced enormous problems in negotiating projects. After training, however, she negotiated a road construction project from the union council and secured gas connections for 40 households through the private sector. She also plans to facilitate road access to a village in her constituency. At present, the forum she belongs to is involved in an initiative to develop a directory of skilled workers to enhance their skills and to establish links with the market to expand their economic opportunities. Yasmeen has no doubt that her levels of information and knowledge as well as her acceptability in the community have been enhanced as a result of her council membership and project activities. Her plans for the future include contesting provincial elections.


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**City Development Strategies (CDSs)**

<table>
<thead>
<tr>
<th>Impact</th>
<th>Not only on cities but also on supporting development partners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resources</td>
<td>CDS is a powerful tool for mobilizing financial and human resources</td>
</tr>
<tr>
<td>Learning</td>
<td>Horizontal learning among cities proved to be a significant contribution</td>
</tr>
<tr>
<td>Local Government Association</td>
<td>Role of local government association in dissemination of learning experience and sustainability of the process is important</td>
</tr>
<tr>
<td>Partners</td>
<td>Other donors should be brought in as potential implementation partners</td>
</tr>
<tr>
<td>Monitoring &amp; Evaluation</td>
<td>M&amp;E cannot be treated separately from the actual CDS exercise</td>
</tr>
<tr>
<td>Diversity</td>
<td>CDS needs to reflect the diversity of cities</td>
</tr>
</tbody>
</table>

Source: Cities Alliance. 2006.

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or reduced consumption of goods produced in Asia for sale in the US, Japan, and Europe. Deteriorating environments in many major cities also pose risks that are certain to lead to declining competitiveness. This includes the diminishing attraction of cities as places to live. Cultural disharmony, too, can play its role in reducing competitiveness, if those who lose out in the globalization process forcibly demand more.

This introduction
This chapter has laid out the general context within which the management of Asian cities can be improved. It has highlighted the rapid growth of city populations and economies, and the resulting risks and problems. It has stressed administrative responsibilities and the need for better asset management.

Above all, it has shown that there is a need for change that leads to the greater involvement of people in determining the future of their cities and for partnerships with the private sector and civil society. This change will be achieved only through strategic planning—which is vital.

The following chapters
We will now examine the economic, environmental, and social aspects of Asian cities in more detail. These chapters provide the context for the development of integrated approaches appropriate to the management of the burgeoning cities that are the primary drivers of the economies of Asia.
Chapter 2
Managing Cities as Drivers of the Economy
Structural weaknesses and poor infrastructure endanger growth in economies that are vulnerable to shocks.

Cities need to better manage the risks that threaten economic growth and lead to poverty traps for many citizens.

City regions: drivers of Asia’s global economy

Major cities are key elements in today’s global economy, which is very different from previous “world economies.” We have now possibly embarked on the third era of globalization (see box). It represents a radical departure from the past. Highly productive individuals living in areas with high-quality environments can participate in productive processes anywhere in the world. More economic processes and elements—production, consumption, management, information, capital, markets, and labor—operate worldwide than ever before. This abundance of opportunity applies not only to multinational companies but to micro-, small- and medium-sized businesses and even individuals linked with larger enterprises through production and supply networks. National governments could dominate markets once but now they need to operate within the international economy.

Smart money seeks global cities

The third era of globalization is changing the relative competitiveness and opportunities for the growth of cities. Investment tends to concentrate where integration into the global economy is easiest, responding not only to national incentives and locational advantages, but also to better access to communications technology, international capital markets, globally integrated value chains of production and distribution, and information-based industries, including research and development.19

Decisions based on location decisions now depend less on particular countries and more on the comparative advantages of different cities. Less well-off cities have tended to compete on the basis of cheap labor and low costs of such items as environmental regulation. These are important for attracting manufacturing and resource-based industries. Once cities become more affluent, the availability and quality of environmental goods become increasingly important in attracting urban professionals.

Why cities drive economies

Rapid urbanization has been the key driver of Asia’s dynamic growth—and of the poverty reduction that has resulted. The region’s success is dependent on high levels of capital investment to create world-class factories, rising productivity, and openness to foreign trade. Asia’s workforce is increasingly being drawn into the world economy and this is driving urbanization.20

In 2004, urban areas contributed about 80% of the gross domestic product (GDP) in Asia but represented only 40% of the total population. The graph on the next page page shows that the city state of Singapore and Hong Kong, China produce almost all of their national GDP in urban


areas. At the other extreme, the urban populations of Myanmar and the Lao People’s Democratic Republic (Lao PDR) produce much less, at 45% and 51% of total GDP, respectively. Overall, East Asia’s urban populations produce 92% of their countries’ wealth, with Southeast Asia at 77% and South Asia at 75%. Per capita GDP in urban areas is much greater than overall national averages.

Workers who live in the region’s cities have higher wages than those in rural areas. This encourages workers to move from less productive rural locations to more productive urban areas, thereby increasing national income and wealth. Large cities are more productive than smaller ones and labor productivity increases with city size.

**Bigger city, greater prosperity**

The economic rationale for urban growth is that cities have productivity advantages that result from locational factors and the economies of agglomeration, which represent the efficiency advantages from the clustering of firms and economies of scale within an urban area. Urbanization enhances productivity, and those countries with a higher proportion of their population in urban areas generally have a higher GDP per capita.

The proportion of GDP from urban areas is growing and the strength of Asian economies will be determined more and more by the economic conditions in their major urban areas. Urban economies either are already or will become the key drivers of a country’s economic performance.

Since the early 1980s, city and regional economies have overshadowed nations and have been recognized as more dominant than countries in shaping the development of national economies. Authors like Kenichi Ohmae⁶¹ argue that the nation-state is no longer the primary driver of economic development. This is because the multinational control of world trade, finance, communications, and information dissemination has resulted in greater regional specialization and integration of global production systems. Deregulation of national economies, capitalism, open markets and free trade, along with greater cultural, educational, knowledge, and visitor exchanges, and sharing between nations and their regions have also contributed. In response to these changes, there has

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been a progressive concentration, specialization, and integration of production and capital in regions that offer competitive advantages to investors, buyers, transnational corporations, and other producers of wealth.\textsuperscript{22} In Asia, this is demonstrated by Hong Kong, China; Shanghai; Singapore; and Tokyo; which dominate regional finance and transport logistics. Other cities, including Bangkok, dominate the gem and jewelry industry, while Bangalore and Kuala Lumpur are global centers of information technology research and development. The growing specialization of regions is leading to the emergence of powerful industry clusters, which often comprise very large agglomerations of interdependent industries and supplier networks.\textsuperscript{23}

**Why cities grow and thrive . . .**

Cities grow through the agglomeration or clustering of economic activity. Agglomeration is seen in large commercial or central business districts of cities, and in districts with specialized manufacturing or knowledge industries. Restaurants, cinemas, shops, or businesses selling similar products or services often cluster in the same neighborhood. The large shopping malls in many Asian cities, which represent a clustering of retail activities, are modern examples.

**. . . and the many forces that shape them**

The uneven distribution of economic activities across a nation reflects differences in such natural features as climate, landscape, and water courses, as well as in accessibility and in the presence of productive natural resources like mineral deposits. In economics, these are commonly known as first nature, and they determine a settlement’s economic history and subsequent development.\textsuperscript{24} As that is less related to natural advantage emerges. This is the concept of second nature, factors stemming from actions to improve upon first nature (see box). While the impact of first nature on the spatial distribution of economic activities can be explained within traditional economic theory, economists now are exploring the endogenous—i.e., internal or second-nature—mechanisms that lead to agglomeration and are developing economic models accordingly. These models provide a general equilibrium picture of cities, where centripetal forces pull economic activities together and the centrifugal forces push them apart. They rely on the trade-off between increasing returns and mobility costs relative to prices of factors of production that vary across regions. This new economic geography\textsuperscript{25} attempts to develop an analytical framework to explain the formation of economic agglomerations spatially. Understanding the linkages between spatial and economic factors is an important but often insufficiently considered element in comprehending and managing the growth of urban areas.

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\textsuperscript{25} This branch of spatial economics was initiated by Paul Krugman in the 1980s.
### Sector Contribution to Regional Product for Selected Asian Cities

<table>
<thead>
<tr>
<th>City</th>
<th>Country</th>
<th>Primary</th>
<th>Industry</th>
<th>Services</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seoul</td>
<td>Korea, Republic of</td>
<td>3.3</td>
<td>40.3</td>
<td>56.3</td>
<td>2004</td>
</tr>
<tr>
<td>Singapore</td>
<td>Singapore</td>
<td>0.0</td>
<td>35.0</td>
<td>65.0</td>
<td>2004</td>
</tr>
<tr>
<td>Hong Kong, China</td>
<td>PRC</td>
<td>0.0</td>
<td>10.0</td>
<td>90.0</td>
<td>2004</td>
</tr>
<tr>
<td>Shanghai</td>
<td>PRC</td>
<td>1.5</td>
<td>50.1</td>
<td>48.4</td>
<td>2003</td>
</tr>
<tr>
<td>Beijing</td>
<td>PRC</td>
<td>2.6</td>
<td>35.8</td>
<td>61.6</td>
<td>2003</td>
</tr>
<tr>
<td>Shandong</td>
<td>PRC</td>
<td>11.9</td>
<td>53.5</td>
<td>34.6</td>
<td>2003</td>
</tr>
<tr>
<td>Osaka</td>
<td>Japan</td>
<td>1.3</td>
<td>25.3</td>
<td>73.5</td>
<td>2005</td>
</tr>
<tr>
<td>Jakarta (DKI)</td>
<td>Indonesia</td>
<td>1.3</td>
<td>22.1</td>
<td>76.6</td>
<td>1990</td>
</tr>
<tr>
<td>Ho Chi Minh City</td>
<td>Viet Nam</td>
<td>2.7</td>
<td>32.7</td>
<td>64.6</td>
<td>1997</td>
</tr>
</tbody>
</table>

PRC = People’s Republic of China.
Source: Various websites and statistical database sources.

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### Adding investor appeal to regional, city strength

The agglomeration and specialization of industries has given some regions in Asian countries a significant competitive advantage in attracting investment, especially in the People’s Republic of China (PRC). Public policy has also played a key role in fostering patterns of investment, while ease of foreign direct investment, access to capital, and strategic infrastructure have been important in creating an enabling environment for investment and development.

Industrialization has had a major impact on the economic structure of many Asian cities. There is very little data providing reliable estimates of the structure of GDP for Asian cities over time. The table above shows estimates from various sources of GDP by primary, secondary, and tertiary sectors. In the more advanced economies of North Asia, Hong Kong, China and Singapore, the service sectors contribute more than 65% of regional product. In many of these cities, export growth has been replaced by endogenous growth, as the cities develop a wide range of internationally marketable producer services.

**In the PRC, the swing is to services**

The table below shows the change in the structure of the economies for Beijing and Shanghai since 1978 by three industry sectors, clearly indicating the shift from manufacturing to services. It was at this time that internationalization of industries in the larger PRC cities began, particularly in the south. For Shanghai, the growth in services was rapid between 1995 and 2000 as the city took greater control of financial services previously dominated by Hong Kong, China. However, locally based, or endogenous, growth has not been as strong in either city as it has been in North Asian cities.26 The growth in services has flattened out in Shanghai and other PRC cities.

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**Sector Product of Beijing and Shanghai, 1978–2004**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Beijing</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td>5.2</td>
<td>8.7</td>
<td>5.8</td>
<td>3.6</td>
<td>2.6</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>71.1</td>
<td>52.4</td>
<td>44.0</td>
<td>38.0</td>
<td>35.8</td>
</tr>
<tr>
<td>Services</td>
<td>23.7</td>
<td>38.9</td>
<td>50.2</td>
<td>58.3</td>
<td>61.6</td>
</tr>
<tr>
<td><strong>Shanghai</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td>4.0</td>
<td>4.3</td>
<td>2.5</td>
<td>1.8</td>
<td>1.5</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>77.4</td>
<td>63.8</td>
<td>57.3</td>
<td>47.6</td>
<td>50.1</td>
</tr>
<tr>
<td>Services</td>
<td>18.6</td>
<td>31.9</td>
<td>40.2</td>
<td>50.6</td>
<td>48.4</td>
</tr>
</tbody>
</table>

Sources: Beijing and Shanghai Statistical Year Books. 2004.

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28 Managing Asian Cities
suggesting that opportunities for endogenous growth remained untapped. The growth of services has been driven by the demand for utilities, retail, and real estate, suggesting in future there will be a big rise in the demand for health, creative industries and the arts, education, and personal services as per capita income rise in these cities. As PRC manufacturing production also switches from labor-to-technology-based production, the growth in services can be expected to rise sharply. This is already happening in some areas as labor costs in the PRC rise.

**The FDI factor: only some are favored**

Foreign direct investment (FDI) has been a major factor driving the development of many Asian cities. The historical pattern of urban economic development within Asia corresponds to five waves of FDI (see box). They have

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**Five Waves of Foreign Direct Investment in Asia**

The first wave of foreign direct investment (FDI) began with the reconstruction of Japan in the 1950s when a substantial injection of Marshall Plan aid investment was used to rebuild the country’s industrial and economic base. Much of this was for specialized regional manufacturing industry development, particularly in the Tokyo and Yokohama regions. Over 20 years, Japan rebuilt and established a strong manufacturing export economy but, by the early 1970s, Japanese firms experienced escalating labor and material production costs and began to relocate manufacturing industries.

This led to a second wave of Japanese-led investment to offshore sites in the Republic of Korea; Taipei, China; Singapore; and Hong Kong, China. These countries welcomed the capital infusion, employment, and technological uplift that accompanied the investments.

The third wave occurred in the 1970s and 1980s, when Southeast Asian countries began to attract Japanese investment. This led to higher levels of industrialization in Indonesia, Malaysia, Philippines, Thailand. The location of industrial investment was strongly related to the factor endowments and the comparative advantages of specific localities. Bangkok, Bintan, Jakarta, and Manila became targets for Japanese investment. The fourth wave began in the late 1980s and early 1990s and centered on the People’s Republic of China (PRC) and, to a lesser extent, Viet Nam. Four economic development zones (EDZs) in Guangdong and Fujian in southern PRC were given special privileges to encourage foreign investment. This EDZ policy was subsequently expanded to another 14 cities along the coast in 1984 and later to the Pudong area near Shanghai. These coastal cities areas grew to produce more than 53% of the PRC’s total gross domestic product (GDP).

The fifth wave of FDI began in the late 1990s with the opening of India to overseas investment, especially in the information technology and communications sectors, much of it financed by expatriate Indian groups. Countries with new-found wealth such as Malaysia; Republic of Korea; Singapore; and Taipei, China; also began to invest in Bangladesh, Pakistan, PRC, and Viet Nam taking advantage of favorable labor costs, lower regulatory costs, and, in some cases, lower standards. A new wave of investment is emerging, with PRC businesses facing higher production costs and competitions seeking to integrate with global business investing in other cities in Asia and elsewhere that offer competitive advantages.

targeted selected and appropriate areas. The effect has been the concentration of FDI and national investment, and specialization of industry development in national capital regions,\(^27\) major cities with good transportation and communications systems, and resource-rich regions that supply raw materials, mainly to North Asian countries. This directed investment from abroad has distorted spatial patterns of investment and development, especially in the PRC, with rapid growth in some parts of the country powered by exports while other areas lag behind. The PRC currently receives the greatest volume of FDI inflows in Asia. Its share of global net inflows increased steadily from 2.5% in 2000 to nearly 9.0% in 2004.\(^28\) The PRC share is less than 1.0% and Japan's is 1.2%.

**Nations have also felt the FDI factor**
The following table shows the changes in FDI for South and East Asian nations. The structural trend away from Malaysia, Republic of Korea, and Singapore is clear. These countries are no longer as dependent on FDI to support their development and have themselves become significant sources of FDI in the PRC and other Asian countries. Indonesia had a net loss of FDI, but this has improved. India and the PRC have used different FDI development paths. The PRC attracts capital-intensive industries through an export-manufacturing framework adopting special economic zones. India favors an import-substitution model to attract more technology-oriented investments.\(^29\)

**FDI can help Asian countries**
Potential benefits according to Brooks and Hill include:\(^30\)

<table>
<thead>
<tr>
<th>Changes in Foreign Direct Investment in South and East Asian Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>------------------------------------------------</td>
</tr>
<tr>
<td>Bangladesh</td>
</tr>
<tr>
<td>China, People’s Republic of</td>
</tr>
<tr>
<td>Hong Kong, China</td>
</tr>
<tr>
<td>India</td>
</tr>
<tr>
<td>Indonesia</td>
</tr>
<tr>
<td>Korea, Republic of</td>
</tr>
<tr>
<td>Lao People’s Democratic Republic</td>
</tr>
<tr>
<td>Malaysia</td>
</tr>
<tr>
<td>Myanmar</td>
</tr>
<tr>
<td>Philippines</td>
</tr>
<tr>
<td>Singapore</td>
</tr>
<tr>
<td>Thailand</td>
</tr>
<tr>
<td>Viet Nam</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

\(\ldots\) = not applicable, ( ) = negative value.


\(^28\) World Bank Foreign Direct Investment (FDI) database.


Foreign firms bring superior technology, but the extent of benefits to host countries depends on whether the technology spills over to domestic and other foreign-invested firms.

Foreign investment increases competition in the host economy, where the entry of a new firm in a non-tradable sector may increase industry output and reduce the domestic price, leading to a net improvement in welfare.

Foreign investment typically results in increased domestic investment. When the capital inflows take the form of FDI, there is a near one-for-one relationship between the FDI and domestic investment.

Foreign investment gives advantages in terms of export market access arising from economies of scale in marketing of foreign firms or from their ability to gain market access abroad. Besides their contributions through joint ventures, foreign firms can serve as catalysts for other domestic exporters.

Foreign investment can help in bridging a host country’s foreign exchange gap.

The extent to which a city will benefit from FDI depends crucially on the quality of its own institutions and entrepreneurs as they support and spread the benefits of FDI.

The informal sector and its hidden income source

Asian countries and their cities, in particular, have large informal economies. The growth of the informal sector is a rational response to economic opportunities, given the factors limiting entry into the formal sector. Informal housing investment and the use of the home to generate income reflect market realities. Furthermore, the distinction between the formal and informal sectors is often blurred where, for example, householders can work in one sector but live in another. In economic terms, the informal sector is a competitively remunerated population that has decided to live outside of the regulations of the formal sector because of its high transaction costs. The informal sector is the lifeblood of many Asians.

Statistics on the informal economy are difficult to obtain and often unreliable. Nevertheless, a recent report shows that in 26 Asian countries, the informal economy contributed an average of about 26% of gross national product (GNP) nationally. The study estimates that the Central Asian republics have the highest proportion of GNP generated by the informal sector, while Bangladesh, Nepal, Pakistan, Philippines, Sri Lanka, and Thailand have more than one third of their GNP produced by the informal sector.

Time to reassess the informal sector

Many governments see the informal sector as one of low wages, poor working conditions and little job protection, and tax evasion. Often they discriminate against the sector, closing businesses and making it difficult to start new enterprises. Governments should change this approach.
and design regulations to encourage rather than hinder development. They need to make it easier to establish new businesses and to encourage the expansion of existing ones. Skills training and improved availability of business finance are also necessary to improve efficiency. Where possible, the potential to link informal and formal sector activities should be exploited.

Country and city life: an archaic concept?

Given the interdependence of urban and rural areas, especially for housing, food production, and recreation, it may no longer be appropriate to distinguish between urban and rural activities. The terms urban and rural invoke visions of congested cities and towns and idyllic, isolated villages. The distinction suggests different economies and ways of life and ignores the many ways in which urban and rural areas and their economies overlap and interlink. In reality, a development continuum links all settlements and their economies—from isolated farms, through villages, to market towns and regional centers that are surrounded by farmland, on to large urban centers and even megacities, and beyond to their ever-growing suburbs and sprawling periurban areas, which act as transitional rural-urban regions. Policies based on the traditional clear separation of rural and urban areas and economies can reduce opportunities to maximize economic growth and inhibit effective spatial planning. Today, many are recognizing that the most effective approaches take account of the diverse activities and needs along the continuum and the linkages between them.33

Where city and country meet: problems and opportunities

The linkages between city and country can occur when major public infrastructure investments, particularly regional roads and mass transport systems, link rural areas to the city economy and at the same time open up new rural areas for urban development. Existing rural settlement areas are incorporated into the fabric of the city. Rural residents benefit from employment and markets for their goods. But there can also be negative impacts. Unserviced residential development begins along the roads on the urban periphery and remains without services until government and utility entities catch up and provide the necessary trunk and local infrastructure. This is a problem common to many of Asia’s rapidly expanding cities and leads to increased costs, less efficient networks, and delays in providing services because of difficulties in acquiring rights of way and shortages of funds.

A major study focusing on rural-urban linkages and regional development was carried out in eight villages in Java, Indonesia, over a 25-year period from the early 1970s. This research produced a wealth of information about rural transformations during a period of intensive urbanization and massive expansion of rural-urban transportation networks and rural-urban interaction.34 In one of its most recent reports, Collier et al35 found that significant differences between villages were determined not only by natural resource endowments and other aspects of village potential, but also by relative distance from major metropolitan centers.

In some countries such linkages develop relatively unaided. In others, for example the PRC, their development is impeded by institutional factors. To spread the benefits of urban economic growth such impediments should be minimized.

Redressing inequalities and disparities between regions

Agglomeration occurs at all geographical levels. It can be seen at the global level where three regions, the North American Free Trade Area (NAFTA), the European Union


Regional Policy: Kazakhstan

The aim of regional policy is to reduce the differences in socioeconomic development between regions, through investments to improve infrastructure, strengthen economic activities, and improve living standards within an overall policy of providing support to problem regions. The basic principles are to make the best use of natural resources taking into account competitive advantages; creating mechanisms to stimulate business in problem regional economies; and the development of strategically important regions. To support this, investment priorities are given to those programs that encourage economic restructuring of regions, create new jobs, improve physical, social and recreational infrastructure, provide ecological security, and reduce poverty and unemployment.

(EU), and East Asia, are increasing their dominance of the world economy. High-income nations are clustered in relatively small cores throughout the world and productivity per capita steadily declines with distance from them. Strong regional disparities also exist within countries, an indication of agglomerations.

**Encouraging “winners” or supporting “losers”**

Some Asian regions have considerable secondary\(^{36}\) and tertiary\(^{37}\) economic activities; others have very little. More profitable businesses tend to locate in densely populated core regions, which suggests that the economic geography\(^ {38}\) is linked to regional differences in productivity and income. But other officials have argued that if a region’s economy is lagging, it lacks “competitiveness,” and they say this can be improved by channeling public funds to projects intended to attract business from the core, or toward infrastructure intended to provide businesses in the poorer region with better access to markets. This approach has not met with universal success, however, and such funding has generally failed to reduce regional disparities. As a result of experience—the regional policy of the EU, for example—there is now a shift in thinking away from a general focus on poorly performing peripheries to a concentrated focus on investments in local agglomerations that have real potential agglomeration economies and competitive advantages. This supports investments in areas to maximize benefits to the overall economy rather than simply providing charity to a region that has not done well.

In summary, regional transfers will be required for poorly performing areas, but they should be structured to maximize incentives for sustainable economic growth. These issues will be discussed further in other chapters.

**Lack of skills, knowledge: a burden on growth**

*Structural problems in an uncertain world*

Many successful Asian cities have bifurcated economies. A formal export-driven sector is the mainstay of national economic growth and operates largely separately of a large, often informal, service sector. This structure leaves many cities vulnerable to change in developed economies, especially reductions in consumption in the US and Europe. But problems in the informal service sector also demand attention, including credit availability, capacity, and working conditions.

One key challenge in managing Asian cities is the lack of appropriate tools and relevant statistics for the economic analysis of city regions. We also lack a full understanding of linkages and synergies between exogenous (external) and endogenous (internal) growth; the importance of local and natural resources; and the interactions among industry clusters, including linkages with rural hinterlands. There also is a tendency to underestimate the importance of the informal economy, which often makes life very difficult for its participants. A complete understanding is also lacking on the subjects of the transition of economic structure according to size and level of development or per capita product within a city region; the place of the urban poor within and among formal industry clusters; and the interaction of the informal and formal sectors.

*A needs list for city success*

Local economic development requires more and better infrastructure, both hard and soft. Not only is strategic infrastructure important, but city economic development policies also need to promote a business-friendly environment and be pro-poor in their focus. Promoting a city’s attractions to new and global business is important. So is the need to support micro-, small- and medium-sized industry and commerce. Consistently applied business rules and regulations help, as does low taxation. But the basic

\(^{36}\) Includes “industrial” categories of mining, manufacturing, construction, electricity, gas, and water of the Standard Industrial Classification.

\(^{37}\) Includes the “service industry” categories of trade, transport and communications, finance, public administration, and other services of the Standard Industrial Classification.

\(^{38}\) The distribution of economic activity over physical space.
Getting the Priorities Right for Developing Economies

Low-, middle-, and high-income countries should pursue different priorities when seeking to improve competitiveness, according to Michael Porter. He identifies three stages, as shown in the figure. First, the factor-driven economy applies to low-income countries, which compete on the basis of cheap labor and natural resources. These countries focus on products that are designed in more advanced economies. They are sensitive to world economic cycles, prices of commodities, and exchange rate fluctuations. To develop, these economies need to improve the environment for business. This requires upgrading the quality of infrastructure, particularly electricity, communications, and transport networks, and improving education, especially elementary and secondary schooling. Also important are creating financial markets to enable better access to risk capital and loans, strengthening emerging business clusters, improving the quality of local supplies, making machinery and components locally available, and opening up the economy to competition. The latter requires the reduction of trade barriers and the elimination of favoritism by government officials. Together, this creates a basis for efficiency and transparency and encourages competition. To reach middle-income status, countries must have made significant investment in physical infrastructure and human resources. Continued improvement of both is important, particularly upgrading public schools, electricity, and telecommunications, including the Internet. These achievements define the second-stage, investment-driven economy based on manufacturing and outsourced service exports. Such an economy is susceptible to financial crises and external demand shocks. It brings new challenges for business and a need to improve university-industry research collaboration and quality. Reform of the judicial system is essential. To encourage improvements in producer quality, local demand conditions must be strengthened—through environmental and consumer protection legislation, for example. Cluster development becomes significant, with its widening supplier bases and more specialized research and training institutions. Moves to higher levels of competition are also needed, including liberalization of tariff and non-tariff barrier, improved antitrust policies, and opening the market for corporate control.

In the third or innovation-driven stage, the ability to produce innovative products and services that are at the cutting edge of global technology is the main competitive advantage. The national business environment is characterized by strengths in all areas, together with the presence of deep clusters. Institutions and incentives supporting innovation are well developed. Companies compete in the global market. The economy has a large proportion of services and is resilient to external shocks.

Porter continues: “Seeking economic development as a sequential process of building interdependent microeconomic capabilities, shifting company strategies, improving incentives, and increasing rivalry exposes important pitfalls in economic policy. The influence of one part of the microeconomic business environment depends on the state of others. Lack of improvement in any important area can lead to a plateau in productivity growth and stalled development. Worse still, it can undermine the whole economic reform process. When well-trained college graduates cannot find appropriate jobs because companies are still competing based on cheap labor, for example, a backlash against business is created.” This can explain why countries and, by implication their cities, find the transition to a new stage of development difficult. Understanding the stages of competitive development is critical to comprehending city development processes in different economies and what approaches should be taken to improve the management of our cities.

National economic stability and control of inflation are implicit in sustainable development. Hence, sustainable economic development is about setting a vision for a city, establishing objectives, and devising strategies and actions to implement these strategies. It is about cost recovery and is concerned with the economic pricing of communal services. It covers small businesses and the informal sector.

In summary, the lack of appropriate management structures to assess the city economy and the lack of skills in local economic development strategy formulation and investment prioritization, particularly, problem identification, problem solving and thinking into the future, means that local economic growth is not as fast as it could be. This is a failing that endangers not only local but also national economies.

**Keys to a strong economy**

The achievement of a sustainable economy requires a new and different approach and involves greater integration and coordination of policy making and implementation across the public and private sectors, and across social, economic, and environmental policy issues. It involves partnerships between central government, local government, private business, financing agencies, and civil society, and must recognize the bifurcated economy of formal export-driven growth and the large informal sector.

Access to cultural, physical, environmental, human, and financial assets determines the quality of life of people in a city, where utility is generated from consumption which, in turn, is dependent on a stock of assets that are accessible for use by families. These can be private family assets and public assets, such as theaters, museums, clean air, rivers, and beaches. In theory, urban management should aim to maximize the net present value of utility for citizens. How is this done in practice?

Correct planning for economic growth should enable a city to achieve the principles of sustainable development, which include:

- A competitive and environmentally efficient business,
- A skilled and adaptable workforce,
- An inclusive society characterized by vibrant communities,
- Sustainable physical and social infrastructure that supports and enables economic growth,
- Creative and innovative cultural environment, and
- Appropriately priced communal and municipal services.

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Cities have to do more than simply improve overall economic performance. Economic success can only be sustainable if its growth reinforces energy efficiency, reducing the consumption of utilities, and supports other aspects of sustainable development.

**Seeking policies to maximize potential**

Economic growth promotion policies have moved toward less interventionist more free market approaches in the US and some parts of Europe, with an emphasis on decentralization and community-based planning. There has been a revival in regional and urban planning and analysis, and with it a new attitude on economic policy. Particularly in Europe and North America, policies have shifted markedly away from seeking to redress the imbalances and differential growth between cities toward seeking to maximize the potential of each area, exploiting the comparative advantages of each. This tends to be referred to as the endogenous growth model.

**Competitiveness remains important**

Globalization and reform policies designed to enhance national competition have forced Asian cities to become more competitive. For a city economy, competitiveness is to have the lowest transaction costs for the optimal structure
Promotion of Endogenous Growth:
What it means

A range of approaches to describing endogenous growth have been documented. Most describe the impact of an endogenous variable, such as health, education, or fall in population has on growth (although there must be some debate on how endogenous the latter is). This book uses a theoretical presentation to attempt a more rigorous presentation of the options available.

Growth (G) is defined as increase in per capita product of a given region.

Therefore:

\[
G = \sum_{i=1}^{x} f(K_i, p_i, c_i) \quad (1)
\]

where,

i, 1 to x are the firms present in the region, \(K_i\) is the stock of capital in firm \(i\), \(p_i\) is the multifactor productivity in firm \(i\), being the key determinates of value added (or net wealth addition of firms in the region), and \(c_i\) is the propensity of firm \(i\) to purchase inputs to production from the region.

In the given economy, there are \(y\) firms dependent on exports of products outside the region for demand (exogenous growth), leaving \(x-y\) firms dependent on the local economy for demand for their products, including inputs to exporting firms in the region.

Thus restating (1)

\[
G = \sum_{i=1}^{y} f(K_i, p_i, c_i) + \sum_{i=y+1}^{x} f(K_i, p_i, c_i) \quad (2)
\]

Equation (2) clearly establishes the options for promoting endogenous growth—being growth that benefits the region from intra-region sales. They are:

Increase \(K_i\) — increase the stock of capital available to locally oriented industry. Interestingly, under this is a reduction in population as the capital stock per capita would increase.

Ensuring the availability of venture capital and other finance for entrepreneurs is the more conventional approach.

Increase \(p_i\) — increase the productivity of locally oriented industry. Under this are the benefits of education and health investments.

Increase \(c_i\) — increase the use of local inputs in locally oriented industry. Under this are business development assistance and networking.

Also,

Increase \(c_x\) — increase the use of local inputs to exporting industries. But this strategy is vulnerable to the same weaknesses in the external environment as the export-driven industries. However, if this factor can be increased when exports fall, it will buffer the local economy.

Although most of these prescriptions are not fundamentally different from what would be undertaken to promote export-oriented industry, the important thing is to identify the locally based industries and ensure that they are fully integrated into business development and other programs. Their needs will likely be quite different. And they are easily overlooked because they often are not as glamorous as export industry.


of the economy, given locational and other advantages. The efficiency of government systems, strategic infrastructure, capital stock, development and quality of human capital, community attitudes and culture, and amenities all contribute to the economic competitiveness of cities. These factors are neither constant nor the same for all Asian cities. An economic development plan needs to identify the key competitive advantages of the city and foster their development.

City regions also need to look inward: endogenous growth

The last decade has seen a resurgence of interest in the geographical and environment influences of the economy. This arose from the need:

- to explain what was driving the decline of US manufacturing activity in the “rust belt” northern states
and its replacement by new knowledge-based, high technology investment in the formerly agriculturally dominated, “sun belt” states of the south and west; and to explain institutional change in the EU states with the process of economic integration across transnational boundaries, including the incorporation of the transitional economies, and the delivery of policy support at the regional, rather than the national, level.

This has led to a new approach to regional policy as discussed above. The general implication of this change in regional policy is that investment should target those sectors, clusters, or areas that can deliver the best return, measured mainly in terms of productivity. This has many common elements with the postwar focus on urban and industrial growth poles as the key to rapid economic development but is more market-driven. It also promotes rural-urban linkages through spatial links such as flows of money, goods, people, and information. Based on locational and other advantages, such an approach seeks to provide capital and skills for local enterprise which can focus on rapidly developing core economic areas.

Basing regional growth on that of cities, following the above principles, is probably the most appropriate approach toward redressing growth inequalities among regions.

**Neglected risk management threatens urban economies**

Roberts shows that the key factors in developing and maintaining competitive regional economies are those that attack or form a proactive strategy and those that are defensive or a reactive strategy. The former includes: setting a vision and preparing a strategy (for example export, endogenous or import substitution); creating an enabling environment (logistics of business); providing strategic infrastructure (hard and soft infrastructure); and stretching and leveraging sector competitiveness. The latter comprises: endogenous and exogenous risk management; maintenance of social, physical, economic, and environmental capital; futures management, including marketing intelligence and technology; and uncertainty management.

### Strategies for Risk Management

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Until recently, little research had been done on the impact that risks can have on a city−regional economy. There are very few examples of regional risk management strategies. Where they exist, most risk management plans deal with the immediate impacts of disaster. Almost no thought has been given to post-disaster economic recovery before such events occur—the $150 billion damage to the New Orleans city region by Hurricane Katrina, for example—and equally little identification is undertaken of opportunities that risk mitigation strategies can create for business development. Most risk management strategies prepared for cities and regions pay only passing attention to social, governance, and external economic risks. Risk management is important in maintaining regional business and institutional competitiveness and to encourage innovation. There are very few examples of business and governments working collaboratively on regional economic risk management plans.

The two important measures required for risk assessment are normally the likelihood of occurrence and the impact or consequence of a risk event. But it is difficult to obtain quantitative measurement of these for a city or city region. The risks concerned are those that have the highest potential impact and likelihood of occurrence. And these may have to be estimated in qualitative and/or relative terms.

The most significant risks affecting regional economic development need to be identified. They are those that pose the greatest threats to the economy and the most vulnerable sectors. Only after exogenous and endogenous risks have been assessed is it possible to develop risk management strategies. The diagram on previous page shows a framework for sector risk management strategies.

**Disaster Risk Initiatives**

The disaster risks of Asian cities have been under examination recently. The Earthquakes and Megacities Initiatives (EMI) is an international, not-for-profit, scientific organization dedicated to the reduction of disaster risks in major metropolises. It was founded in 1998 to stimulate urban earthquake preparedness and mitigation in developing countries. EMI contributes to capacity development and mainstreaming of disaster risk reduction in the development agenda, planning, and daily operations of local government through its cluster cities project, crosscutting capacities development program, and e-learning training platform, Mega-Learn.

The World Conference on Disaster Reduction in January 2005 at Kobe, Japan gathered experts, practitioners, government officials, civil society, and the media to discuss disaster risk reduction. The proceedings of this conference group the issues and recommendations in five key thematic areas: governance, institutional, and policy frameworks for risk reduction; risk identification, assessment, monitoring, and early warning; knowledge, innovation, and education to build a culture of safety and resilience; reducing underlying risk factors; and preparedness for effective response.


Sources: www.emi-megacities.org; www.ubnisdr.org/wedr/; and www.unisdr.org/isdrindex.htm

**Governments need to rethink risk**

Roberts concludes that external risk factors will have greater impact on local economies in the future. A more collaborative approach to risk management between government and business is needed to reduce the impact of future economic and natural shocks to the economy. Since there is a very poor understanding of risk management in public agencies, they tend to take a conservative approach. This suppresses opportunities for inventiveness, innovation, and commercialization of ideas and solutions to address risk. There is a need for a change of culture and improved skills on risk management within government. City region governments lack knowledge and systems for shared risk intelligence. This leaves all unaware of the nature of risks potentially affecting the economy or where to go to obtain information about these and the management strategies in place to reduce risk. Weakness in these areas reduces investment.
Infrastructure’s role in taking out the risk

Infrastructure—basic facilities, services, and equipment—is critical for generating growth, alleviating poverty, and increasing international competitiveness, particularly in East Asia. Major investments in physical and social infrastructure preceded and later reinforced economic growth in the newly industrialized countries of Asia. New and well-functioning infrastructure promotes better access to markets, lowers transaction costs, and provides communities with improved access to education and health care. Efficient infrastructure networks are the backbone of sustainable economic growth.

Getting the most from infrastructure

Although the stock of infrastructure assets is important, how efficiently they are used also impacts economic development. Hulten shows that low- and middle-income countries that use infrastructure inefficiently pay a growth penalty and realize smaller benefits from infrastructure investments. Using data comparing the growth of Africa with that of East Asia, he shows that over 25% of the differential growth rate between the two areas stems from the difference in effective use of infrastructure resources, even though the difference as a result of new public capital formation is minimal. When comparing high and low growth rate economies, the study found that over 40% of the growth differential can be attributed to the efficiency effect, making it the most important contributor to differential growth performance. The lessons regarding the maintenance of infrastructure and other assets are clear. Asset management, discussed in the previous chapter, is a crucial aspect of successful city management.

Clearly, infrastructure is a force for good, but investments must provide value for money and, more importantly, be located where benefits can be maximized. Some studies now indicate that public sector spending on infrastructure has its greatest impact when it supports high-yield, productivity-oriented projects aimed at growth objectives. A recent ADB review suggests that productivity of cities could be even higher if city efficiency is enhanced.

At the micro level, Kessides shows that better infrastructure can boost a firm’s production growth by lowering the production costs, increasing profits and possible higher levels of investment/output, income and/or employment, and by raising the productivity of other factors of production.

Improved physical infrastructure also increases access to social infrastructure, which further raises the productivity of labor/households. Improved water supply, for example, contributes directly to the increased productivity and welfare of households.

In the context of the earlier discussion in this chapter, the focus of infrastructure provision should be on supporting competitive exogenous and endogenous growth. This means supporting existing and potential industry by overcoming their constraints to growth, mitigating risks to growth, and linking the poor to the benefits of that growth—by providing affordable transport that gives the poor access to employment, for example.

Infrastructure needs are massive and usually environmentally related

To help predict investment needs, ADB has estimated

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45 This is a key element of agglomeration economies and is the main factor in “crowding in” effects where companies cluster together around a well-serviced site.
46 Because the issue is complex, a review of the literature attempting to link infrastructure provision and productivity is a tortuous exercise. The pivotal article in this area was written by Aschauer (1989) who analyzed the relationship between infrastructure provision (proxied by non-military capital formation in the National Accounts) and productivity. Aschauer concluded that there was a strong relationship between the two and that the rate of return on infrastructure was high—higher than for private investment. From this he concluded that there had been under-investment in infrastructure. Debate has raged, both supporting and dissenting since then.
47 Footnote 43.
The Symbiotic Relationship between Economic Growth and Infrastructure Provision

Many Asian cities need a transformation to provide both increased economic growth and improved living conditions—particularly for the poor. In its work on Vision Mumbai, consultants built on the experience of cities from both the developed and developing world that sought such a transformation, and indentified three key prerequisites:

- The need for a city to actively focus on its economic growth.
- The need for early developments to focus on a few high-impact projects using public-private partnerships that achieve both real and visible impact.
- The city must have at its helm a committed leader, ably supported by an appropriately skilled, well-coordinated body of administrators.

The importance of the interlinkage between infrastructure and economic growth is borne out by the comparison of the expansions of two major Asian cities, Shanghai and Bangalore. In Shanghai, the mayor, well known for cutting through red tape, led the opening up and development of Pudong, Shanghai’s hinterland, between 1987 and 1991. From the start, Pudong has followed a strategy of infrastructure goes first. It undertook 10 major infrastructure projects, including bridges, tunnels, the Metro, and a deep-water port. As a result, Shanghai grew at 8–10% per annum in the 1990s and Pudong at 16–18%. The $40-billion investment in infrastructure changed the face of Shanghai. Entire blocks were rebuilt and its roads, buildings, transport, and telecommunications emerged as some of the best in the world.

In Bangalore, the information technology companies responsible for its economic success are now confronting the state Government over the decrepit state of infrastructure, which they claim is threatening the city’s position as a primary global destination for investment from overseas. The Bangalore Chamber of Industry has said that it is tired of the Government’s inability to deal with the problems of traffic congestion, power supply shortages, intermittent water supplies, and inadequate airport facilities. One industrialist has complained: “There is not enough power, so we have to have captive power generation, and there is no sewage treatment plant so we have to set up our own effluent treatment system, and so on.”

A drag on growth

In a recent survey, 60% of more than 500 executives polled in India described infrastructure as a “significant constraint on growth,” compared with only 23% of their peers in other countries at a similar stage in their development. “The deterioration of the city’s infrastructure did not happen overnight. It is the result of long years of faulty planning, which has assumed crisis proportions in the past year,” said Frontline magazine.


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Demand for infrastructure and how to cope

Clearly, all cities are facing massive challenges in planning for and raising funds to construct new infrastructure. But these investments must be made on this major scale if Asia’s cities are to remain competitive. Effective infrastructure asset management needs to be linked with overall development plans for a city. Appropriate demand assessments are needed to reflect the affordable limits of the population, business, and the local government. Planning and financing new infrastructure must also be linked and appropriate resources allocated for maintenance and rehabilitation. Coordination of planning for and investment in infrastructure is critical. But the scale is such that consumers and taxpayers cannot be expected to finance this all at once. City governments will need to seek international and local and foreign private sector partners to help them cope with needs of this magnitude. New and innovative mechanisms will be needed to fund the potential financing gap.
Chapter 3
The Broad Environmental Footprint of Asian Cities
Despite improvements in some areas, Asian cities have large environmental footprints that endanger both their economic base and the global environment.

**Improving the quality of urban life is imperative**

The urbanization of Asia is occurring at a pace and on a scale never seen before. Living standards have increased dramatically for many, but for many others there is poverty, exclusion, and environmental squalor. For both economic and political reasons, governments must work to maximize the efficiency and sustainability of their cities. Cities should become better places for everyone to live, with more green spaces and less air and water pollution. The global environment must be protected by encouraging lower emissions of greenhouse gas (GHG). Sustainable but affordable city development should be the goal. The thinking about cities and their roles will need to change. The emphasis for too long has been on economic growth. But it is the quality of life that will increasingly determine the success of cities in Asia. This calls for new capacities in city management. Most Asian cities lack the resources for environmental management, including the management of sustainable urban transport.

**Our resource devouring cities ...**

Cities occupy only 2% of the world’s land, but consume 75% of its resources. They generate a similar percentage of the earth’s wastes. Rapid urban growth has wrought massive environmental problems that are also felt, sometimes even more painfully, in smaller cities with less capacity to cope. As they consume resources, all cities generate waste, including air pollution, GHGs, solid waste, and toxic effluents. They also make unsustainable demands on soil and water supplies for their food production, and on forests for the timber and paper they use. London needs 125 times its own area to provide the resources it consumes, and if urban areas in the developing world grow in the same way and consume at the same levels, their environmental impact will be catastrophic.

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... and their equally voracious residents

A sustainable footprint for each person in a world that shared all its resources equally would be about 1.8 hectares (ha) per inhabitant. The average ecological footprint in rural People’s Republic of China (PRC) today is 1.6, but in Shanghai it is already 7.0 and in a typical United States (US) city, 9.7. Yet, it would not help much even if the world’s entire population were to return to the countryside. Modern high-consumption living standards mean there is little difference between the ecological footprints of rural and urban areas. Moreover, to reduce poverty, urban areas need to grow.

A key challenge, therefore, is to maintain living standards while reducing environmental damage from urban-based production, consumption, and waste generation. Although consumption today is high, technology is available to substantially reduce the demand for fossil fuels without adversely affecting the quality of life.

**Seeking social, economic, and environmental solutions**

Our air, water, coastal areas, and forests can be considered “local public goods.” They should be available to all. Degradation of these assets reduces a city’s competitiveness. More and more people are demanding clean air, clean water, and a pristine environment, and those cities that cannot provide these basic attractions will lose their competitive edge. This may already be happening. In Hong Kong, China, for example, recruitment agencies find it increasingly difficult to encourage professionals to work and stay in the city because of its deteriorating air quality.

Clearly, the scope for improving sustainability lies with directing the economic growth of developing cities along
Managing Asian Cities

Flooding in Bangladesh and Impact on Dhaka

If sea level rises about one meter because of climate change, one of the poorest nations in the world is projected to lose 17.5% of its land area. Thousands of people would likely be displaced—including many in the capital—and the country’s agricultural system would be badly affected. Coastal flooding would threaten animals, plants, and freshwater supplies. The serious danger to lives and livelihoods posed by storm surges when cyclones hit Bangladesh would only get worse.

Source: National Academy of Sciences, US.

a more sustainable path and changing the way in which developed cities work to reduce their ecological footprint. In the developing world, the focus must be on mitigating existing negative economic, social, and environmental conditions—and ensuring that negative environmental impacts do not increase with economic development as they have in the developed world.52

The aim should be to provide sustainable urban infrastructure and services efficiently and effectively, with equality of access to a minimum standard within a framework of economic pricing.

Measures to reduce the causes and impact of global warming and climate change will also be needed. At present, however, major investments in clean air or reducing water pollution are not forthcoming from the private sector since there are no appropriate pricing methodologies.53 Governments, therefore, need to play a central role in promoting environmentally friendly development and encouraging energy efficiency. This objective must be a central tenant of national urban strategy.

Uncurbed pollution promises disaster worldwide

Economic growth has traditionally been associated with increases in both energy consumption and mobility. Both have environmental implications. They increase the emission of air pollutants. Cities are the major source of the GHGs54 that contributes to global warming and climate change. Activities in cities, or generated by them, produce close to 80% of all carbon dioxide (CO2) and other GHGs. Almost 80% of carbon emissions from burning fossil fuels and cement manufacturing and 76% of industrial wood used worldwide are from urban areas. Land use also impacts global climate change. Urban expansion, including the destruction of forests and vegetation, has a strong effect, not only on GHG emissions, but also on the changes in local and regional climate. By 2025, the PRC will be the largest emitter of GHGs, surpassing the US. Unless there is direct action to control activities leading to GHGs, emissions will increase in every country in the world, particularly in India, the nations of the former Soviet Union (FSU), the European Union (EU), and the US.

Measures to reduce the causes and impact of global warming and climate change will also be needed. At present, however, major investments in clean air or reducing water pollution are not forthcoming from the private sector since there are no appropriate pricing methodologies.53 Governments, therefore, need to play a central role in promoting environmentally friendly development and encouraging energy efficiency. This objective must be a central tenant of national urban strategy.

Evaluating the quality of energy, water, and sanitation services is critical in making services accessible to the urban poor. In many developing countries, however, the poorest urban households are not served by these services. Therefore, the focus must be on expanding urban infrastructure and services to ensure that the urban poor have access to proper sanitation. This objective must be a central tenant of urban strategy.

Source: World Resources Institute, 2005.

Climate change confronts humanity with a potential disaster. Science increasingly confirms this and one recent economic report demanded urgent action55 to head off the huge risks. Over the next 10–20 years, there must be a shift away from

Flooding in Bangladesh and Impact on Dhaka

If sea level rises about one meter because of climate change, one of the poorest nations in the world is projected to lose 17.5% of its land area. Thousands of people would likely be displaced—including many in the capital—and the country’s agricultural system would be badly affected. Coastal flooding would threaten animals, plants, and freshwater supplies. The serious danger to lives and livelihoods posed by storm surges when cyclones hit Bangladesh would only get worse.

Source: National Academy of Sciences, US.

52 www.footprintnetwork.org/
54 Greenhouse gases (GHGs) include carbon dioxide (CO2), methane, (NOx), and some gases from industrial processes.
current dependence on fossil fuels. Energy must be used more efficiently, energy use reduced, and deforestation stopped. The consumption of polluting goods and services must decline. This has major implications for urban development since road and air transports are currently locked into fuels that create GHGs, and both are destined for major expansion in Asia and worldwide. Rising sea levels are a particular outcome of global warming and, according to the Intergovernmental Panel on Climate Change (IPCC), the current level is expected to increase worldwide from 8 to 88 centimeters during the 21st century. Many of Asia’s largest cities are located on or close to the shore and would be affected.

Vulnerable cities include Bangkok, Chennai, Dhaka, Jakarta, and Tianjin (PRC). Global warming also means weather that is more violent. This has a heavy impact on those living in poor quality housing and in informal settlements often found in areas prone to natural disasters.

The fog over the solution to pollution

The ambient air concentration of particulate matter in most Asian cities now exceeds World Health Organization’s (WHO) health and safety norms—often by dramatic margins. But the trends differ. In some cities, industry-related pollutants are decreasing while transport-related pollution is growing rapidly in others. This is true in Japan, in North Asian cities like Beijing and Shanghai, and in Southeast Asian cities that include Ho Chi Minh City, Jakarta, and Manila. In many large cities, however, industry is steadily relocating to the periphery or beyond city limits, with the net effect being improved air quality in city centers. Pollution moves to the suburbs. In addition, the relatively faster growth of the urban service sector in Asia will further reduce industry-related pollution or at least slow its rate of increase. One study reports evidence of consistent growth in the tertiary sector in 22 East Asian cities.

Asian attempts to control air pollution have involved both demand- and supply-side approaches, including the burning of clean coal in the industrial sector, increasing the use of natural gas, developing mass public transport, and introducing regulations, fees, and targeted subsidies. The results have not been encouraging so far, with failures especially apparent in efforts to reduce demand. Overall institutional weaknesses, capacity constraints, inadequate financing for infrastructure, and poor financial incentives for appropriate investment have all contributed to the lack of success. Meanwhile, the problems are becoming worse, particularly in cities with high energy demands, like those in the rapidly growing industrial centers of India, and the PRC many of which have resorted to increased use of coal, resulting in higher sulphur dioxide (SO₂) emissions.

Engendering responsibility: use the carrot or the stick?

Progressive thinking on how to encourage sustainable development is moving away from taxing businesses and people to charging those who pollute the environment. The aim is make consumers understand environmental costs. Other options include prohibition, regulation, and market mechanisms. Fuel duty in the United Kingdom (UK) provides one example where high taxes have failed to reduce emissions significantly, mainly because consumers are not given the incentives or alternatives that would convince them to leave their cars at home. Polluters-pay approaches to combating air pollution—where permits to pollute are issued, paid for, and are tradable—offer a possible alternative to prescriptive, static regulation but they require legislation at the national level and consistent enforcement locally.

Pollution can cross national boundaries and have transboundary impacts. Particulates from the PRC have been found in the US after crossing the Pacific. The effects of air pollution can be particularly widespread and impair the environments of cities that have kept their own houses in

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The Stern Review

The Stern Review was tasked with taking the existing science on climate change and quantifying the economic costs and benefits of a business-as-usual (trend) scenario, compared with alternative proactive scenarios. The Review indicates that climate change is profoundly important and difficult to deal with. It concludes that action must be based on a very long-term strategy, whose benefits will be received substantially by future generations.

- What we do now can have only a limited effect on the climate over the next 40 or 50 years. On the other hand, what we do over the next 10 or 20 years can have a profound effect on the climate in the second half of this century and the next. Our actions over the coming few decades could create risks of major disruption to economic and social activity later in this century and the next, on a scale similar to those associated with the great wars and the economic depression of the first half of the 20th century. And it will be impossible to reverse these changes.

Global warming arises because of the build up in greenhouse gases (GHGs). But the rate of emissions is accelerating, and the level of GHGs could increase by 25% by 2035. Current trends are for a 2–3°C temperature rise within the next 50 years.

Modeling suggests a 50% risk of a temperature rise of +5°C by the end of this century.

- This would take humans into unknown territory. Such changes would transform the physical geography of the world… and must have powerful implications for the human geography—where people live and how they live their lives.

Nevertheless, the Review’s record has a positive conclusion: Much of the risk can be reduced through a strong mitigation policy. With strong, deliberate policy choices, it is possible to “decarbonize” both developed and developing economies on the scale required for carbon stabilization, while maintaining economic growth in both.

- Stabilization—at whatever level—requires that annual emissions be brought down to the level that balances the earth’s natural capacity to remove GHGs from the atmosphere. The longer emissions remain above this level, the higher the final stabilization level.

- The current evidence suggests aiming for stabilization somewhere within the range 450–550 ppm CO₂e. Preliminary work suggests that if the target were within this range the social cost of carbon would be in the region $25–30 per ton of CO₂—around one third of the level if the world stays with business as usual scenario. Stabilization at 450 ppm CO₂e is already almost out of reach, given that we are likely to reach this level within 10 years and that there are real difficulties of making sharp reductions required with current and foreseeable technologies. Costs rise significantly as mitigation measures become more ambitious or sudden. Efforts to reduce emissions rapidly are likely to be very costly.

- An important corollary is that there is a high price of delay. Delay in taking action… would make it necessary to accept both more climate change and eventually, higher mitigation costs.

- Policies to cut GHGs include: reduce the demand for emissions-intensive goods and services; increase efficiency, which can save money and emissions; take action on nonenergy emissions, such as avoiding deforestation; and switching to low-carbon technologies for power, heat, and transport. The main policy components are carbon pricing that is considered essential, policies to promote low-carbon and high-efficiency technological innovation, and actions to remove behavioral barriers to change. Adaptation policy “is crucial for dealing with the unavoidable impacts of climate change, but it has been underemphasized in many countries. Adaptation is the only response available for the impacts that will occur over the next several decades before mitigation measures can have an effect. Adaptation efforts in developing countries must be accelerated and supported, including through IDA …. The poorest developing countries will be the earliest and hardest hit by climate change, even though they have contributed little to causing the problem.

“It is still possible to avoid the worst impacts of climate change; but it requires strong and urgent collective action. Delay would be costly and dangerous.” The Stern Review explicitly states that the forecasts are “heroic” and very uncertain. Their value is in providing a sense of possible scale and strategic risks. Their recommendation is, in effect, that governments should invest today to insure against a possibly catastrophic future.

CO₂e = carbon dioxide equivalent, IDA = international development assistance, ppm = parts per million.

Pollution and poverty: twin challenges to health

Poor environmental conditions are directly responsible for about 25% of all preventable ill health in the world today. Two thirds of those affected are children. They fall ill because of a lack of essential environmental resources—chief among them, sufficient clean water, food, shelter, fuel, and air. People are also made sick when exposed to hazards in the environment. Many diseases are linked to environmental problems like polluted drinking water, foul air, poor waste disposal, and the presence of mosquitoes and other carriers of disease. Changes in the way people live and work can also cause a sudden increase in old diseases and the emergence of new ones. Overcrowding and industrialization affect the health of millions in the developing world. The emergence of 30 new diseases in the past 20 years, including human immunodeficiency virus (HIV), Ebola, and hemorrhagic illnesses, has become a growing public health issue. Tobacco use now kills over 11,000 people a day worldwide.

Poverty influences people’s health because it largely determines an individual’s environmental risks, as well as the person’s ability to access resources to deal with those risks. Many in the poorest countries live in conditions that imperil their health through steady exposure to biological pathogens in their immediate environment. More than 500 million people in Asian cities lack adequate shelter or acceptable housing. Safe water is unavailable to 700 million in these cities, and 2 billion of their people have no access to adequate sanitation. All these basic needs are essential for good health.

Asia’s sprawling slum settlements suffer severe environmental and health problems. Garbage collection is often nonexistent and drainage tends to be poor, creating ideal conditions for insects and other disease vectors. Overcrowding increases the risk that disease will spread. Our cities’ poorest people, who are often excluded from the benefits of emerging prosperity, may also face a disproportionate share of health risks related to economic growth. Urban slums may be located near major roads, factories, or dumpsites, exposing residents to higher levels of air pollution or to the risks of industrial accidents.

Billion dollar bills for bad air

The economic, health, and other costs of environmental degradation are already high. The cost of air and water pollution in Jakarta probably exceeds $1 billion a year, while in Bangkok it is more than $2 billion. Costs in Asia’s other large cities are comparable. They are rising as safety thresholds for a large number of pollutants and poisons are exceeded in increasingly large geographic areas. According to Science magazine, exposure to air pollution affects “death rates, hospitalizations and medical visits, complications of asthma and bronchitis, days of work lost, restricted-activity days, and a variety of measures of lung damage.”

A WHO study of Austria, France, and Switzerland found that their health costs because of traffic pollution amounted to approximately 1.7% of gross domestic product (GDP), dramatically more than the cost of treating injuries from traffic accidents. The rapid growth in vehicle ownership makes ozone more of a risk in highly motorized cities. More information is becoming available on the economic impact of air pollution and it is now widely believed that it can amount in negative terms to some 2–4% of GDP.

In Canada, the province of Ontario estimates that air pollution costs its 12 million residents at least $1 billion annually in hospital admissions, emergency room visits, and worker absenteeism. And the World Bank reports that in the PRC—home to some of the most polluted air in the world—the deaths and illnesses of urban residents because of air pollution cost an estimated 5% of GDP.


CNN. 2000. Traffic Pollution Kills Thousands Every Year. September.


Polluting cities make nasty neighbors

Air pollution in Asian cities is not only a health hazard for the local residents but also impacts upon areas far from the source. Air pollutants can travel over long distances, often more than 1,000 kilometers (km). Recent studies show the complex interlinkages of air pollution, haze, smog, ozone, and global warming. A good example of air pollutants raveling great distances is the transboundary movement of lead particles in the air emitted by industries and motor vehicles where leaded fuels are still used. Scientists have established that the levels of lead in the air in Greenland increased steadily until the 1970s when unleaded petrol and environmental regulations were introduced to limit the emissions of heavy metals by industries.64

There is major concern in Asia over the problems of cross-boundary pollution, including the haze that regularly affects Malaysia and Singapore because of forest burning in Indonesia. The haze of industrialization mars all city environments at various times of the year; much of this comes from other cities and industrial areas that are often in another country. Water pollution also travels. A recent example is the discharge of hazardous waste and chemicals into northern PRC rivers that flow into the Russian Federation. Cross-border coordination and concerted action are clearly needed.

Facing Up to City Responsibilities

Cities are key participants in implementing the Montreal Protocol and the Vienna Convention—multilateral environmental agreements signed by national governments to reduce the emissions of substances that destroy the ozone layer, especially chloro-fluorocarbons (CFCs) used in refrigerators and cooling equipment. Although cities were not directly involved in developing these international agreements, national government plans developed to implement their commitments had to include actions to be taken at the local level. In Europe, for example, local governments were asked to set up systems to collect old refrigerators separately from other wastes. It is likely that there will be similar pressure on Asian cities in the near future.

Motor vehicles: Shapers and stranglels

Rapid urbanization, frequent urban sprawl, and growing vehicle ownership and use have led to worsening congestion, with its attendant impacts of pollution, environmental degradation, and declining quality of city life. The consumption of oil-based fuels has increased rapidly, together with the generation of GHGs. The stabilization of urbanization, the private vehicle fleet, congestion, pollution, energy consumption, and emissions of GHGs—let alone their reduction—appears out of reach. Yet decision makers are increasingly advocating their reduction. This situation is unacceptable and a way forward must be found. The solution is to promote development with green, high-density urban areas that are integrated with effective public transport.

The rapid increase in vehicle ownership has strongly influenced urban form. It has led to the construction of elevated highways and resulted in urban sprawl and neglected city centers. Relatively low population densities

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have hampered the development of cost-effective, high-quality mass transit systems.

Motorization has come at the expense of nonmotorized transport (NMT), such as walking and cycling. This, in turn, has contributed to the loss of public space and the human form of the city. Without restraints on the use of motor vehicles and energy, continued urbanization will make Asian cities even larger emitters of GHGs in the next 20 years.

<table>
<thead>
<tr>
<th>City</th>
<th>Mode share (%)</th>
<th>Non-motorized transport</th>
<th>Public transport</th>
<th>Private motorized vehicles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ahmedabad (2002)</td>
<td>60</td>
<td>30</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Bangalore (2002)</td>
<td>56</td>
<td>37</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Bangkok (1999)</td>
<td>60</td>
<td>30</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Beijing (1999)</td>
<td>71</td>
<td>24</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Chengdu (2003)</td>
<td>74</td>
<td>10</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Chennai (2002)</td>
<td>47</td>
<td>43</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Delhi (2002)</td>
<td>39</td>
<td>42</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>Dhaka (1996)</td>
<td>65</td>
<td>25</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Guangzhou (2004)</td>
<td>73</td>
<td>19</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Ha Noi (1995)</td>
<td>54</td>
<td>4</td>
<td>42</td>
<td></td>
</tr>
<tr>
<td>Hong Kong, China (1999)</td>
<td>17</td>
<td>74</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Hyderabad (2002)</td>
<td>45</td>
<td>36</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>Jakarta (1999)</td>
<td>22</td>
<td>36</td>
<td>41</td>
<td></td>
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<tr>
<td>Kolkata (2002)</td>
<td>16</td>
<td>79</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Kuala Lumpur (1999)</td>
<td>17</td>
<td>26</td>
<td>58</td>
<td></td>
</tr>
<tr>
<td>Manila (1999)</td>
<td>18</td>
<td>54</td>
<td>28</td>
<td></td>
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<tr>
<td>Mumbai (2002)</td>
<td>21</td>
<td>60</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>Seoul (1999)</td>
<td>20</td>
<td>60</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>Shanghai (2002)</td>
<td>58</td>
<td>29</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Singapore (1999)</td>
<td>22</td>
<td>56</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>Tianjin (2004)</td>
<td>87</td>
<td>10</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Tokyo (1999)</td>
<td>22</td>
<td>49</td>
<td>28</td>
<td></td>
</tr>
</tbody>
</table>


Cool image, but city living is hot, hot

A wholesale rethinking of how cities are laid out is needed to reduce the use of private vehicles. How can new cities be planned in an energy-efficient way and how can existing cities be restructured to minimize the need for movement? One way would be to build cities with multiple centers where people live close to their work in high-rise blocks near public transport hubs, as in Singapore. Although living in high-rise blocks is, for some, at odds with living in harmony with nature, a study by Peter Newman and Jeff Kenworthy suggests this is not the case. They found a strong inverse relationship between urban density and the amount of energy used by cars driving within city limits.

The energy use for transport is far higher in a sprawling city like Houston than in more compact, low-rise cities like London or Copenhagen. Increasing density does produce another problem, however; dense development heats the surrounding air. Stone, concrete, and asphalt absorb more and reflect less solar energy than natural surfaces such as grass, water, and trees. Vehicles, air conditioning, and electrical appliances also give off heat, while tall buildings cut down winds that can disperse the heat. So cities are usually about 1°C warmer than the surrounding countryside during the day and can be up to 6°C warmer at night.

The denser the city is, the worse the effect. In hot climates, where many super-dense megacities of the world are found, air-conditioning is used to keep indoor temperature bearable. On a hot day in many of these cities, air-conditioning can consume more energy than any other single activity. To cut this

Cars at the crossroads?

There is growing awareness that the rapid increase in the number of vehicles cannot continue. There is not enough road space to accommodate all the vehicles that Asians can afford to buy and use on their daily commute, and neither can enough new road space be built. Over the last 10 years, many Asian cities have focused on the construction of rail-based urban mass transit systems in the form of subways or light-rail systems. But many city authorities have concluded that they can neither build these systems fast enough nor afford to construct and maintain them. More cities are now considering bus rapid transit (BRT) systems as a more cost-effective alternative that can reach much larger groups of the population. For example, Jakarta will have seven BRT corridors by the end of 2007 and 10 by end of 2008. This rapid expansion would not be possible with rail-based solutions. Associated with BRT growth has been a new interest in NMT. In the PRC, the vice-minister for construction has gone on record on several occasions to plead with cities to maintain cycle paths or to reconstruct them. Seoul has removed over 7 km of elevated highway in the city center and restored its river while building a BRT system and promoting NMT solutions.

huge use of energy, many cities are taking steps to counter the heat-island effect by redesigning buildings to reduce direct sunlight through windows, increase ventilation, cool the air with water fountains, and cut energy absorption by painting external walls white. Planting trees along the streets can help reduce the air temperature, too. In Miami, researchers found that summer electricity bills were around 10% lower in neighborhoods with more than 20% tree cover than in neighborhoods with none. Urban areas in the Netherlands have demonstrated that cities without extensive high-rise buildings can still be dense enough to make life without a car possible, and that they can retain the economies of scale needed for efficient infrastructure provision, public buildings transport, energy use, and recycling. In addition, they can offer people a wide variety of lifestyle choices. The key is to put both people and ecology first.

There is this broad consensus that urban transport policy is intimately linked with urban development outcomes. It affects a wide range of environmental, social, and economic issues at global, national, and local levels. These outcomes determine the sustainability of an urban area. Barter’s typology of cities, and the concept of choices—cities always have choices—and of transport development paths is compelling and provides a strong framework and focus...
for debate. There is strong consensus that, in principle, sustainability requires the development of compact or smart cities—“transit cities,” in Barter’s terms.

These cities have strong central business districts and other subcenters. There is a clear conclusion that early restraint and an improved bus system achieved by introducing competition, innovation, and priorities—possibly including BRT—are critical to the transition from a “bus city” to a “transit city.” What is necessary is to anticipate and plan for urban expansion.

Urban areas need an increasing supply of natural resources and these are brought in from surrounding rural areas. This can have a positive impact since cities provide facilities, services, and jobs, and have been a driving force behind rural development. In some countries, such as Indonesia, much of the increase in rural incomes has come from nonfarm or urban employment. But the urban demands on rural areas also result in environmental pressure. Resources are depleted and pollution finds its way into the countryside. Growing cities can encroach on agricultural land and overtax natural waste sinks, such as rivers and air sheds. As urbanization increases, resources need to be sourced at longer distances from the cities, and rural areas will increasingly be drawn under the direct influence of cities. Managing the fringes of urban areas is also a major challenge.

Control the fringe, sustain the city
The scale of the urban fringe problem is large and growing. The urban population of East Asia is expected to increase by an average of 21 million every year between 2006 and 2030, with an annual increase of 17 million in the PRC, 1 million in Viet Nam, and 0.2 million in the Philippines. Most of this growth will be accommodated on the urban fringe. Yet neither markets nor governments provide the right incentives for sustainable development in these areas. The consequences of this failure are large and many, including the proliferation of unserviced informal settlements, development that leaves existing residents worse off, encroachment on environmental areas, and even more pollution. The circumstances vary sharply between countries. For example, the PRC’s rapid growth, strong institutions, and proactive approach to urbanization are different from conditions in the Philippines, where there is a general lack of effective planning control or direction. In the latter case, development happens largely because of market forces and is particularly influenced by the development of major roads and trunk water supply. The issue is not so much a lack of understanding by governments, but their priorities and efforts. These determine outcomes.

The sustainable development of fringe areas is important for virtually all developing cities. The issues are complex in some respects, and so are the solutions. They concern the balance between market forces, government capacity to intervene effectively, and market failure, which is manifest in marginal settlements that are poorly serviced and in problems that can also affect middle-income households. The sustainable development of fringe areas requires a package of measures that includes land management, adequate infrastructure, environmental protection for sensitive areas, pollution reduction, and safeguards for the rights of existing occupants. On the other hand, the requirements for transport intervention—given a general idea of where growth should occur—are usually obvious, influential in achieving desired growth patterns, and achievable.

First decision: Private or public transport?
Peter Hall suggests that:

- Servicing land and the building of transport infrastructure are the two most important tools with which to guide the pattern of urban development, especially in developing Asian cities where direct urban planning controls are weak. In conditions of pervasive congestion, any new infrastructure tends to have a major influence on urban form. If the aim is to foster an urban form suited to public and nonmotorized transport, then their infrastructure must be used to guide development, and not just roads. Trying to first build roads and leaving the public transport until later will tend to shape the city around vehicle

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66 World Bank. 2006. East Asia and Pacific – Sustainable Development of the Urban Fringe. E-mail Report by Halcrow. USA.

use and make the tasks of installing public transport and changing travel behavior more difficult. In low-income cities, the public transport and NMT infrastructure need not be capital intensive. The important thing is that these modes receive priority in capital spending.

Almost all Asian cities experience that transport is important in guiding and structuring fringe area development. Major road construction stimulates the development of private sector land development—mainly for upmarket housing and industry. But without a complementary road network this results in ribbon development—of the kind that extends along the main radial roads 60 km out of Bangkok, for example. As traffic and congestion on the main radial road increases, private sector expressways may reinforce this trend. Conversely, where major roads are not built, development takes place at a much slower and less intense level, if at all. Where a road network is built, as opposed to a single main road, development of large land areas occurs and is more efficient than ribbon development.

Public transport is essential for those without a car, particularly low-income and low middle-income households living at distances from the city and depending for employment on long, affordable journeys to the city. They need a competitive, efficient bus or busway system that keeps fares down and journeys within acceptable time bounds. Public transport generally and busways in particular are even more effective when they are established when major roads are developed, rather than retrofitted. Expressways may support bus transit in providing rapid bus journeys. It is government’s role to plan, license, procure, and regulate such services.

**Time for change in infrastructure and service delivery**

The issues surrounding sustainable infrastructure and service delivery show that the status quo is not solving the problems. Nor is there a clear pathway to resolving the competing pressures that characterize sustainable provision of urban services, which are declining in many urban areas along with the level of infrastructure. This has serious implications. Water, sanitation, and wastewater treatment and disposal are critical for sustainable development. Solid waste management also presents an increasingly complex problem and has significant impacts on both public health and GHG emissions.

**Water supply and sanitation are inadequate for one in two Asians**

Many people in Asian cities have no access to adequate water and sanitation services. ADB’s Asia Water Watch 2015 indicates that 361 million people in the urban areas of Asia do not have access to adequate sanitation. Although the absolute number of people in the urban areas now served by some form of water supply has increased in recent years, the rate of coverage has dropped because of rapid urban population growth in the

### Smart Growth and Sprawl

<table>
<thead>
<tr>
<th>Smart Growth</th>
<th>Sprawl</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emphasis</td>
<td>Accessibility—to goods, services, and activities</td>
</tr>
<tr>
<td>Density</td>
<td>Higher density, clustered activities</td>
</tr>
<tr>
<td>Growth pattern</td>
<td>Infill development</td>
</tr>
<tr>
<td>Land use mix</td>
<td>Mixed</td>
</tr>
<tr>
<td>Public services</td>
<td>Local, distributed, smaller, walking access</td>
</tr>
<tr>
<td>Transport</td>
<td>Multimodal transportation and land-use patterns that support walking, cycling, and public transportation</td>
</tr>
<tr>
<td>Connectivity</td>
<td>Highly connected roads, pavements, and paths allowing more direct travel by motorized and nonmotorized transport modes</td>
</tr>
<tr>
<td>Street design</td>
<td>To accommodate a range of activities, with street calming</td>
</tr>
<tr>
<td>Planning process</td>
<td>Planned and coordinated between jurisdictions and stakeholders</td>
</tr>
<tr>
<td>Public space</td>
<td>Emphasis on streetscape, pedestrian areas, public parks, and public facilities</td>
</tr>
</tbody>
</table>

Pacific, East and North East Asia, Republic of Korea, and has remained constant in Southeast Asia (see table below). But there is a high degree of variability in the coverage and availability of water supplies across major cities in Asia. In Pacific coastal cities of the PRC, and Republic of Korea the coverage is nearly 100% and water is available 24 hours a day. This contrasts sharply with Southeast and South Asian cities. The coverage in Jakarta is only 27% and availability is 18 hours a day, while in Chennai, coverage is 97%, but water is available only 4 hours a day. About half of Asia’s people do not have adequate water supply and sanitation. In most cities, 90–100% of the population are within 1 km of a standpipe or public well, but these facilities are often shared by many. Official statistics often overstate the level of provision of water and sanitation. Coverage in Mumbai, for example, is cited as 100% although many low-income neighborhoods have long lines at water points and only irregular supplies of poor quality water.

Detailed figures of coverage of water supply and sanitation are shown in the table below. There have been some improvements in the proportion of those with household water connections in East, Southeast, and Central Asia. Sanitation coverage has shown modest gains or has remained static. Asian cities face major challenges to provide adequate water supply and sanitation facilities to low-income areas and informal settlements, which make up the bulk of unserviced areas.

Ensuring appropriate sanitation is essential to promote sustainability. Many of Asia’s major cities do not have extensive waterborne sewer systems and rely heavily on septic tanks and latrines for waste disposal. Only about 40% of household sewage is treated while in Bandung the figure is 23%, in Penang, 20%, and in Karachi, 10%. Other cities enjoy a high percentage of wastewater treatment, 83% in Bangalore, India, and 70% in Chiang Mai, Thailand, but the efficiency of the treatment plants is often very low. The challenge of improving treatment facilities to reduce pollution of water courses and avoid further environmental degradation will require massive investments in urban sewer systems.

### Drinking Water and Sanitation Coverage in Urban Areas, Asia and Pacific, 1990 and 2002

<table>
<thead>
<tr>
<th>Region</th>
<th>Water Supply</th>
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**Total**

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**Total**

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<td>Sewer Connections</td>
<td>70</td>
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</tbody>
</table>

( ) = negative value


68 Bapat, Meera, and Indu Agarwal. 2003. Our needs, our priorities; women and men from the slums in Mumbai and Pune talk about their needs for water and sanitation. Environment and Urbanization, Vol. 15(2).
70 Song, L. 1997. Physical and Chemical Wastewater Treatment. Hong Kong, China.
Poor Quality Water is Costly to Society

The cost to society of poor quality water has generally been estimated with reference to the health effects and environmental costs of polluted water. This method computes the benefits of a good quality water supply as time savings, health, and other closely related benefits. The World Health Organization’s (WHO) Evaluation of the Costs and Benefits of Water and Sanitation Improvements at the Global Level, by Guy Hutton and Lawrence Haller (2004) reviewed many urban and rural water supply and sanitation interventions and concluded that, in achieving the Millennium Development Goals (MDGs) for water supply and sanitation in developing regions, the return on a $1 investment would be on the order of $5–28. This return was achieved whether the interventions were for both water supply and sanitation, or for sanitation improvements for those already having improved water supply, or vice versa. The database used in this analysis was comprehensive, with analysis based on data generated from over 50 countries in all developing regions. Similar analysis carried out by Water Aid refers to WHO estimates that 5.6 billion working days and 443 million school days would be gained by universal access to safe water and sanitation. While also concluding that the attribution of wider benefits of water supply and sanitation is not a straightforward matter, it estimates that for a range of water supply and sanitation investments, returns of between $2 and $52 are made for every $1 invested, the result only of the time savings and better health that such investments generate.

Other research confirms that the greatest measurable benefits from water supply and sanitation improvements are in employment time savings, largely because of reduced incidence of diarrheal diseases. Rijsberman reports that more than 4 billion cases of diarrheal diseases are reported each year, with between 1 and 2 million deaths annually. Thus, the burden of disease associated with poor water supply, sanitation, and personal hygiene has been estimated at 82 million disability-adjusted-life-years (DALYs) annually. Taking a low valuation of $500 per day, the total economic cost amounts to $40 billion annually. However, this figure is highly dependant on the valuation of the DALY. Rijsberman also provides estimates of total investment and recurrent costs for water supply ($1.8 billion) and sanitation ($9.3 billion) to achieve the MDGs. These are estimated to generate benefits of $54 billion—a benefit/cost ratio of almost 5. Again, the major benefits are derived from time measurements—less time (and lives) lost from being sick, and less time spent caring for sick babies and infants. This implies a net present value (NPV) of $400 billion at a discount rate of 5%, but still leaves half of population unserved as of 2000 without safe water and sanitation access. Providing all with water supply and sanitation would generate an NPV estimated at $600 billion. Work in Delhi indicates that a long chain of beneficial consequences is initiated by water supply improvements. These involved complex relationships between the time saved in obtaining water, the health benefits, and thus further time savings, and the impact on personal hygiene, food preparation, etc. The average cost to a household of illness caused by poor water quality and poor sanitation based on health expenses alone is estimated at 143 rupees (Rs) per month for poor families, or about 3.5% of household income.

Sources and Notes:

- Redhouse, David, Paul Roberts, and Rehema Tuaki. 2006. Every One’s a Winner? Economic Valuation of Water Projects; Water Aid.
- Based on the data available, this suggests about 1% of gross domestic product (GDP).
- At the other extreme, in the United States, a life is frequently valued at $3 million. If this is converted to a DALY valuation of $40,000, the global economic cost of poor water supply, sanitation, and hygiene becomes $3.2 trillion.

Inefficiency and waste are key problems

The major barriers to achieving greater coverage and sustainability of water supply and treatment in Asia include serious capacity problems arising from extensive operational and management inefficiencies. Very low tariffs often act as inequitable subsidies and encourage users to waste water. Asia also suffers from major under-investment in this infrastructure compared with other areas of the world.

WHO and United Nations Children’s Fund (UNICEF). 2000. Global Water Supply and Sanitation Assessment Report 2000. The share of water supply and sanitation as a percentage of total infrastructure investment is lower in Asia than in other regions of the world; 3.6% in Asia compared to 5.3% in Africa and 9.3% in Latin America and the Caribbean.
Although city sewage systems have prevented the transmission of diseases, particularly in developed countries, the lack of sewage treatment in many Asian cities is severely damaging ecosystems and water resources. This not only affects the immediate environment and the availability of water resources, it allows the transmission of infectious diseases, which have a global economic impact that was recently estimated at $10 billion per year.

**Keep water flowing around the clock**

Issues of resource availability raise the question of whether a constant supply of water 24 hours a day and 7 days a week (24/7) is an achievable and sustainable goal. This is often the stated aim of system improvements but is it the most cost-efficient way forward when water scarcity exists? Existing networks are often complemented by rival systems or investments that have enabled customers to survive using intermittent and low-pressure supplies. The poor often rely on water vendors, for instance, while the more affluent construct storage reservoirs or install pumps to supply elevated reservoirs or to draw directly from the main source. Rather than striving to provide 24/7 water supply, which would require unaffordable investments, should we seek to optimize the use of existing investments within an improved system that would increase efficiency and bring down costs for the poor? The answer to this question will depend on the circumstances of a particular city, but the aim must be 24/7 supply. Intermittent supply damages networks, encourages contamination through infiltration, and makes metering useless.

**Is water scarcity a legitimate concern?**

There is debate over whether sufficient freshwater resources are available for all needs. Some argue that the problem is one of unequal distribution and that the poor lack the political and financial capital to ensure that water is made available to them. Others believe there is a scarcity that is demonstrated by groundwater depletion and rapidly drying rivers and lakes. Groundwater—responsible for one third of world supply—is used almost everywhere, and most critically, is exploited for most potable supplies in India. Literature on water stress generally assumes that water scarcity is at the root of problems. But the countries facing greatest water stress are not necessarily those with the greatest inadequacies of water. Many large cities where provision is inadequate have little or no overall shortage of freshwater resources.

The greatest threat to groundwater as a usable resource is overuse that does not allow for regeneration. Water tables are falling virtually everywhere—a problem that is particularly serious in large areas of India and the PRC. The depletion issue is often addressed by deepening wells and building additional surface water storage and facilities for recharge and water harvesting. This is expensive, however, and it provides only a temporary respite without effective controls

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Local Circumstances Contribute to Water Shortages

Case studies show that changing local circumstances can contribute to water shortages despite relatively plentiful supplies. In Beijing, groundwater levels are dropping as water withdrawals exceed aquifer recharge rates, and most groundwater is contaminated. Meanwhile, agriculture around the city has shifted toward higher-value, more water-consuming products, becoming a major water user and contributor to water pollution. Water stress requires a regional response through which agriculture, as well as industry, the power sector and residential and commercial areas, must become more efficient in using freshwater and reducing water pollution. In Andhra Pradesh, India, during the dry year of 2002, the groundwater supply to the city of Chitoor dried up completely. All of the city’s water had to be trucked from a distance of 50 km. Because of the immense cost of this operation, the state government at one point considered evacuating all of the city’s 70,000 people until the monsoon rains brought respite and recharged depleted aquifers.

over extraction and the reduction of resource use through recycling.\textsuperscript{75}

\textbf{Sewage: A looming deluge}

Cities can devastate water bodies, rivers, lakes, and coastal areas. Approximately 60\% of the world’s population lives within 100 km of the coast, an area that accounts for only about 25\% of the land mass. By 2025, the majority of Asia’s largest settlements will be coastal megacities. Many coastal cities discharge their sewage, industrial effluent, and other wastes into rivers and oceans. Few Asian cities have adequate sewerage systems and the ones they have are often limited to economically advantaged areas. Only an estimated 35\% of all wastewater in Asia is treated, and adequate treatment is rare. Worldwide, two thirds of the sewage from urban areas is pumped untreated into lakes, rivers, and coastal waters. If no action is taken, these discharges will grow along with populations, channeling ever greater amounts of untreated wastes that contain nitrogen and phosphate into the sea. This has created dead zones in some coastal areas—areas with too little oxygen in the water to sustain the original flora and fauna.

Construction along shores and rivers, deforestation—especially the cutting of mangrove forests—and erosion cause the run-off of fine sediments into the ocean, either directly or through rivers. Singapore is a case in point. Its land area has been increased by more than 10\% in the past 35 years. Sediment is continually stirred up by massive shipping traffic. This damages coral reefs and contributes to the global depletion of fish stocks. More than 90\% of the world’s marine harvest comes from coastal waters and much of it is brought ashore in cities where the fish are being sold.


\textbf{Wastewater: overlooked and understated}

The coverage of effective and environmentally satisfactory wastewater management systems in Asian cities falls well below that for household water supply. Much of the needed investment in sanitation and wastewater management is frequently diverted to further investment in providing water supply because:

- Water supply provides a tangible benefit, and thus enjoys political support, whereas sanitation does not, if the waste is removed from under people’s feet.
- The negative impacts of inadequate sanitation facilities and/or poor wastewater disposal are often felt at points removed from the source of waste, or are so dispersed as to impact on the environment in ways that are not immediately obvious.

The costs of environmentally sustainable wastewater collection treatment and disposal are high and the solutions are technically complex. Crucial to success is introducing the polluter-pays principle that requires the costs of pollution to be borne by the polluter. This is achieved through a charge levied by volume, which is the most effective method when dealing with domestic sewerage, and, for industry, through insisting on on-site treatment to levels comparable to domestic waste before discharge into the sewerage system. In most developed cities, conventional sewerage and sewage treatment provides an acceptable means for the collection, treatment, and disposal of domestic and industrial wastewater. These systems were developed as cities grew. In many Asian cities, conventional sewerage systems were never installed in a comprehensive way, and to build them retroactively is both expensive and disruptive. This high cost has led many water and wastewater authorities to seek alternatives. For instance, the wastewater disposal strategy of Manila Water Corporation—one of the two private concessionaires for water and sanitation services in Metro Manila—is still emerging.

The original targets for wastewater service coverage have had to be renegotiated. Its current strategy involves an incremental approach and a combination of sewerage and sewage treatment, installation of a package plant for high-density developments, a system of septic tank emptying, and septage treatment for others. Even with this approach, the target is that only 30\% of the service area population will be covered by sewerage and sewage treatment by 2010.
Deficient drains and fears of future flooding

The maintenance of city drainage networks is frequently neglected and capital investment for improving storm and surface water drainage is often seriously inadequate. This has a heavy impact on the living conditions of city residents, especially in low-income areas. Many of Asia’s cities and towns are vulnerable to floods, particularly those in coastal regions. This growing danger is exacerbated by upstream deforestation, the filling in of retention basins, and the effects of climate change. Of the world’s 15 largest cities, 13 are on coastal plains. Many other cities will also face a severe risk of flooding if sea levels rise by one meter. Parts of Bangkok and Manila, for example, are below sea level. To prevent inundation in future, many cities will need to invest in extensive coastal protection and flood-control systems.

Solid waste: A region-wide municipal headache

A number of countries in Asia have recently introduced solid waste management (SWM) legislation that seeks to provide a policy framework for dealing with the increasingly difficult problems associated with the handling, disposal, and recycling of municipal solid waste. India faces a jurisdictional problem: SWM is a local government responsibility and higher levels of government have little capacity to penalize those who do not comply with regulations. The Philippines’ Republic Act 9003 that deals with SWM and recycling is visionary but, to a large extent, it has not been implemented so far. Some Asian countries have had greater success with efforts to legislate on issues relating to waste disposal, particularly minimizing waste. In the developed world, the EU’s packaging legislation, designed to reduce the amount of packaging that has to be disposed of by placing greater responsibility for its reuse or disposal on producers, has been successful in reducing the amount of waste in landfills. There are now EU-wide targets in other areas designed to dramatically reduce waste by increasing reuse, recycling, or recovery. The overall sustainability of moves to increase recycling is a complex issue, however. For instance, a recent report on the UK government’s recycling targets pointed out that some recovery processes used more energy than they saved, thereby raising GHG emissions.

The SWM sector appears to offer more opportunities than other environmental services for developing countries to avoid mistakes made by developed countries. Most Asian cities already have a strong informal waste recycling industry that can be harnessed to put...
them ahead of many in the developed world in terms of minimizing waste, including recycling, reuse, and recovery. There is an opportunity to avoid duplicating the fate that befell the “rag-and-bone men” or junk dealers of the West, who were the equivalent of the ragpickers in many Asian cities today. These people were forced out of business because of overly zealous public health regulations and the move toward "wheelie bins,“ which discouraged householders from sorting and segregating waste and increased the amount of potentially reusable solid waste going to landfills.

Population growth, rapid urbanization, and intensified economic activity have combined to increase the volume of waste in Asian cities. In the cities of Japan, Malaysia, and Republic of Korea, the quantity of waste generated exceeds 1 kilogram per person per day, similar to that in the most developed countries. In the large cities of the poorer, developing countries of Asia, the amount is roughly half.77 The composition of solid waste differs too. In wealthier countries, the waste is highly inorganic and nonrecyclable. In the cities of developing regions, solid waste is generally organic and recyclable.

After collection, where?

About 75% of solid waste generated in urban areas is collected, according to estimates, but less than 60% finds its way to a disposal site. Most Asian towns and cities use open dumps and only about 10% ends up in properly engineered and managed landfill sites. For most cities, disposal remains a serious problem, with finding suitable sites, appropriate technology, and finance for a citywide facility among the leading difficulties. Often, there are also issues over the public acceptance of such disposal facilities once they are found.

77 IGES. 2001.

The Philippine Approach: Ecological Solid Waste Management Act of 2000

The Act adopts a systematic, comprehensive, and ecological solid waste management (SWM) program to ensure the protection of public health and the environment. It prescribes the use of environmentally sound methods that maximize the use of resources and encourage resource conservation and recovery. It sets guidelines and targets for solid waste avoidance and volume reduction through source reduction and waste-minimization measures, including composting, recycling, reuse, recovery, green charcoal process, and others, before collection. It also set targets and guidelines for treatment and disposal in appropriate and environmentally sound SWM facilities in accordance with ecologically sustainable development principles. The Act prescribes proper segregation, collection, transport, storage, treatment, and disposal of solid waste through the formulation and adoption of the best environmental practice in ecological waste management, excluding incineration. It promotes national research and development programs for improved solid waste–management and resource-conservation techniques, and a more effective institutional arrangement and indigenous and improved methods of waste reduction, collection, separation, and recovery. Greater private sector participation in SWM is encouraged, but primary enforcement and responsibility of SWM is with local governments, although the act establishes cooperative efforts among the national government, other local government units, nongovernment organizations, and the private sector. The approach aims to encourage cooperation and self-regulation among waste generators through the application of market-based instruments. Public participation in developing and implementing national and local integrated, comprehensive, ecological waste management programs is institutionalized. It further encourages the integration of ecological SWM and resource conservation and recovery into the academic curricula of formal and nonformal education to promote environmental awareness and action among the citizenry.

communities do not want them in their neighborhoods. Nevertheless, some cities are adopting the use of controlled dumps and partially engineered landfills, and composting and recycling are now receiving more attention.\textsuperscript{78} Informal recycling is also important and between 5\% and 25\% of waste collected is recycled in this way,\textsuperscript{79} although it generally involves manual sorting and the related health risks. Increasingly, it is undertaken with the help of the nongovernment sector. Many city collection systems that previously were inefficient now seem to be working much better, with many local governments contracting the services out. Because of its high cost and the fact that residual waste still needs disposal, incineration is usually not practiced, except for hospital wastes.

High cost, low support
In most cities, waste management suffers from weak institutional, regulatory, and financing capacities, and this is further exacerbated by poor communication as well as a lack of public participation.\textsuperscript{80} Waste management services account for a high percentage of municipal budgets in many Asian cities. For some, expenditures on SWM can reach 40\% of a municipality’s operating budget, with 70\%–90\% of this spending going to collection. Although recycling is promoted by some governments and private sector firms, these activities are usually limited and often not well supported by municipal authorities.

The challenge: To supply more than infrastructure
Providing adequate potable water and sanitation to growing urban populations is made more complex by the long history of imbalance of supplies and facilities between the rich and poor, and the underpricing of water, sanitation, and solid waste services, which have often been viewed as a social rather than an economic good. While the urgent need for improved water and sanitation services—particularly for the poor—remains a critical Millennium Development Goal, pressure on freshwater resources is increasing. This includes pollution from poor waste treatment and disposal practices. While adequate water supply, sanitation, and solid waste centers can be regarded as a fundamental right in modern urban society, providing them also requires complex administrative, management, financial, and regulatory structures that are heavily influenced by political considerations.

Cities provide opportunities to tackle water supply, sanitation, and waste management problems efficiently because of their economies of scale and density. The concentration of population and enterprises reduces both the capital and operating costs of the services. Geographically concentrated wastes are effectively dealt with more readily than dispersed wastes. Cities are wealthier than smaller centers of population and have a greater capacity to pay for these systems.

It is critical that cities regard water and wastewater treatment as an economic good, with a social element factored into the way the service is priced and is paid for by the urban poor. To achieve the transition from a social to an economic good, changes must be made to the institutional arrangements governing how water is supplied and wastewater is managed. These should focus on:

- promoting national water sector changes, emphasizing policy formulation and institutional reform;
- fostering the integrated management of water resources;
- improving and expanding the delivery of water and sanitation services;
- fostering the conservation of water and increasing system efficiencies;
- promoting regional cooperation and increasing the mutually beneficial use of shared water resources within and between countries;
- facilitating the exchange of water sector information and experience; and
- improving governance through promoting institutional reform, decentralization, and building capacity.

Basic elements for an efficient system
Although there is no one-size-fits-all solution for the sustainable development of infrastructure, there are some elements of water supply and sanitation provision that many consider are sine qua nons of a move toward more sustainable services. The first is for governments to change or modify their role from a service provider to a regulator. International experience has demonstrated that water supply and sanitation services are most efficient when delegated to autonomous and accountable service providers. These may be public, private, or cooperative agencies that provide water supply and, generally, sanitation services within a defined


\textsuperscript{79} Footnote 69.

Suburb Power: Public–Private Partnership in the Alandur Sewerage and Sewage Treatment Plant

Alandur is a 2,000-ha satellite town within the Chennai metropolitan area with a population of about 150,000. One quarter of its residents live in slums. It had no sewerage system and people used various forms of waterborne sanitation. Sewage and sullage flowed in open storm water drains and ended up as stagnant water in an area where the sludge from residential septic tanks was also dumped. This was hazardous to public health and contaminated ground water. The Alandur sewerage project was championed by the municipality in partnership with the community and the private sector. Its objectives were to:

- improve the standard of living of the residents of Alandur to a level matching that of the rest of Chennai;
- eradicate the mosquito menace and eliminate associated nuisance and health dangers;
- provide a basic facility to all the residents;
- avoid recurrent expenditures on septic tank cleaning; and
- prevent continuing groundwater contamination.

Infrastructure under the Alandur sewerage project included a conventional sewage treatment plant, pumping station, and a 120-km network of sewerage lines with a capacity of 24,000 cubic meters per day, which was sufficient to serve a population of 300,000. The pumping station was constructed on a build-operate-transfer (BOT) basis. The contractor was given a lease period of 14 years, including operation and maintenance responsibility for 5 years after construction on a fixed-fee basis. At the end of the lease period, the sewage treatment plant will be handed over to the municipality. The treated effluent is to be used for afforestation in open areas. A special feature of the project is its use of citizens’ contributions. A one-time deposit of 5,000 rupees (Rs) was received from owners of residential properties, along with Rs10,000 from commercial and industrial establishments. To encourage people to contribute, publicity campaigns and discussions with community groups were organized. The project cost was Rs340 million, of which citizens’ contributions amounted to Rs80 million. The balance was from other sources, including a loan from the Tamil Nadu Development Fund.


Finding ways to improve affordability

In developing PPP arrangements, governments must balance the need to invest in the system with the consumers’ ability and willingness to pay. Where affordability and/or macroeconomic stability are a concern, a stepwise approach should be considered. Many donor agencies and governments have begun to experiment with the concept of management contracting as a first step in the PPP continuum. Management contracts provide governments with an opportunity to bring private sector expertise to bear in improving utility management, the quality of system data, and initial efficiency. These can be valuable tools in preparing a water utility for a deeper level of private sector involvement in future.

PPP arrangements remain highly controversial and so there is need for a strategic approach to stakeholder consultation and communication. When employed properly, strategic communications can build stakeholder support and provide governments with valuable feedback on service quality, investment needs, and affordability. To be effective, communication and stakeholder consultation must begin at the earliest stages of formulation before key decisions are made and while stakeholders feel that their input will be meaningful.

Lessons learned from privatization

A 2004 World Bank report that draws lessons from experience since 1984 with the reform and privatization of infrastructure utilities concludes that substantial benefits can be expected from the policy, although it has been oversold and misunderstood in the past:

- Infrastructure delivery, when undertaken by state-owned companies, was often inefficient. Under pricing was common and this meant that utility agencies were unable to finance the expansion of infrastructure.

There is no universal reform model. Results depend on the sector and will differ, for example, between telecommunications and water and sanitation. The approach will also depend on the country and the social environment involved. Telecommunications offers the most compelling case for privatization, while transport networks, electricity, and water supply are more problematic.

Effective regulation is the most critical condition for reform, protecting the interests of both private investors and consumers. This is the only way to attract private funds toward infrastructure and to get social support for the reforms.

It is essential that the regulatory authority has the correct information on the distributional impact of a reform. Often, this information is lacking.

Privatization should follow restructuring and the introduction of competition. There is no point in privatizing monopolies. Privatizing for privatization’s sake is not an objective per se, and privatization will work only within a competitive structure.

Starting with major consumers, the cities

Energy and energy services are critical for sustainable development. The ecological footprint method of assessing environmental sustainability shows that roughly half of global ecological demand is attributable to CO₂ from fossil fuels, and 55% is attributable to total energy use. Today, issues of energy security, the depletion of nonrenewable resources, and rising international energy prices provide a context that supports opportunities for more sustainable energy production and consumption. However, such patterns are highly structural, potentially volatile, and heavily influenced by political considerations.

Cities offer specific advantages in addressing energy-related problems. There is scope for more sustainable energy practices because a number of energy-related environmental problems are concentrated in the cities of developing countries. Urban consumers use energy more intensively than their rural counterparts, and energy use in cities casts an environmental shadow over surrounding areas.²²

Bumps on the road to energy market reform

A recent ADB study³³ of energy policy highlights some key lessons. Lending policy since 2000 has emphasized the development of independently regulated and privatized energy markets that were expected to lead to more efficient use of energy, lower costs, and greater private investment. But energy market reform has been slower than expected because of the renegotiation of power purchase agreements by several countries, a lack of investor confidence, political influence to keep tariffs below cost levels, and unacceptably high system losses. The evaluation points out several other problems: difficulties in building regulatory expertise and independence, insufficiently deep and liquid markets for trading electricity contracts, a major withdrawal of independent power producers from the Asian market, and declines in funding for generation projects in the public sector and for transmission and distribution investments. The type and destination of lending have reflected a growing concern with environmental effects, with a particular focus on renewable energy emerging.

Determining energy policy according to demand and supply

The primary focus of energy policy has been on supply-side interventions such as providing cleaner, renewable energy sources. But urban areas determine demand for energy with their pricing regimes, their transport systems, their need to heat and cool buildings, and their manufacturing. An emphasis


on consumption overproduction is embodied in the Global Environment Facility’s (GEF) strategic priorities. Given that environmental impacts and efficiency losses occur on both the supply and demand sides, urban development policy needs to better integrate demand- and supply-side interventions to ensure that efficiency and environmental damage is addressed at the points of production, transformation, and transmission and distribution, as well as consumption.

A sustainable energy policy involves action on three fronts—efficiency (saving), diversification (alternatives), and pollution and emissions control. Six of the seven strategic priorities (SPs) of the GEF’s climate change program, for instance, relate to the characteristics indicated in the table below. (The seventh is piloting an operational approach to adaptation.) And all relate to urban management either directly or indirectly. Initiatives to tackle emissions and pollution range from comprehensive power sector development programs to household-level interventions that reduce indoor air pollution from the burning of biomass fuel. Long-term, large-scale investment by the World Bank in Brazil has had a widely acknowledged impact in reducing emissions in São Paolo while expanding gas distribution at the same time. Success rested on leveraging cross-border projects, institutionalizing credible and effective environmental regulation, and timely and in-depth environmental assessment procedures.

At the household level, projects to encourage a switch from biomass fuels to liquefied petroleum gas (LPG) in Sudan have succeeded. They were built on strong women’s groups with demonstrated saving and financial capacity, and on a livelihoods approach that integrated pollution objectives with microenterprise activities.

In many Asian cities, significant improvements in air quality, particularly in suspended particulate matter, $SO_x$, and $NO_x$, have been achieved through the replacement of two-stroke and diesel engines for public transport with compressed natural gas (CNG). In cities such as Delhi and Kathmandu, this has made a significant difference to urban air quality. A different approach to reducing emissions has been used in the city of Puerto Princesa in the Philippines with the support of the United States Agency for International Development (USAID).

**For environment sustainability**

*Urban ecologies to reduce waste*

Manufacturing and construction activities generate a lot of waste—as much as four times produced by households, according to estimates. One way to overcome this problem is to mimic nature, where waste produced by one organism is

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**Global Environment Facility’s Climate Change Strategic Priorities**

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<th>Category</th>
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<td>Efficiency</td>
<td>SP1: Transformation of markets for high-volume, low-GHG products and processes to catalyze both demand and supply sides with relatively small resource input, resulting in a significant and lasting market penetration or transformation</td>
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<tr>
<td>Efficiency &amp; diversification</td>
<td>SP2: Increased access to local sources of financing for renewable energy and energy efficiency to provide capital for investment in (near-) commercial energy-efficient equipment, energy conservation, or renewable energy technologies for modern energy services</td>
</tr>
<tr>
<td>Diversification</td>
<td>SP4: Productive uses of renewable energy to provide income generation and other essential social services</td>
</tr>
<tr>
<td>Pollution/emissions</td>
<td>SP5: Global market aggregation and national innovation for emerging technologies to support the reduction of cost in the end of emerging clean-energy technologies</td>
</tr>
<tr>
<td></td>
<td>SP6: Modal shifts in urban transport and clean vehicle/fuel to emphasize public transit (such as bus rapid transit), nonmotorized transport (such as bicycles and pedestrian areas), and nontechnology measures (such as traffic demand management and economic incentives)</td>
</tr>
<tr>
<td>Efficiency, diversification, &amp;</td>
<td>SP3: Power sector policy frameworks supportive of renewable energy and energy efficiency to incorporate clean energy into energy policy frameworks</td>
</tr>
</tbody>
</table>

Vertical Farming: Perhaps Cities Can Even Produce their Own Food

In January 2006, about 38% of the world’s land was being used for agriculture. Farming has radically altered the natural landscape and ecosystems. Rapid population growth requires more land for food, but this land is no longer available. Alternative approaches to producing food are needed to avoid further encroachment on the remaining functional ecosystems. The replacement of traditional farming by urban food production centers, or vertical farms, would enable the gradual repair of the world’s ecosystems as farmland was returned to natural vegetation. In temperate and tropical zones, the regrowth of hardwood forests would absorb carbon dioxide (CO₂) and contribute toward reversing global climate change.

Vertical farming involves growing food within towns and cities inside environmentally controlled multistory buildings that recycle organic, human, and animal waste and wastewater. Indoor farming is not new but existing operations need to increase substantially in both output and range of products. The concept offers urban renewal, sustainable year-round production of food, and employment. But government-supported economic incentives are needed so that the private sector, universities, and local develop the concept. The vertical farm must be efficient, cheap to construct, safe to operate, and independent of public subsidies and outside support.

Farming in the Z-Axis: The Vertical Farm

6th Street Basin, Gowanus Canal, Brooklyn
- Healthy transportation alternatives
- Crops distributed locally and regionally
- Existing buildings reactivated
- Public education
- Electricity generation
- Job creation

CO₂ = carbon dioxide, CSO = c____s____o_____
often reabsorbed by another as part of symbiosis. Industrial symbiosis offers the same kind of solution, whereby the waste or by-product of one enterprise becomes the resource or input of another.

Denmark provides an example (see box on the next page) where 20 projects have been developed through the exchange of residual products. This has a number of advantages:

- Recycling of by-products. The by-product of one company becomes an important resource for another company.
- Reduced consumption of resources, including water, coal, oil, gypsum, fertilizer, etc.
- Reduced environmental strain, through lower CO₂ and SO₂ emissions, lower discharges of wastewater, and less pollution of watercourses.
- Improved utilization of energy resources. Waste gases are used in the energy production.

The project was financed by its core partners and all projects are environmentally and financially sustainable.

The Kalundborg experience produced several lessons:

- An industrial symbiosis can only work if industries with the right composition exist or are relocated in one area. One company’s residual products must take the place of another’s raw material. Diversity within the local industrial structure is important.
- The physical distance between individual companies must be as small as possible since the transport of residual products over large distances is seldom profitable. Geographical distance is the most important parameter when energy is exchanged between companies. Other by-products can be transported to advantage over larger distances.
- The basis is openness, communication, and mutual trust between the partners. The Kalundborg companies are located in a small community that has helped establish an enabling environment for open, intimate working relations.
- Energy-efficient buildings, built form, renewable energy sources, standards, and climate-responsive design, together with open space and green areas, are also important to ensure a sustainable neighborhood.

Bionic buildings: Taking a lead from spiders and termites

Many architects feel that the world is on the cusp of change. Buildings will emulate nature and become more energy efficient. City landscapes are likely to transform as new materials and designs enable buildings to become more colorful, stronger, and suitable to an era where sustainability comes to the fore. Such changes in the color and texture of buildings would radically alter the look and structure of a city.

Nature provides many examples of energy efficiency, structural strength, and an ability to maintain cleanliness. Much can be done to promote energy-efficient buildings through design that emulates nature. Energy efficiency can be improved if the walls and facades of buildings emulate skin. Natural ventilation can be encouraged by providing double layers of building materials with a cavity in between. Buildings can be designed with intelligent skins that contain sensors to control blinds in response to sunlight patterns throughout the day. Self-cleaning windows, following the model of the lotus leaf where water simply runs off, would greatly reduce maintenance costs for most buildings. Less resources will be needed to construct buildings in the future. Lighter and stronger structures frames can be designed by adapting the structure of trees and even spider webs. The largely columnar-grid structures with pillars and beams now used for most buildings would consume far less material if they were designed to make use of cross-braced tubes (twisted columns) based on the cellular structure of trees. Strong, lightweight structures engineered along the lines of the web of a spider have been built economically using a minimum amount of material to cover a large area. The Munich Olympic Stadium constructed in the 1960s is an example.

The style of today’s building interiors needs to change. The current approach to office layout is to pack workers in and hope that they work hard. This encourages neither innovation nor productivity. The better, more livable the building, the happier and more productive people are. Simple things like windows that open, plants and gardens, and communal open space make for a happier workplace. The layout and lighting of buildings also play a role in encouraging or discouraging antisocial behavior. The cost of making buildings more livable is minimal compared with the benefits. With increasing energy costs, buildings need new efficient heating and cooling systems. One method

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84 Symbiosis means coexistence between diverse organisms in which each may benefit from the other. Industrial symbiosis can be applied about the industrial cooperation between a number of companies and local government, all of which exploit each other’s residual or by-products.

86 Footnote 85.
Kalundborg Industrial Symbiosis

The evolution of industrial symbiosis in Kalundborg, Denmark, has been spontaneous but slow. The web of material and energy exchanges among companies within the small coastal industrial zone 75 miles west of Copenhagen has been developing for more than 30 years. The original motivation, in 1975, was to reduce costs by seeking income-producing uses for waste products. Gradually, the managers and town residents realized they were generating environmental benefits. The Kalundborg system comprises eight major partners:

- Energy E2, Asnæs Power Station.
- Plasterboard factory BPB Gyproc A/S.
- Pharmaceutical plant Novo Nordisk A/S.
- Enzyme producer Novozymes A/S.
- Oil refinery Statoil A/S.
- Bioteknisk Jordrens Soilrem A/S.
- Waste company Noveren I/S.
- City of Kalundborg, which supplies district heating to the 20,000 residents, hot water to the homes and industries.

Acting on their own, these partners have developed a series of bilateral exchanges that also include a number of other companies. There was no initial planning for the overall network; it evolved as a collection of one-to-one deals that made economic sense for each pair of participants. The symbiosis began when Gyproc located its facility in Kalundborg to take advantage of the fuel gas available from Statoil.

Source: Industrial symbiosis website. Available: www.symbiosis.dk
Managing Asian Cities

is modeled on the way termites keep their mounds cool in the desert. Air is drawn over an underground water reservoir into the building and passes out through a chimney. This uses a natural resource (air) to regulate temperature. The ultimate aim is to lower operating costs of a building and conserve energy.

Applying the results of the rigorous, scientific study of nature to the construction of bionic buildings leads to new and better design and construction. With a little encouragement from local authorities, buildings can become far more energy efficient and pleasant places to live and work.

Designing a house—think energy saving

Energy saving housing technologies have been tested in a number of locations in South Africa with a focus on passive design. Some have found traditional methods like the use of mud bricks to be thermally efficient although generally constrained by low acceptability. While some technologies, such as solar-powered water heaters, might appear suited to tropical locations, affordability remains a critical problem. Several projects for energy-efficient housing have been implemented in the context of the country’s reconstruction and development program.

Some of these tests of potential low-cost urban housing methods have not systematically or comprehensively evaluated energy savings. The passive design technologies have focused on orientation that minimizes heat gains and losses, insulated ceilings, wall cavity insulation, innovative window sizing and shading, use of mud bricks for improved thermal performance, shared walls, and fluorescent lighting.

Spreading the emission control message

Australia faces a major challenge and has been active in promoting relatively small-scale diversification projects in its mission to abate GHG emissions. The initiative is built on partnerships between industry and governments, with a focus on power distributors. High-profile institutional and corporate clients, including Australia’s Parliament House and Westpac Banking Corporation, showcase state-of-the-art technologies. Other projects demonstrate the effectiveness of regionally focused solutions like the country’s mini-hydroelectric system, supported by the provision of technical expertise and consultancy services.

Farming within cities

Wikipedia, the online encyclopedia, offers an excellent definition of urban or periurban agriculture as the practice of farming, including crops, livestock, fisheries, and forestry activities, within or surrounding the boundaries of cities. It may use private residential land—privately owned plots, balconies, walls, or building roofs—public roadside land, or river banks. Urban agriculture is practiced for income-earning or food-producing activities. It contributes to food security and food safety by increasing the amount of food available to people living in cities, and by allowing fresh vegetables, fruits, and other products to be made available to urban consumers. Because it promotes energy- and resource-saving local food production, urban and periurban agriculture is a sustainable practice.

That makes it important for the urban environment. The current industrial agriculture system is accountable for the high-energy costs for the transportation of foodstuff. According to San Diego’s Community Forest Advisory Board, a group that is promoting urban agriculture in the city, 95% of the food produced within the US is exported, while 95% of the food eaten in the US is imported. The energy used to transport food would be greatly decreased if urban communities were to adopt localized food production methods.

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87 The wind towers of the 100-year-old houses in old Dubai are clear examples of building design that should be considered today.


89 Australia has one of the fastest-growing per capita greenhouse gas (GHG) emissions in the world. Over the past few years, while its GDP per capita has grown from about $15,000 to $25,000 per annum (at 1995 PPP), its emissions per capita has grown from 200 to 300 gigajoules per annum. Over similar periods and with similar GDP growth rates, Japan’s emissions have gone from 140 to about 180 gigajoules, and the UK from 160 to 170 gigajoules.
agriculture could provide US cities with locally grown food. Cities could significantly reduce their ecological footprint.

Urban agriculture is too wide a subject to be fully explored in this book. Activities have included small plot-intensive cultivation, “greening” of roofs, and aquaculture, to name but a few. There are debates about the efficiency of the process. These issues and more can be canvassed on the many web sites dealing with the topic.

**What is needed and how to provide it**

National and city governments can no longer hope that reactive management will solve the problems of transport, infrastructure, and utilities, and of air and water pollution. The reactive approach has largely failed—a failure clearly illustrated in almost all Asian cities by the widespread transport crisis, the lack of wastewater treatment, and worsening air pollution. The issues have local, national, and global dimensions and are now too important to ignore. The pervasive interconnection between the wide range of policy questions this raises poses the major challenge to effective city management and to providing needed infrastructure.

The solution to inadequate urban services—the “what to do”—is not to be found in the provision of infrastructure hardware alone. There needs to be an increased focus on the required outcomes in terms of more sustainable, cost-effective, and appropriate services, and the actions required to achieve such outcomes. The “what” must be driven by, and provided within, a framework of sustainable development that addresses these issues of interconnectedness.

**Fact: sustainable growth and environmental health are compatible**

At the outset, city administrations need to believe in sustainable growth and reject the notion that they must choose between protecting the environment and promoting prosperity. There is a direct connection between environmental protection and wealth creation. The most attractive cities in the world generally have the highest environmental regulations. Cities in countries that have fallen behind economically often cut environmental regulations, as Central Asia and Eastern Europe did in the early years after the fall of the FSU. But this has changed dramatically now as these same cities try to attract higher value-added industry. Cities have the ability to achieve economic growth and a sustainable environment at the same time. Indeed, one supports the other. Delhi, for instance, has pioneered the use of CNG as a fuel source for all public transport vehicles and its air quality has improved significantly without any impact on growth. Energy efficiency leads to lower costs for business; new market opportunities arise as consumers demand more environment-friendly products. The world market for environmental services has been estimated at $515 billion and it is growing rapidly. British Petroleum has shown that promoting energy efficiency within a business can add to the bottom line—over $650 million to date—while over the past 5 years, Dupont has reduced its global energy consumption by 7%, reduced its emissions by 70%, and saved some $2 billion.90

At the city level, much can be achieved through the adoption of market mechanisms. Markets are essential because, through prices, they enable consumers to decide rationally. By enabling markets, desired outcomes can be achieved efficiently with minimal cost of regulation. Polluter-pays concepts and emission trading are examples. A cohesive strategy is needed, one that is shared by all. Success is achieved when the strategy involves financial incentives and disincentives that adopt market principles. Political consensus is also necessary because achieving sustainable development is a long-term process. The impact of decisions made today will last beyond the life of any one mayor or city administration.

**Solving a region’s environmental troubles . . .**

Some progress has been made. Many cities in Asia have increased their air quality management capabilities. This is often limited to primary cities, however, with the exception of the PRC and Thailand that increasingly are installing...
capacities in secondary urban centers. Most Asian countries now have road maps in place that will result in cleaner tailpipes and an overall reduction in emissions from road transport for most pollutants. But similar reductions are not yet foreseen for GHG emissions. This mixed bag is evident across all pollution sources. And it is not enough.

Environmental problems need to be tackled at three levels:

- Global and international concerns such as climate change, GHG effects, and energy prices. These cover: air quality issues like the cross-border haze that is driven by city demand; water quality and quantity, as in the Singapore–Malaysia water issue; water pollution across boundaries that causes fish stock depletion; and greenhouse effects.
- National concerns, such as economic competitiveness, conversion of farmland, and protection of natural areas.
- Local concerns that affect the quality of life, including congestion, pollution, accidents, and health.

Appropriate incentives for action and frameworks that enable such actions need to be in place at each level. Much depends upon city form and car use.

Global, National, and Local Concerns

<table>
<thead>
<tr>
<th>Global Concerns</th>
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</thead>
<tbody>
<tr>
<td>Climate change—GHG effects</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>National concerns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial liabilities</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Economic competitiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farmland conversion</td>
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<tr>
<td>Protection of natural areas</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Local concerns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Civilized quality of life</td>
</tr>
<tr>
<td>Congestion, pollution, accidents</td>
</tr>
<tr>
<td>Poverty alleviation</td>
</tr>
</tbody>
</table>

. . . and action at city level too

Legislation is largely in place to improve city environments but it is rarely enforced consistently and, effectively. Planning for the future form of a city, including its spatial growth, is largely nonexistent. Among other things, this leads to poor management of movement and severe problems on the urban fringe. Incentives are not in place for people and business to use energy more efficiently. Some governments in the West make notional gestures toward the use of economic instruments but most are more revenue-driven than genuine efforts to employ taxation to encourage a reduction of energy use. And as cities begin to swim in seas of waste, there exist no clear incentives to build the required environmental infrastructure.

The core problems are a lack of international incentives for action to preserve global public goods, and a lack of capacity in, and funding for, management entities at the local level. Many problems clearly stem from a lack of political will. But the rise in pollution and sea levels puts trillions in economic output and hundreds of millions of people at risk. Action must be taken now. The cost of more delay will be too great.
Chapter 4
Opportunity, Culture, and Innovation
Cities have been a focus for innovation and culture, but unthinking development is alienating the poor, driving away innovators, and destroying cultural heritage.

Cities are people—in all their diversity
We often think of cities in terms of buildings, roads, parks and other physical assets. Zoning and congestion come to mind. So do financial markets and retail centers. But a city’s most important asset—and its reason for being—are its inhabitants. Cities are made by their people and it is often the diversity of their inhabitants that gives cities their distinctive characters. Some people have lived in cities for years; others are recent migrants. There are different ethnic and religious groups. The diversity of urban societies presents them with a great variety of challenges and opportunities. Understanding the needs and priorities of people, and the social context, is essential to social development. Understanding four key areas of society is crucial for urban management. They are poverty, shelter, culture, and innovation, and they overlap and influence each other in sometimes surprising ways.

Cities have high disparities in incomes

Poverty persists despite productivity-boosted incomes
Economic theory based on a simple equilibrium model hypothesizes that different individual cities will grow to a size where the economic efficiency of all cities is the same. Cities with large productivity advantages because of location or the agglomeration of industries will have the largest populations and the highest nominal wages and land and property prices. Those with less advantage will grow more slowly. Their populations, land prices, nominal wages, and average worker productivity will end up lower. Within cities, however, there will be disparity. Migration to cities increases productivity in the national economy and allows rural incomes to rise, but it also can depress urban wages. Because of these market forces, a key feature of urban societies in Asia is the striking variation in levels of wealth. Visitors to cities as dynamic as Mumbai are appalled by the extent of poverty and the desperate plight of the poor, which is often juxtaposed with glitzy modern buildings.

The New Poor
When economies change—often abruptly—jobs can demand higher levels of education, favoring the people with the appropriate training and skills. Those who cannot compete often find their assets at risk also. Some must sell their houses and other possessions because of economic difficulties. These people can become “the new poor,” facing new insecurity and vulnerability during economic change. Many who lack the skills needed by the new economy find themselves competing for lower-paying employment in a much reduced, more competitive job market. Past examples of this phenomenon include some white middle-class South Africans after the change to majority rule, and many in the early days of the transition economies of Eastern Europe and the former Soviet Union.

Source: Adapted from UN Habitat reports.

What is poverty? Who are the poor?
The table below shows rural and urban poverty levels in a number of countries. In general, urban poverty, even adjusted for differences in cost of living, is lower than rural poverty. This fact can be deceptive, however, because the urban poor are more vulnerable to shocks. There is no nearby farm to provide food. Everything must be paid for. The two most widely used measures of poverty are based on income. They define a poverty line by a minimum level of income needed to satisfy basic needs. A popular measure of global poverty is the percentage of people living on less than $1 a day. Again, this is, by definition, a lower percentage in urban areas where all incomes are monetized.

Urban and Rural Poverty

<table>
<thead>
<tr>
<th>Country</th>
<th>Population in poverty (%) (National Poverty Line)</th>
<th>Year data collected</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Urban</td>
</tr>
<tr>
<td>Mongolia</td>
<td>35.6</td>
<td>39.4</td>
</tr>
<tr>
<td>Indonesia</td>
<td>18.2</td>
<td>14.5</td>
</tr>
<tr>
<td>Malaysia</td>
<td>7.5</td>
<td>3.4</td>
</tr>
<tr>
<td>Myanmar</td>
<td>26.6</td>
<td>20.7</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>49.8</td>
<td>36.6</td>
</tr>
<tr>
<td>India</td>
<td>26.1</td>
<td>23.6</td>
</tr>
<tr>
<td>Nepal</td>
<td>30.9</td>
<td>10.0</td>
</tr>
<tr>
<td>Pakistan</td>
<td>32.6</td>
<td>25.9</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>22.7</td>
<td>7.9</td>
</tr>
</tbody>
</table>

Profiling the region’s poor

The urban poor comprise a vast mix of people with very different personal histories. Some urban slums are mature settlements that have existed for 20 or 30 years. Others are far less established and are often inhabited by recent migrants to the city—people who have left their rural homes hoping for a better life. It is widely recognized now that poverty has many dimensions and, to capture its true meaning, it must be measured with a variety of indicators.

About 70% or 800 million of the world’s poor live in Asia. Between 240 and 260 million of them or 33% live in urban areas.91 Studies show that while the proportion of poor urban households has been falling in most countries, the numbers remain high. In 2004, about 150 million urban poor were estimated to be in the developing member countries (DMCs) of ADB, excluding the Pacific Islands.92 The greatest single group of the urban poor live in India, which accounts for half of the total. Bangladesh, Indonesia, Pakistan, People’s Republic of China (PRC), and Philippines are each home to more than 10 million impoverished city dwellers.

Many of Asia’s urban poor live in informal settlements in both built-up and periurban areas—squalid, high-density slums. Most residents work in the informal economy and low income, generally because of a lack of access to full employment, is a major problem. They generally live under conditions of extreme deprivation and degradation and suffer social exclusion in many ways. Despite appalling housing conditions, they often face eviction.

The absence of affordable, adequate housing highlights the exclusion of the urban poor, as does insecurity of tenure. But they also lack such basic infrastructure as water supply and sanitation. Many suffer from poor access to education and health services, and have inadequate social protection.93 Simple poverty measurements do not reflect this lack of access, or the vulnerability of the urban poor to health or economic shocks that often send whole households spiraling into even deeper poverty. This vulnerability is closely related to asset ownership—assets such as human capital, including health, education, and training and skills, as well as productive assets, especially housing, and social capital, including social networks and the connections among individuals. The more assets people have, the less vulnerable they are. Any reduction in these assets increases a person’s or family’s insecurity.94

91 Deolalikar, Anil B., and Ernesto M. Pernia, eds. 2003. Poverty Growth and Institutions in Developing Asia. Manila: ADB.


The slum population of Asia, excluding the former Soviet Union (FSU), which was about 398 million in 1990, had grown to an estimated 551 million in 2005. Although this increase, there was a decline in the proportion of the urban population living in slums—from 49% in 1990 to 42% in 2005. Projections are that, if nothing changes, the population of these slums will grow by an average 110 million people a year, reaching 692 million by 2015. The PRC and India together represent some 66% of Asia’s slum population, numbering 196 million and 170 million, respectively, in 2005. Next come Pakistan with 40 million, Bangladesh with 36 million, and the Philippines and Indonesia, with 22 million each. Bangladesh has the highest percentage of its urban population living in slums at 95%. Nepal (77%) follows, Cambodia (74%), Pakistan (71%), Lao People’s Democratic Republic (Lao PDR) (66%), Mongolia (64%), and India (54%).

In most cities, it is difficult for the poor to own or rent with guaranteed security since most are squatting on the land they occupy and are often threatened with and subject to eviction. Meeting the high standards of city zoning and building regulations is often unaffordable for the poor, while high transfer taxes and fees and complicated registration procedures make it expensive for them to register property. But slums are being upgraded in many cities through programs that produce remarkable transformations once secure tenure has been granted to neighborhoods and individuals. When this occurs, commerce and business also improve and active rental markets are stimulated. These programs, however, operate on only a limited scale and, unless they are expanded significantly, the trends reflected in the figures above mean slums will remain a depressing feature of Asian cities.

Poverty, inequality, and growth
While a positive relationship between growth and poverty reduction is widely acknowledged, the relationship between poverty and inequality is less certain. Higher growth has been accompanied by falling inequality in some cases and by rising inequality in others. Recent research shows that the gap between rich and poor must be narrowed to make growth and poverty reduction effective. Several researchers have found that a growth in income levels in low-inequality countries leads to a greater decline in poverty than a similar rate of growth in highly unequal societies. Low initial inequality could also have an indirect effect on poverty because high levels of asset and income inequality may impede growth. But the relationship between growth and distributional change remains uncertain.

Some recent data suggests that high levels of growth do tend to increase inequality. Thus, in Viet Nam, the Gini coefficient—which measures the degree of inequality in a given society’s distribution of income—increased by 2.3% annually during the fast-growth years between 1993 and 2002. In the PRC, it was up by 2.0% a year between 1990 and 2001.

Comparing the Gini coefficient with the Human Development Index (HDI) that includes more comprehensive measures of poverty than income alone, shows a similar relationship between inequality and poverty. As shown in the table on the following page, some of Asia’s more wealthy countries also have a high degree of inequality. For example, Singapore has a high HDI of 0.907, but its Gini coefficient is similar to that of Cambodia and Sri Lanka, which have much lower HDIs. This suggests that the impact of inequality on poverty reduction depends very much on the stage of development. At low levels of development and, perhaps, of integration into the global economy, inequality can be a constraint to poverty reduction but at higher levels of development, inequality is—to be expected—is not linked to absolute poverty.

As economies move from agriculture to manufacturing and then to higher value-added goods, the businesses and people that drive economic growth often create large amounts of personal wealth, thereby contributing in both developed and developing cities to a characteristic large gap between rich and poor. Very large inequities also exist in developed economies but are a problem wherever they are only when the inequality keeps people in poverty. Inequality can, of course, lead to other problems, including rising social instability and potential for conflict. In urban areas in...
### Inequality and Human Development

<table>
<thead>
<tr>
<th>Country</th>
<th>Gini coefficient (year)</th>
<th>Human development index, 2003</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>East Asia</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>China, People's Republic of</td>
<td>0.447 (2001)</td>
<td>0.755</td>
</tr>
<tr>
<td>Hong Kong, China</td>
<td>0.434 (1996)</td>
<td>0.916</td>
</tr>
<tr>
<td>Korea, Republic of</td>
<td>0.306 (2003)</td>
<td>0.901</td>
</tr>
<tr>
<td>Mongolia</td>
<td>0.303 (1998)</td>
<td>0.679</td>
</tr>
<tr>
<td><strong>Southeast Asia</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cambodia</td>
<td>0.450 (1999)</td>
<td>0.571</td>
</tr>
<tr>
<td>Indonesia</td>
<td>0.343 (2002)</td>
<td>0.697</td>
</tr>
<tr>
<td>Lao People's Democratic Republic</td>
<td>0.347 (2002)</td>
<td>0.545</td>
</tr>
<tr>
<td>Malaysia</td>
<td>0.443 (1999)</td>
<td>0.796</td>
</tr>
<tr>
<td>Philippines</td>
<td>0.461 (2000)</td>
<td>0.758</td>
</tr>
<tr>
<td>Singapore</td>
<td>0.425 (1998)</td>
<td>0.907</td>
</tr>
<tr>
<td>Thailand</td>
<td>0.420 (2002)</td>
<td>0.778</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>0.370 (2002)</td>
<td>0.704</td>
</tr>
<tr>
<td><strong>South Asia</strong></td>
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<td></td>
</tr>
<tr>
<td>Bangladesh</td>
<td>0.318 (2000)</td>
<td>0.520</td>
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<tr>
<td>Bhutan</td>
<td>0.341 (2000)</td>
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<td>India</td>
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<td>Nepal</td>
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<td>Pakistan</td>
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<tr>
<td>Sri Lanka</td>
<td>0.420 (2003)</td>
<td>0.751</td>
</tr>
</tbody>
</table>


France, for example, poverty and social exclusion faced by young people from immigrant families was considered a contributing factor to violent street conflict in 2005.

**Discrimination worsens the plight of have-nots**

The difficulties of poverty are made worse for some groups of the poor because they experience what is now termed “social exclusion.” The Department for International Development (DFID) of the United Kingdom (UK) offers the following definition: Social exclusion describes a process by which certain groups are systematically disadvantaged because they are discriminated against on the basis of their ethnicity, race, religion, sexual orientation, caste, descent, gender, age, disability, HIV status, migrant status or where they live. Discrimination occurs in public institutions such as the legal system or education and health services, as well as social institutions like the household.

The processes by which people are excluded include institutionalized behavior that reinforces and perpetuates social attitudes and values. These behavior patterns can be both formal and informal. Exclusion may be rooted in deeply entrenched societal traditions, as in India, for example, where social exclusion is often based on the caste system. It can also be related to geographical location. An ADB report on the Millennium Development Goals (MDGs) cites the case of the Lao PDR where most of the 1.9 million people who live below the poverty line belong to an ethnic minority group and where, despite economic growth, increasing inequality is exacerbating poverty. Social exclusion not only can cause poverty but it also locks people into poverty and out of opportunities to escape and overcome it. Social exclusion denies people the chance to increase their income. It can bring about situations of social and political insecurity. Marginalized people who suffer from multiple disadvantages may group together to protest against their treatment. Over time, this can lead to violent conflict.

Social exclusion encompasses the norms, societal processes, and institutional arrangements that inhibit certain groups from full participation in the social, economic, cultural, and political life of societies. Exclusion operates at levels of human interaction. At the household level, it can include the differential allocation of food and education among household members. It often involves discrimination within communities based on social status and through differential access to basic services. It can be part of national cultural practices and state policies, which reinforce the power of some to the disadvantage of other specific groups.

Different groups experience social exclusion in different ways. For rural people, it centers on land issues, environmental degradation, and isolation from services. For the urban poor, exclusion means slum environments, insecure residential tenure, and the constant threat of eviction to distant relocation sites and the forced separation from existing sources of employment and income. Poor women worry about their inability to feed, clothe, or educate their children, their limited or nonexistent opportunities for earning income, their exclusion from decision making, and violent behavior from abusive husbands. There are similarly complex lists of disadvantages and indignities for the many other groups among the excluded, including children, indigenous peoples, the differently abled, the elderly, and other disadvantaged groups.

**An age-old struggle**

Despite their poverty, or perhaps because of it, poor people remain remarkably creative and resilient. The evidence is in the many ways they cope. They reduce their modest expenditures.
They sell or rent out their meager assets. They increase their work activities and borrow money, food, and other necessities. They migrate, seeking better lives within or outside their country. These efforts at survival and mere subsistence often take a toll on society’s most vulnerable groups. Young children can become more malnourished, risking permanent disability, or even death. Children, women, and the elderly become sick more often but cannot afford health care. Young girls and boys drop out of school to find full-time work to help their families. Adolescents are sold to prostitution or pornography rings, while desperate young adults try to make ends meet through theft or the drug trade. The natural environment of Asia is also affected as destitute people move into the uplands to harvest trees for firewood, overuse other natural resources, or engage in the illicit fishing that destroys coral reefs and mangrove forests in coastal areas.

**Cohesive societies are necessary for development**

The prosperity of a family is ultimately determined by its ability to accumulate assets. These include physical assets like housing, human assets such as education and good health, social capital such as supportive community networks, and financial assets. The opportunity to accumulate these assets varies among households by income group, location, ethnicity, and other factors. When these disparities become wide, social tensions build and development is threatened. Thus, poverty, a shorthand for unacceptable levels of disparity, is central to the discussion on urban management, both at national and local levels. At least as much or perhaps more importance should be given to disparities in the opportunity to build assets, to progress. Thus the poor, even in rich societies such as the United States (US) where inequality could be reduced but where it is perceived that there is equality of opportunity. The alienation that results from this lack of opportunity, and from a lack of social context, grows and can threaten stability. Managing such issues requires a multifaceted approach that helps low-income groups acquire such assets as housing, education, and access to health care, but does not neglect the social supports and cultural context that provide a bulwark against alienation. Going beyond immediate problems to foster an innovative society is also important for encouraging development in cities.

**Why the poor stay poor**

A joint study by the World Bank and DFID in Indonesia highlights a number of reasons that poor people often remain poor. It cites that poor people often lack confidence in government policies and programs. This is partly because of a lack of transparency and information sharing. This “information poverty” keeps the poor powerless to improve their lot. Land security and tenure affect the poor in urban areas where rapid social and economic changes put people at risk of losing their homes. Another cause—and outcome—of poverty is exploitation, particularly by business and those who control the means of production. Although pro-poor growth is seen as a mechanism that can lead people out of poverty, care is needed in formulating policy intervention.

A number of key cause–effect factors perpetuate poverty: lack of economic growth, lack of support systems and

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97 Footnote 94.
98 The approach taken in this paper is deliberately different from a fixed-income level, for example $1 per day per person, which is useful for many purposes, including cross-country comparisons, but is not much use in actual management of cities where relative poverty is the driving political force.

100 Pro-poor means the engagement of poor communities in eliminating their poverty through sustainable development.
social protection for the poor, their lack of access to goods and services, their lack of information, and their social exclusion. While it is now widely appreciated that economic growth is the most effective way to reduce poverty, addressing the nonincome dimensions of poverty is also recognized to increase the impact of growth in achieving this goal. Social exclusion is one area that has been given particular prominence in the last few years as a means of understanding the causes of poverty and providing insights into ways to address it.

Asia’s urban communities have high disparities in incomes and these disparities exacerbate the effects of globalization. The highly skilled attract international level wages at the same time that low-skilled workers face intense downward pressure on wages because of competition from potential migrants and the reserved underemployed in other countries. Diverse, sometimes antagonistic and, more often, ghettoized communities of migrants do not feel the need to integrate into a universal urban ethic. There is less choice and mobility both in employment type and housing location than would be imagined from the opportunities existing in the city.

Hope for communities that innovate, organize
But using this diverse mix as a catalyst for social, economic, and cultural development can also give the poor the potential for upward income mobility and asset accumulation. To achieve this, urban managers must explicitly address social development. Social development is much more than poverty reduction. The issues of access and equity are primary and culture and community cohesion are also important, as well as encouraging openness and innovation that is essential in a globalized economy.

Without intervention, poor neighborhoods will multiply and become larger. In these diverse, clustered communities, people live in overcrowded and sometimes ethnically segregated neighborhoods that represent extensive pockets of poverty. These poor but generally vibrant communities play an essential role in the economy and form of a city. But those who live in them require better access to social services, utilities, and other economic opportunities, including finance.

Shelter
Shelter, that is, the house and the neighborhood environment where we live, is a large issue which affects not only the poor. But it is the poor who are marginalized in the housing market and who live in neighborhoods without adequate services. This has direct and indirect consequences, for public health, for example, and in its adverse impacts on the environment. But housing is a subsector of the wider urban land markets and needs to be treated as a separate issue.

Obstacles to solving housing problems
Houses and plots that the poor can afford are rarely available, largely because neither the government nor the private sector develops units at these prices. Even where such units exist, the lack of mortgage finance means that most poor households, which have insufficient savings to purchase outright, are unable to buy. Many governments in the 1960s set up national housing authorities to provide low-income housing, including the national housing authorities in the Philippines and Thailand, and Perumnas in Indonesia. Others have worked through local government, or the city development authorities in India and Pakistan. But most of these agencies either built unaffordable units or allocated them, below cost, to a select few. Substantial areas of land were developed for such housing in many South Asian cities. In some places, Karachi for instance, much of the land remains unoccupied. Attempts at sites and services development—often supported by international development assistance—were successful, but the scale of development was too small relative to demand to make a difference. Without major changes in land management practice, housing finance, and housing delivery systems, the considerable housing backlogs of most Asian cities will continue to increase and lead to further overcrowding and the growth of more informal settlements. These settlements are often on vacant land that is unsuitable and unsafe for housing—alongside railway tracks and on steep slopes or river banks, for instance, and even on garbage dumps.

Attempts have been made to reform the housing finance markets of Asian countries to encourage more lending to
the urban poor. But their irregular incomes and limited affordability have meant little interest has been shown by the formal banking sector.

Governments have intervened through instruments such as subsidized interest rate mortgages that have distorted finance markets. Current actions aimed at enabling financial institutions to address this market have brought modest improvements and recent initiatives to involve microfinance institutions are leading the way in innovation. Although successful locally, however, such programs need to be scaled up significantly to make real inroads into serious housing shortages that face the residents of all of Asia’s cities, from the smallest to the largest.

**Importance of secure housing**

In addition to the poor themselves, a large number of people living only slightly above absolute poverty lines are vulnerable to change and events that might reduce them to poverty.  

ADB defines this vulnerability as “the exposure of people to short- and long-term risks and their capacity to absorb or protect themselves from these risks, including life-cycle risks such as illness, injury, and disability; and economic risks, including unemployment.” Their poor asset base is, of course, one main factor affecting peoples’ ability to withstand risks and improve their livelihoods. Housing, including security of tenure, is one of the most important elements in a family’s asset base. When households have a fall in income because of life-cycle and economic risks, they have a much reduced ability to withstand the event without security of tenure. In some cases, they will end up homeless and in poverty.

In Indonesia, the increase in poverty that followed the 1997 Asian financial crisis has abated but a large number of people still live in a situation of vulnerability. The difference between the figures for people living on less than $1 a day and less than $2 a day provides an indication of the number of people vulnerable to falling into absolute poverty. According to the 2005 World Development Index that is published by the World Bank, the percentages of population in Indonesia living below the first threshold in 2002 was 7.5%, and below the second, 52.4%.

**Cities are a cultural nexus**

Sustainable cities need to be attractive places within which to live. They require a dynamic and evolving culture and should be welcoming and prosperous. They need to enhance their special identities with restaurants and cafés, shops, markets, public places, buildings, and streets that reflect the best of the locality and region, rather than adopt bland global brands. Too often, the old identity is abandoned in favor of the new, where historic buildings are destroyed for modern shopping malls.

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Cities are where migrants from diverse backgrounds and cultures settle. They bring with them their music, language, architecture, art and literature, creating a unique identity for a city that, in turn, draws in more people from afar. This results in multicultural cities that encourage innovation and creativity, but can also result in tensions between ethnic groups. Cities with dynamic and active cultural environments have global competitive advantages. From 1870 to 1918, for example, Vienna, which gathered creative individuals from all over the Austro-Hungarian Empire, was a unique cultural nexus that fostered intellectual and cultural innovations in philosophy, music, architecture, painting, and literature. Such an identity adds to a city’s attraction. The advantages exploited by Liverpool and London during the “swinging 1960s” are evidence of this.

**Culture, heritage, leisure, and lifestyle**

Political empowerment alone will not foster a vibrant city. People need a sense of belonging; in cities, this is generated in large part by the built and cultural environment, particularly when they have historic significance. Conserving and renovating urban heritage has three aspects:

- **Cultural.** Urban heritage represents the history and cultural development of a city. It belongs to the people and is a source of inspiration for contemporary culture. Each city’s cultural heritage makes it unique.
- **Social.** Physical interventions, such as restoration projects, improve the quality of life. Restoration of heritage creates jobs and increases the income of the inhabitants. Participating in the improvement of urban culture engenders a sense of belonging and encourages people to improve their properties and remain in the historic city.
- **Economic.** Urban cultural heritage is an economic asset that should be capitalized on as part of a city development plan. A well-preserved historic city attracts investors and tourists, generates employment, and contributes to overall economic growth. The renovation process itself generates employment.

**Saving urban heritage as public policy**

Successful projects aimed at preserving and renovating urban heritage and culture have been numerous. Some are shown in the accompanying box. Others, like those undertaken by Sana, Antwerp, Singapore, Amsterdam, and London, are well known. Renovated urban areas generate large amounts of income for the building and tourist industry. Melaka, for example, attracts

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**Successful Exploitation of Heritage**

**Lille, France**

In the early 1990s, Lille was an ugly, dirty city, unattractive to tourists and investors. The French city had high unemployment because of a declining industry and a neglected Dutch heritage. It is booming today. It became the crossroad of high-speed trains. Local government renovated the existing built heritage. Result: a city visited by millions of tourists, an art city, a fashion city, a service city, and the cultural capital of Europe in 2004. By train, it is 1 hour and 40 minutes to London, 2 hours to Amsterdam, and 1 hour to Paris.

**Melaka, Malaysia**

Melaka is a small town with interesting Malay, Chinese, Portuguese, Dutch, and British heritage. The public sector rightly recognized the economic value of the town’s history. A heritage conservation zone was created. Result: over 4 million tourists in 2004, and investments by the private sector in hotels, shops, heritage, and hospitals.

**Elmina Heritage Project, Ghana**

Elmina, the capital of the Gold Coast, has returned to its fishing roots. It has historic monuments such as the St. George Castle, Fort St. Jago, the Dutch cemetery, and Asafo Posts, plus a stunning coastline attracting over 100,000 visitors annually. But visitors spend little time in Elmina and bring little revenue to its people. There are glaring drainage and waste problems. Historic buildings are poorly maintained, the environment is being damaged, and poverty is growing. In April 2002, working groups began to act on these problems after a town consultation. The people of Elmina identified five priority areas with strategic objectives for developing each: waste management and drainage, fishing and the fishing harbor, tourism and local economic development, health, and education. The aim was to revitalize heritage assets to create employment, improve local living conditions, and make Elmina an attractive city. The results so far include creating both direct employment (construction/artisans) and indirect tourism, office, hotel, industry, and retail jobs. This has reversed a brain drain and made the town healthier and cleaner. Ownership is linked to the participatory process and collective local actions have been stimulated.

4 million tourists per year, while Antwerp generates 25% of its income from tourism. Preserving urban heritage is one of the highest job-generating economic development options available, usually creating more jobs than would result from the same investment in manufacturing. Preserving heritage also has significant economic impacts that continue beyond completion of the project itself. Experience shows that preserving heritage and revitalizing historic areas can be an engine for economic growth. Very often, the government starts the process and establishes the strategy for renewal. This includes creating conditions for the private sector to step in. In many cases, including the examples mentioned above, the initial investment by the national government and/or the donor community has been a catalyst for much larger investment by the private sector. Investment in revitalizing heritage pays off.

**For future growth, cities need innovation**

**The global context**

Ever-changing technology, especially in communications, data transfer, and knowledge, will be crucial in determining the future of cities. The impact of technology on land use and urban regional development will be significant, including that of information and communication technologies and new transport modes. Much will also depend on the location of high-technology companies. The spatial impacts relate to future city growth, the design of business parks, and the emergence of techno-clusters.

Innovation refers to the process of commercializing new knowledge in a product, process, or organizational innovation. Innovation can be described as a knowledge-transfer and realization process. It has been recently argued that some regions are better equipped for innovation than others. The table below shows the characteristics of regions where overall innovation potential can be categorized as weak or strong.

**Business-power innovation**

In developed countries and in emerging economies such as the Republic of Korea; Singapore; and Taipei, China, firms are among the main drivers of new ideas and learning through systematic, long-term, large-scale investments in research and development that add to global knowledge. They have become a major source of competitiveness and profitability. Intra-regional knowledge flows are small but building fast.

### Regional Innovation System Potentials

<table>
<thead>
<tr>
<th>Infrastructure level</th>
<th>Strong Potential</th>
<th>Weak Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Autonomous taxing and spending, Regionalized private finance, Strategic infrastructure competence, and Embedded universities/R&amp;D laboratories.</td>
<td>Decentralized spending or taxation, National private finance, Few infrastructure competencies, and Disembedded universities/R&amp;D laboratories.</td>
</tr>
<tr>
<td>Organizational level: Firms</td>
<td>Workplace cooperation, Externalization, and Innovation.</td>
<td>Workplace antagonism, Internalization, and Adaptation.</td>
</tr>
</tbody>
</table>


103 Tacit knowledge is held by people, but some can be converted and made accessible to others through medium of documentation, presentations, training, among others; this is called explicit knowledge.


Footnote 75.
A small number of emerging economies—including Hong Kong, China; the Republic of Korea; and Taipei, China—are producing new knowledge at or near the frontiers of global technology. As with trade in goods, the flow of ideas is often higher between neighbors. This impacts cities. Firms locate in centers of innovation so they can in turn enhance their competitiveness. It is this linkage between cities and innovation that we now examine in more depth.

**Innovation and city growth**

Over the last two decades, there has been a plethora of literature dealing with globalization and the new global economy. The global economy is a highly urbanized phenomenon and geographically selective. The 1994 Joint Organisation for Economic Co-operation and Development (OECD)/Australian Government conference, Cities and the New Global Economy, highlighted the importance of the linkage between the rapid economic growth and urbanization occurring in cities of Asia and the Pacific.

**Metropoles, but no self-generating technopoles**

It is asserted that a crucial force in globalization is the increasing importance of the “knowledge structures” or “expert systems” in production. These knowledge structures influence production processes on a scale not previously known and are facilitated through strategic alliances and networks developed by corporations, business, professional groups, institutions, organizations, and community movements. What this actually means, in terms of economic policy analysis, is less clear. A reactive policy based on initial observation of clusters of high-tech industry has been the drive to create “technopoles” of a variety of policy initiatives. Many attempts to generate technopoles have failed to achieve the “innovative milieu” necessary to drive the synergy between different firms and research and development (R&D) institutions that allows a technopole to achieve self-generating development. Some old metropoles retain their leading role as centers of high technology firms and research (Paris and Tokyo). Newer metropoles have also developed as centers of high-technology production (Los Angeles and Munich).

What then are the factors influencing success or failure in innovation?

**The right environment for innovation**

The concept of “linkage” appears important. Good physical infrastructure is one element—such as computers or fiber optic cables—but the essential characteristic is that the urban milieu encourages new and more efficient ways to combine inputs and resources. This is to reduce transaction costs and increase productivity. Thus, smart infrastructure will include business networks that help spread productivity enhancing technology and lobby for improved physical infrastructure; venture capital that lowers the finance costs; local quality of life, which increases the productivity of human resources; and R&D networks that produce productivity enhancing technology. Institutions, both public and private, are crucial smart infrastructure for facilitating an innovative milieu. The institutions involved include business networks, venture capital pools, consortia, and professional support organizations. Regulatory and government-support environments need to facilitate enlightened but quality-oriented planning and development controls, business incubators, technical support programs, competitive taxation arrangements, intellectual property protection, maintenance of quality indicators, and advanced transportation and telecommunications systems access. All these measures either increase productivity and throughput or reduce transaction costs.

**Think further than facilities and systems**

The OECD report on Competitive Cities stressed the importance of what were called relational assets or local collective goods in the success of cities. These include transportation and other public infrastructure. But they also involve the building of links between universities and science-based industries and the strengthening of relationships between firms and suppliers, including small production. But most successful examples have emerged because of synergistic collaboration bridging the private and public sectors. They include industrial complexes of high technology firms that eventuated in the absence of deliberate planning, although government and universities had a significant role in their development such as Silicon Valley in California and Boston’s Route 128 and “science cities” or scientific research complexes that are spatially separated from manufacturing, Tsukuba in Japan and Taekook in the Republic of Korea are examples.


The term “technopole” is used to describe deliberate attempts to plan and promote, within one location, technically innovative, industrial-related
businesses. It is not just science. The entire range of creative capabilities in the arts, education, and the broad range of service industries must be tapped. A vibrant city is one that has a high rate of new business creation.

How cities manage their space and improve livability also matters—all the more so because they can serve as tools to attract and retain talented people. Good schools, safe streets, a high-quality cultural life, and abundant green spaces, including public parks, all matter. Mixed-use planning is important to ensure that residential, commercial, retail, and institutional activities, such as schools and hospitals, are all within easy distance of one another. Cities must provide public transportation and adopt other measures such as road-pricing or congestion charges to discourage automotive use where it is not needed. The OECD report also found that it was critical to deal with issues of social equity. Cities can become sharply divided between rich and poor, or lose their middle class. It is important to address social exclusion, or face the risk of a widening gap between the bottom and the top that can lead to increased crime, drug use, and other threats. Access to affordable housing invariably appears as an important element of social cohesion. Finally, cities face significant environmental challenges related to clean air, water, waste management, toxic wastes, and inefficient use of energy. Most environmental challenges our planet faces are found in our cities. Cities that neglect their environmental challenges will lose talented people and businesses.

The table above shows various types of infrastructure linked to the production elements and objectives already identified.

### NGOs and CBOs: Doors to Civil Society

Community engagement is important to gain an understanding of the needs of the different sections of society and enable institutions to deliver services more effectively. In developing mechanisms to engage civil society, it must be recognized that it is represented in a number of different forms, including nongovernment organizations (NGOs), community-based organizations (CBOs), and individuals.

The formal representative groups of civil society comprise the operational and advocacy NGOs. The former deliver development or welfare services, while the latter work toward influencing the policies and practices of governments, development institutions, and others in the development arena. Much importance has been placed on involving NGOs to access civil society and design more appropriate programs of assistance. This has met with more success in some places.
than in others. Within Asia, the capacities of NGOs vary widely from city to city. Metro Manila, for example, has a wide range of very well-respected operational NGOs and these have been highly useful in reaching out to different parts of the community and in creating links between the private and public sectors. Bangladesh is also well known for its NGOs, which have been active in areas ranging from providing microcredit to health care. Many NGOs—the Grameen Bank, for example—are targeted at poor women. In countries such as Indonesia, the NGO sector is far less developed and tends to be dominated by advocacy NGOs. In urban areas outside Jakarta, the skill levels of NGOs are often very limited. In creating mechanisms for community participation, NGOs can play a significant role but they are representative groups and do not always reflect the interests or views of a cross section of society. Many have focused and narrow agendas that can overshadow the needs of groups that are less well represented. Strategies of engagement then need to be tailored to both the orientation and the capacity of community groups. Effective engagement may entail having to upgrade the capacity of NGOs and CBOs.

Local communities have their own CBOs which include youth groups, religious groups, women's groups, and specific groups developed for particular activities. In urban areas, CBOs are particularly common in informal settlements. Here, the lack of formal basic service provision and people's low-wealth status means that CBOs, unlike NGOs, are almost always set up and run by the people from within the community. CBOs help in establishing self-help operations for providing basic services and are a way for people to create such systems that can improve their livelihoods. Often, these are based around local groups. In the more wealthy neighborhoods, people tend to lead more individual lives and leave an area if they are dissatisfied with it. Many are members of CBOs such as parents-teachers associations, sports clubs, and residences groups, and these can be a useful way to link with them. Religious associations present a medium through which to gain access to a wide spectrum of people, but care should be taken to ensure all stakeholder groups, especially females, are included if such intermediaries are to be a primary form of engagement.

While community activity can be more powerful when organized through group action, there is often no substitute for direct contact with the people. This is particularly important for reaching the poorest in society, who may not be well represented by either the CBOs or NGOs. The participation of all sections of the community in analysis and decision making has been a common objective of many projects but real participation is difficult to achieve.

**The role of often contentious NGOs**

Civil society organizations and NGOs in particular work extensively with poor people to help improve their economic, political, and social well-being. When the state is weak or virtually absent and chronic poverty affects large numbers of people, or when severe shocks deplete traditional safety nets, NGOs strengthen poor people’s ability to meet their daily needs and enhance their capacities through education, training, organizing, and advocacy. These forms of empowerment expand poor people’s demand and decision-making opportunities. They may also lead to a reorganization of institutional and power relationships that may enable disadvantaged groups to gain greater access to society’s resources. NGO networks, made up largely of an active middle-class citizenry, have mobilized fellow civil society organizations to advocate and develop new paradigms for society that are more favorable to the poor. These attempts to reorient government and its institutions have had varying degrees of success in Asia, depending on how well or badly the state has related to NGOs and civil society. More recently, NGOs have also been expanding their mutually supportive relationships with the business sector in line with the latter’s growing interest in corporate philanthropy and local development.

Asian governments have mixed feelings about NGOs. They recognize the capacity of their dedicated and modestly paid professional staff to reach the poor quickly and flexibly with innovations that lead to effective poverty reduction. But many officials regard NGOs as troublesome, carping critics who are largely ignorant of government constraints and procedures. They also complain that even as the NGOs demand exacting transparency and accountability from
government, they themselves tend to avoid transparency and evade accountability. Suspicious officials even accuse some of mobilizing poor groups to destabilize the government and threaten those in authority. Thus, varying patterns of collaboration and conflict play out between NGOs and governments in Asia, with reasonably effective cooperation resulting in some cases and animosity and repression featured in others. Generally, Asian societies acknowledge the important roles NGOs and civil society have played in drawing attention to the poor and powerless, and to the exclusionary systems that must be overcome for people's development and empowerment toward the elimination of poverty.

Many NGOs are now developing strategies that encourage governments to realign their budgets in favor of pro-poor programs. In the process, their earlier dependence on foreign funding is diminishing. NGOs have participated successfully in many development assistance projects, bridging the gap between formal institutions and the community. For example, they have helped the poor plan and carry out community upgrading and relocate from danger zones.

But it is not only NGOs that catalyze significant social change. People's movements in Asia have often forced governments—through violent or nonviolent means—to engage in widespread land and other asset reforms. In the transition economies, mass organizations carry out the remobilizing functions undertaken by NGOs elsewhere. But because these mass organizations operate under government auspices they are not classified as NGOs or civil society groups.

**Getting communities engaged**

Sustainable livelihoods framework and willingness-to-pay surveys are among a number of community participatory mechanisms that have been developed. Many ADB projects are implemented through a community development strategy that attempts to incorporate community participation in the formulation. One mechanism is participatory budgeting through which community representatives and local governments share in setting priorities and planning public expenditure. This is intended to ensure that community needs are well represented. While these mechanisms are useful, their real success depends on the effort put into ensuring that different sections of the community, particularly the more marginalized and excluded groups in society, are able to participate in a meaningful way.

It takes time and skill to facilitate effective participation, especially if difficult-to-reach communities are to be involved. Moreover, different groups have different needs and demands and these often conflict. There is a tendency in such cases for the elite groups to dominate. The ability of the poor to participate in and influence government processes is an area requiring further exploration. Participatory processes are often more effective and easier to implement in rural areas than in urban areas. Urban populations are far more heterogeneous. It is not always easy to get people together to discuss issues, particularly in poor areas where many people work in the informal sector and have different schedules. It may also be more difficult to build consensus.

Nonetheless, there are many communities that have participated in the planning, design, and implementation of

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**Village Area Improvement Program in Vientiane, Lao People's Democratic Republic**

When communities or community groups are allowed to decide on their own development priorities and are given direct funding and technical guidance to implement them, the cost-recovery and sustainability results are quite often remarkable. A village area improvement (VAI) program supported by ADB’s Vientiane urban infrastructure and services project loan proved that this approach can work well in urban settings. VAI covered 50 of Vientiane City’s 100 villages and the Vientiane Urban Development Administration Authority now wishes to expand it to the remaining villages. In the beginning, Vientiane citizens were not convinced that the scheme would work since nothing similar had been tried before. The first phase began with a series of meetings during which Lao Women’s Union members convinced community members to participate. After the first five village projects were completed, they provided a remarkable demonstration impact. VAI provided an average of $80,000 to each village in a joint bank account to be spent on its choice of urban infrastructure and services to be managed by the communities themselves. Most chose roads and/or drainage. Community members contributed 10% of total civil works through labor, land, or cash. They also monitored the quality of the contractors’ works. The demand for participation from the villages that are not yet part of the scheme is so high that they are willing to contribute more than 10% of costs. Community members also contribute to maintenance.

improvement projects in their neighborhoods. Participation can also help communities contribute to implementation, which creates community ownership, and can lower costs, improve quality, and increase customer satisfaction. Involving communities and local business in designing a city’s economic development strategies is vital to promoting city growth. Many of Asia’s cities have tackled the problem of slums, employing a variety of methods. Some have undertaken programs of in situ upgrading of informal settlements, legalizing occupancy and making formal mortgage, housing, and livelihood microfinance available to residents. These innovative, small-scale, community-based projects to deal with land, infrastructure, and housing problems are models that need to be replicated across Asia’s cities.

A social framework for all-embracing development
The need for governments to undertake appropriate redistributional measures, invest in public goods, create an enabling framework for enterprise, and support innovation is clear. Affordable primary, secondary, and tertiary education; health care; and child care are all musts, along with measures to ensure that basic human needs are met through social services and safety nets. It is also important to make efforts to help the poor accumulate private assets through housing, social services such as health and education, and livelihood development.

Investments in social infrastructure need to aim at creating a sustainable society in which every part of government is involved in promoting prosperity for all, providing high-quality service delivery, and giving local people the ability to shape the places they live in and change things that matter to them. People identify some elements of a better life, such as clean streets, local schools, health clinics, or parks, with their neighborhood. For others such as higher education, work, and transport, they look to city government or higher.

As prime generators of economic growth and jobs, urban areas will have a direct impact on two of MDGs (see box above), specifically the eradication of extreme poverty and environmental sustainability, and urban growth will have an indirect impact on the others. Local area development will lead to the achievement of goal 1. The adoption of policies for sustainable urban development is needed to accomplish goal 7. Effective urban management is essential for achieving goals 2, 4, 5, 6, and 8. Clearly, sustainable urban growth is necessary for achieving the MDGs.

Millennium Development Goals (MDGs)

Eight goals to be achieved by 2015 that respond to the world’s main development challenges:

1. Eradicate extreme poverty and hunger.
2. Achieve universal primary education.
3. Promote gender equality and empower women.
4. Reduce child mortality.
5. Improve maternal health.
7. Ensure environmental sustainability.
8. Develop a global partnership for development.

The MDGs are drawn from the actions and targets contained in the Millennium Declaration, adopted by 189 nations and signed by 147 heads of state and governments during the United Nations Millennium Summit in September 2000.
Social foundations for a developed economy, improved environment

Social development involves not only wider measures to be taken at a national level, such as social security reform and health and education policy, but also addresses the local problems of access to and delivery of social services across the city. While social security and health safety nets are a national responsibility, they have critical contact points at the local level—in local health centers, which link people to the national health system, for instance. Social issues are integral to addressing two other aspects of sustainable development and are also impacted by problems in these areas:

- **Environment.** Poor water supply and sanitation are major causes of health problems in many cities but community collaboration is essential to solving many environmental problems.

- **Economic development.** Poor health reduces productivity but unique cultural icons provide social cohesion and enhance social stability, and are a potential basis for tourism investment. An educated, open, and innovative culture is also a more productive one.

Poor communities have undertaken programs of in situ upgrading, legalizing occupancy for informal dwellers, and making available formal mortgage and housing and livelihood microfinance to them. These innovative small-scale community-based projects covering land, infrastructure, and housing are models that need to be replicated citywide.

Social development needs to focus on three aspects. First, it must link local facilities and systems to those of cities and the nation. Second, it must develop local infrastructure—such as schools and health facilities—efficiently and target subsidies on the poor. Third, based on the interdependency of the three elements of sustainable development, it must incorporate social development into investments in environmental and economic infrastructure and in projects that support the preservation of cultural heritage and promote innovation. The third is a new approach and it could produce significant advances. At the moment, however, the coordination mechanisms necessary to achieve such integration are lacking and this courts social disruption. It will require time, effort, and commitment to get this right.
Chapter 5
Financial Challenges
Financial management is failing Asia’s cities in several ways:

- Local governments do not collect the taxes they should.
- National governments do not match local government resource transfers to their responsibilities.
- Local capital markets often have private capital in abundance but funds are not invested in infrastructure.

**Infrastructure funding: Investing in sustainable cities**

The previous chapters have examined the state of Asia’s cities from the governance, economic, environmental, and social perspectives. Improving economic, environmental, and social outcomes will depend on the sustainable provision of infrastructure that also fosters sustainability of outcomes. Indeed, many would argue that improving governance outcomes requires investment in “soft” infrastructure, such as e-governance systems to enhance transparency and accountability as well as encourage changes in mind-set. Financing this kind of infrastructure within the context of rapid urban growth, decentralization, and developing capital markets is a challenge. This chapter will examine this challenge and point to some opportunities that are now available or beginning to emerge in the region.

**Who finances city infrastructure—and who should?**

Taxpayers and consumers ultimately finance infrastructure through user charges. Private sector communities and government, sometimes through official development funding as loans or grants, provide development finance. Its provision is often mandated to specific levels of government by law. For a long time after the Second World War, most governments delivered public utilities through state-owned enterprises. But the results were often disappointing because inefficient public sector monopolies failed to provide the quality and quantity of service needed. In general, these publicly owned utilities neither expanded services sufficiently to meet a growing demand nor provided adequate coverage to poor and rural areas. Fiscal pressure resulting from an inability or unwillingness, both at the local and national levels, to raise taxes and charges to cover investment needs, together with the option of privatization, led governments toward a new paradigm in the 1980s.

The World Bank has shown that most investment in infrastructure has traditionally been funded by the public sector, which accounts for about 70%. The share of private finance has been 20–25% and official development assistance (ODA), 5–10%.

**Changing attitudes to infrastructure investment**

During the latter part of the 1980s, encouraged by governments and funding agencies, private sector investment in infrastructure increased in developing countries. Such
investment in South and East Asia and in the Pacific peaked in 1997 at about $42.4 billion. The total fell dramatically the following year to $12.4 billion because of the Asian financial crisis and has only started to climb again since 2002. In 2005, it stood at $27.2 billion.114 Today, providing infrastructure is the sole responsibility of neither the public nor the private sector. Increasingly, infrastructure is about public–private partnerships, especially in the energy and telecommunications sectors. Commercial banks were the major source of private finance for infrastructure in the 1990s, either directly or through syndicated loans. Since the 1997 crisis, lending costs have increased, mainly because of host-country risk rather than global infrastructure-industry risk.115 The paucity of private infrastructure investment was in part because of a failure to recognize the basic requirements for sustainable private capital flows.

A new focus

The graphs show that the largest private sector investments have been in the energy and telecoms sectors, which from 1990 have accounted for 73.3% of total investment. Transport accounted for 18.7% and water and sanitation some 8.0% of the total. Figures for 2005 show that water and sanitation accounted for only 3.1% of total private investment in infrastructure, while transport represented some 18.4%. Telecommunications was the largest at 51.9%, followed by energy at 26.6%.

Principles of sustainable finance

The principles of structuring finance for providing infrastructure are clear. First, at the project level, the object of such finance should be to minimize the cost (interest, dividends, fees, etc.) while providing incentives for all stakeholders to perform their roles—financing, operation and revenue collection, or regulation, for instance—in an efficient manner for the sustainability of the project. Second,
at the level of the national government, the objective should be to provide the incentives and an environment to enable such financing to communities, local governments, private sectors operators and suppliers, through retail financial institutions (banks), wholesale financial institutions, and the capital markets, and the community.

Such finance should be provided on a sustainable basis—meaning that financiers at minimum must cover their cost of funds, inflation, and administration, and be subject to competition. These principles counter both the use of unsustainable forced subsidies and the exploitation of monopoly positions. The mix of public and/or private, local and/or foreign funds will largely depend on the stage of development of a country’s capital market, but a key objective of using foreign funds should be to support the development of required financing capacity in the local capital markets.

**Experience in funding city infrastructure**

*Traditional financing: Cash, loans, municipal funds, and national grants*

Decentralization means that local governments are expected to take on increased responsibilities for financing infrastructure services. The cash raised by local governments from their own revenue sources is insufficient, and much of the investment has been provided through grant or loan financing from central governments, some with help from international financial institutions. Such funding has often been passed through specialized municipal-fund arrangements, many of which have not performed as envisaged. Furthermore, managing foreign exchange risks associated with international borrowing often has been inadequate, either leaving national or, in some cases, local governments or their enterprises exposed. Exacerbating these difficulties, demand for new and improved infrastructure has continued at an unprecedented rate with rapid urban growth. Unmet financing needs are a major problem. However, many services or unbundled components thereof can and should be fully cost recoverable and have potential for direct private sector involvement in financing, construction, and operation. Such potentials open up new possibilities for infrastructure financing and for greater responsiveness to city needs.

**City responsibility for structuring finance**

Much can be done through more efficient revenue collection and consolidation of systems to fully exploit all potentials. Collecting what is due can often lead to significant increases in revenues and should be supported even on equity grounds. But even these improvements often do not close the funding gap for infrastructure funding, since the revenue increases are small relative to the capital cost required. There can be improvements in the way central transfers are disbursed, but the reality is that funds at national level are also insufficient to provide for all needs of megacities. For cities to raise more funds themselves, additional sources of taxation and/or borrowing are required. The former is seen to be limited unless central governments allow local governments to retain much of what is collected locally. For instance, in countries where value-added tax (VAT) or sales taxes are levied, these funds could be allocated for local governments. Local government borrowing too is limited and often restricted to medium-term loans for projects that have a guaranteed revenue source, such as transport terminals, slaughterhouses, and markets. Many local governments are reluctant to take on long-term debt and the examples of municipal bond flotation are few.

**Where local government revenue comes from**

If local governments are to take on more responsibility for financing infrastructure, they must have both the mandate and capacity to generate local revenue. Both are lacking. Local governments have five basic sources of revenue: (i) those from publicly owned assets, including land, or shares of central government taxes on minerals and other natural resources; (ii) taxing private wealth, including property; (iii) taxing income and/or its use, including earnings, consumption, and business turnover taxes; (iv) user charges or licenses on services provided and utilities consumed; and (v) intergovernmental transfers, comprising grants and other assistance from central or regional/provincial levels.

The first source is generally small in most Asian countries, although local governments often have significant land and property holdings. Most central governments either prohibit or limit the authority of local governments to tax wealth and income, although sales taxes in some developed countries can be an important local government source. User charges different investment strategies can be applied—for example, separating power generation from transmission, water treatment from distribution, and trains from tracks.

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117 Unbundling means separating parts of an infrastructure network so
are becoming more prominent in both the developing and developed world. Fiscal transfers generally make up more than 50% of local government revenues, and in some countries such as Pakistan, they can reach as high as 95%.

There are considerable constraints on local governments in raising local revenue. Many in Asia are notoriously inefficient at mobilizing and utilizing resources. In addition, most local revenues are used for the operations of city governments with very little allocated for capital investment. Although a proportion of own-source revenues can be set aside for capital development expenditures, in practice most is funded through central grant transfers. Such funding, however, is dependent upon the central government’s commitment, which can be made based on simplistic formulas, agency priorities, or political expediency rather than legislative provisions, demand, or need. In some cases, where utilities are run by city administrations, additional resources can be raised from user charges.

**The many alternatives for borrowing**

A number of cities in Asia have borrowed from local banks, mainly those that are government-owned. Borrowing often is for short-term, cash-flow support and/or overdraft credit or for a medium term, perhaps up to 5 years. Very little long-term lending (15–20 years) has occurred, apart from that associated with foreign-assisted projects often on-lent by municipal development funds. In a few cases, municipal bonds have been floated.

Municipal bonds are basically loans to local and state governments. Debt obligations are issued by states or provinces, cities, districts, and other government entities to raise money to build schools, highways, hospitals, and sewer systems, as well as other projects for the public good. They are the most important way that the United States’ (US) state and local governments borrow money to finance their capital investment and cash-flow needs. Investors lend money by purchasing a municipal bond and this supplements operating budgets and pays for public projects. The municipality pays interest on the loan that is then distributed to the investor as federal, and sometimes regional and local, tax-free income. When the loan term ends, the principal balance is returned to the investor. The tax exemption or subsidy provided by government allows municipal issuers to compete effectively for capital in the domestic securities market. There are two main types, general obligation bonds secured by a pledge of the local government’s taxing power; and revenue bonds that are secured by the pledge of project revenue streams of a particular service or utility entity, generally user fees and service charges. There are also hybrids of these two categories.

Tax-backed bonds are used where direct cost recovery is difficult, such as in urban renewal or for social facilities. Some forms of tax-backed debt are tax exempt, usually where the purpose or the agency concerned are considered to be providing a public service. Revenue bonds are issued where cost recovery is more direct in financing water supply, sewerage, electricity, and large-scale transport infrastructure. These have been successful in the US because its municipal governments can form a special purpose vehicle (SPV)—for example, a utility company that can issue bonds in its own right and, under certain circumstances, benefit from tax concessions.

In Australia, infrastructure bonds for specific purpose have been issued by private sector entities, upon approval by the Federal Treasury, for specific projects. They have been popular and have been a key factor in mobilizing significant long-term finance for infrastructure projects. The rationale is that investors in infrastructure are at a taxation disadvantage.

**Early Municipal Bonds**

The first real general obligation bond was issued in 1812 by New York City, but today there is more than $1.8 trillion in outstanding municipal debt, comprising obligations of approximately 50,000 issuers. General obligation bonds were the main type issued during the early years, but now have been outpaced by revenue bonds and those issued by quasi-public bodies (special districts). England also provided the early revenue-bond model through its sale of bonds for toll roads in the 1770s. In addition to long-term bonds, many issuers also use short-term municipal note borrowing, and this option has grown substantially since the 1960s.


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120 Local revenue sources are not really designed to finance the construction of major city-wide infrastructure, such as mass transit systems, major highways, water source development, and trunk transmission lines, whose costs can only be recovered over the longer term.

Municipal development funds

Municipal development funds are parastatal institutions that lend to local governments for infrastructure investments. They can evolve to become financial intermediaries focusing on municipal credit. They are essentially financial intermediaries that provide credit to local governments and to other institutions investing in local infrastructure and are normally viewed as transitional instruments toward self-sustaining municipal credit systems that can access domestic and international capital markets for financing.


Tamil Nadu Urban Development Fund

The World Bank-funded Tamil Nadu Urban Development Project set up a loan and grant program as the Municipal Urban Development Fund (MUDF). By October 1996, the government-owned MUDF had financed over 500 subprojects in 90 out of 110 municipalities in Tamil Nadu. In 1996, MUDF was converted into a new financially and legally autonomous financial intermediary with participation of private capital and management, the Tamil Nadu Urban Development Fund (TNUDF). An asset management company—a joint venture between the Tamil Nadu government and private investment companies—now manage the fund. This has brought private-sector management expertise to the selection and financing of subprojects sponsored by either public or private agencies and to facilitate access to creditworthy municipalities to the private capital market. The government’s share is to be reduced eventually through sale to interested investors and on-lending interest rates will gradually be made to conform to market rates. A separate grant window for poverty-oriented investments, such as slum upgrading and cost of resettlement, is also being handled by the asset management company and provides technical assistance to municipalities in preparing such investments and improving their own financial management.


with respect to investors in other assets. Investors in assets that can be purchased “off the shelf” or manufactured quickly can claim interest expense on borrowings as a tax deduction from the time of purchase. Investors in infrastructure must wait for these tax deductions to become effective, sometimes for several years, from the time borrowings are undertaken until the completion of the asset and the commencement of earnings. The infrastructure bonds allowed deducting interest expense from issue, and thus, these have overcome this perceived disadvantage. Their use, however, was discontinued and private sector infrastructure investment has suffered.

Municipal development funds

During the early 1980s, independent or quasi-independent municipal credit institutions were established to channel borrowed and grant funds to local governments for local infrastructure development such as the Cities and Villages Development Bank of Jordan. In some Asian countries, these institutions were government-run municipal development funds, such as the municipal development fund (MDF) in the Philippines, and the regional development account (RDA) in Indonesia. Their objectives were to reduce political interference in project selection and financing, to provide a more responsive administration, to finance economically and financially viable projects, and to lend at market rates. The longer-term objective was usually for these institutions to access private sector savings and become intermediaries between private capital markets and local governments.

Government-run funds were designed to revolve, providing further loans to local governments, but it has not always worked that way. Experience of government-run funds from the Indonesia and Philippines shows that when loans are repaid, funds generally are not relent effectively. This is because of institutional restrictions or the apparent inability to identify and appraise sufficient feasible projects for investment. There
are a number of other problems with MDFs, including the distorting impact of low- and fixed-interest rate lending on financial markets, weakening emerging instruments for raising domestic resources, and problems with adopting efficient and transparent appraisal systems. Hence, overall experience of MDFs has been mixed. Success—in terms of expanding the role of such organizations—has ranged from rejecting outright additional funding, and more stringent financing terms in the case of the Thai MDF, through the rather lukewarm reception of the RDA in Indonesia, to implementing and establishing a successful self-sustaining financial institution in the case of the Tamil Nadu Urban Development Fund (TNUDF) in India. This latter institution has actually graduated to a more sophisticated level of financing institutions, as shown in the box on the previous page. However, the approach enabled infrastructure projects to be implemented without fundamental change in the institutional context of investment. There was no question of private sector participation since the transaction costs in each market remained prohibitively high for any actor except the government. Moreover, there was no institutional basis for that participation. Individual projects included institutional-strengthening components, but most focused almost exclusively on project implementation.122

A good example of a fund focusing its activity in this area is the Local Government Infrastructure Development Fund in the Philippines. This fund was an outgrowth of the Capital Investments Folio123 project in which considerable resources were expended in assisting local authorities to plan for and prioritize infrastructure investments. But the wider institutional issue of generating sustainable capital market finance was, in general, not addressed.

Overall, such funds were effective disbursement agencies for international funding agencies and they may have increased the quality of project assessments and fund allocation. But the broader objectives of accessing private capital markets, extending operations beyond specific project financing, and becoming financially sustainable entities without infusions of new capital from the government and funding agencies, have not generally been achieved.124 A few have, however, become part of a transition process toward developing more specialized local government financial intermediaries.

**Local government’s obligation to rationalize revenue raising**

Decentralization means that local governments have to become more financially responsible in raising revenues. They need to manage available resources more efficiently and responsively and press for reforms in intergovernmental fiscal relationships to ensure that functional responsibilities are clearly defined and revenue sources are adequate to meet them. Public financial management must

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### Stages of Local Development Financing

**First stage**
Funding local government investments

- Municipal development funds the conduit of budgetary resources for local governments, as loans or grants.
- Focuses on strengthening local capacity and improving selection of capital investment projects enhancing the quality of local project finance.

**Second stage**
Assisting local governments develop and build a credit record

- Specialized financial intermediaries develop capacity in local project finance. Funds from budget and bi/multilateral agencies.
- Help local governments improve creditworthiness through better budgeting, auditing, and disclosure.

**Third stage**
Mobilizing private resources for local infrastructure

- Provide pooling mechanism through which local government mobilizes private funds.
- Operate on commercial principles and issue long-term debt for on-lending to viable, revenue generating infrastructure projects.
- Borrowers can extend beyond local governments and include utility agencies.

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adequately control the level of revenue and expenditure, and appropriately allocate public resources among sectors and programs. A key step is to improve intergovernmental fiscal relations through streamlined and predictable rules on tax sharing and grants, improve the local taxation system, and introduce sound budgetary and financial procedures through budgets that establish the basis for financial control and provide timely financial information. This highlights and strengthens the links between budget and performance of local government agencies in meeting key operational and strategic objectives.

Intergovernmental transfers are the cornerstone of local government financing in most countries, especially as a source control over public finances while providing the mechanism to channel funds to local and provincial governments. There are many different forms of transfers designed to address specific issues, including grants, shared taxes, subsidies, and subventions. The most appropriate form of transfers for one country depends on the objectives to be achieved. In general, such transfers are required to:

- Improve vertical fiscal balance within levels of government on their expenditure responsibilities and revenue, raising powers—i.e., transfers to make up for limited sources of local government revenue.
- Improve horizontal fiscal balance or equalization of fiscal disparities among regions—transfers which favor poor regions.
- Compensate for “spillovers” or offsetting “externalities” between jurisdictions in providing regional or local services—transfers to local governments for locating a solid waste–landfill site, for example.
- Fund national priorities or “merit” goods—a good or service that may be underprovided if the consumption decision is left to consumers or local governments since they may not recognize its true value or benefit—transfer for sewerage treatment, for example.
- Reflect the administrative reality that it is easier for central governments to assess and collect national taxes than it is for local governments.

**Tracking the transfers and their achievements**

Transfers can be general purpose or special purpose (selective), matching (requiring local government counterpart financing) or not. Special-purpose transfers pay a significant role in financing local capital investment. Central government justification for such funding is that infrastructure projects often have externalities, while others may be key elements of national development programs. In a decentralized system of governance, local governments prioritize investments and execute projects. As discussed above, financing large infrastructure projects from local resources is not always possible, given the levels of current revenues of most local governments. Access to bank finance and capital markets has been limited, thus leaving local governments tied to transfers either in the form of grants or perhaps public and, often, subsidized loans.

Bahl, Boex, and Martinez-Vasquez see good practice where the transfer system provides adequate resources to local governments to achieve policy objectives, preserves budget autonomy at the local level, supports a fair allocation of resources especially to the poorer local governments, ensures stability and predictability in releases, uses formulas that are simple and transparent, is neither a disincentive for mobilizing local revenue nor encourages inefficient expenditures, and avoids major changes in the levels of resources to local governments during periods of change.

Bird and Smart show that the key lessons from international experience for transfer design are that both general-purpose

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126 Reflecting the imbalance between the expenditure responsibilities of local governments and their revenue-raising powers.
transfers and special-purpose matching grants, such as those for infrastructure, are required. General-purpose grants should consider both need and capacity but be distributed in the most straightforward, reliable, transparent manner possible—often based on simple formulas—or according to the source of collections. The total amount of resources to be distributed should be set in a stable but flexible way, such as a percentage of central taxes that can be adjusted every few years. Where local governments have some discretion in tax policy, there is no need to include specific-incentive features to encourage additional tax effort. No conditions should generally be imposed on how general-purpose grants are to be spent. Special-purpose grants should generally have a matching component that would vary both with the type of expenditure and the fiscal capacity of the recipient. Where grants are to finance capital investment in infrastructure, recipients should satisfy technical conditions and prepare feasibility studies of a standard sufficient to ensure that the money is properly spent. Matching grants are probably the best approach for local infrastructure when the local government funds part of the cost of the capital work.

Encouraging private participation in financing

Despite the diverse modes of government support, and even with those mechanisms operating at full efficiency, a dearth of long-term debt financing available for infrastructure development remains. But there is a growing recognition that mobilizing private resources, particularly from local sources, is required on a large scale to augment current efforts of government and international funding agencies in financing sustainable infrastructure at the local and regional level. Access to local financial markets through loans or bond flotation has not been used on a significant scale by most countries. Private sector financiers have assessed the risks of financing local government infrastructure, both actual and perceived, to be high. Nevertheless, a number of countries have adopted innovative measures to help mobilize domestic resources for infrastructure development and reduce these perceived risks. These include credit enhancement through various guarantee mechanisms, including the Local Government Units Guarantee Corporation in the Philippines and the creation of municipal development financing institutions, such as the TNUDF of India. However, these bodies have, at best, had limited impact and, at worst, have crowded out private finance. The following sections will explore the potential of mobilizing private capital and the structural issues that must be addressed to do so.

The capital markets and infrastructure finance

State of Asia’s capital markets

In theory, the availability of private funds is not a problem. But using such resources to finance urban infrastructure is. As Asian economies continue to grow at an impressive pace, their capital markets exhibit comparable expansion. Prior to the Asian financial crisis of the late 1990s, very few dollar-denominated bonds were issued in Asia. Governments and companies usually accessed banks for funding. Now, bond markets in both local and hard currencies are growing fast. Today, Asian capital markets are generally flush with savings and are linked to international capital markets. But finding safe investment opportunities is a problem. Pension funds and life insurance companies are unable to find the major long-term investment opportunities they need to avoid potential maturity mismatches. Bond markets are dominated by national government debt. The lack of alternative long-term debt not only impairs the development of capital markets but also constrains the financing of city infrastructure. Setting aside Hong Kong, China and Singapore, which are well-developed offshore bond and equity platforms for other countries in the region, the two best-developed markets in the region are those in Japan and the Republic of Korea. They also have the two largest domestic bond markets and the first- and fourth-ranking stock markets, respectively, in absolute size. The chart shows the bond markets measured as a percentage of gross domestic product (GDP).

Asian Bond Markets as a Percentage of GDP, December 2005

GDP = gross domestic product, PRC = People’s Republic of China, % = percent.

Source: Bloomberg Data; national statistical officers.


131 Footnote 116.

The total domestic financing, comprising domestic credit of the banking sector, outstanding local currency bonds, and total equity outstanding in the major markets of East Asia is estimated to be some $29.4 trillion\(^{133}\) as of end of 2005. The local currency bond market comprises $7.4 trillion or 36% of this total.

The accompanying figures, using Asian Bonds Online website data, show the amount of and changes in domestic financing available from 1995 to 2005 for major markets of East Asia, together with the structure of the bond markets in the same countries. The trend of increase in bond financing is clear, but it is overwhelmingly government-issued bonds. Financial markets mobilize resources and allocate risks and, in many parts of the developing world, the focus is now on the process of risk allocation. As the economies of Asia become more integrated, stability becomes an important factor for investment. The region probably is less vulnerable now to sudden changes in investor sentiment as the structure of financing has moved towards foreign direct investment (FDI) the maturities of liabilities have become longer, and financing sources more diversified.

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\(^{133}\) Asian Bonds Online website with date covering the PRC, Hong Kong, China; Indonesia; Japan; Republic of Korea; Malaysia; Philippines; Singapore; and Thailand.
Summary of Market Potential in Focus Countries

- India could finance regular issues now. Bond market has issued both municipal and special-fund bonds since 2004. Structured funds have issued ABS bonds since 2002, MBS bonds since 2003, and CDO bonds since 2005.
- Pakistan could make special issues within a year. Equity market could list infrastructure funds by 2008. Bond market could fund the city or the fund if the bond were secured by infrastructure assets. Structured funds would need another few years.
- Philippines could finance regular issues by 2008. Equity market can list infrastructure funds now. Private placement bonds have been issued since 2002. Structured funds would need another few years.


The International Monetary Fund (IMF) notes:

- Regional economies are now more resilient to a sudden reversal of inflows than a decade ago, because their economic fundamentals have improved, and because exchange rates in the majority of economies are more flexible. Furthermore, risks to the banking systems in the region have diminished because only a small portion of the flows, this time, have been intermediated through banks, leaving their balance sheets largely unaffected. However, not all economies have moved at the same pace in reducing domestic and external vulnerabilities.

- Some economies still possess underlying weaknesses, which leave them vulnerable to a sudden reversal of capital flows that can be brought by changes in sentiment and international financial conditions.134

It is now thought that credit risk remains a major problem in the region. Banks have cleaned their balance sheets by reducing exposure to the corporate sector, especially small firms. However, capital markets have not developed rapidly enough to offer a viable alternative source of funding and a lack of capital is detrimental to investment and innovation. The priority for the region is to develop equity and bond markets to permit better risk sharing.135

Expanding the base of investors is a key element in this. Contractual savings, covering pensions and life insurance,
are important since they provide a base for long-term capital accumulation and have a longer time horizon than other investors. Many such funds are active traders of securities and contribute to the liquidity of capital markets. Also important is the mutual fund business, which can cater to retail investors with different needs and risk profiles. The assets of institutional investors in East Asia are increasing and, at the end of 2004, they were some $1.5 trillion, or about 45% of GDP in the region (see table above). But the size of these assets vary considerably from country to country, and in those countries that require massive investments in infrastructure—such as Indonesia, People’s Republic of China (PRC), and Philippines—the institutional investor base is small relative to GDP.\(^\text{136}\)

The pension systems in Asia have considerable assets but they differ in their institutional design, coverage, maturity, benefit provision, and value of assets. Many have been operational for many years. For instance, the Philippine’s Social Security System (SSS) started in 1948, while the Employees Provident Fund (EPF) of Malaysia was established in 1951. Others are more recent, such

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### Assets of Institutional Investors in Selected Asian Countries, 2004

<table>
<thead>
<tr>
<th>Economy</th>
<th>Pension funds</th>
<th>Life insurance</th>
<th>Mutual funds</th>
<th>Total</th>
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<td></td>
<td>$ billion</td>
<td>% of GDP</td>
<td>$ billion</td>
<td>% of GDP</td>
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<tr>
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<td>7.9</td>
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<td>9.0</td>
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<tr>
<td>India</td>
<td>60.0</td>
<td>8.0</td>
<td>22.0</td>
<td>3.0</td>
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<td>Indonesia</td>
<td>5.4</td>
<td>2.1</td>
<td>10.5</td>
<td>4.2</td>
</tr>
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<td>21.4</td>
<td>133.0</td>
<td>17.7</td>
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<tr>
<td>Philippines</td>
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<td>9.2</td>
<td>2.7</td>
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<td>Singapore</td>
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<td>61.2</td>
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<td>12.0</td>
<td>17.0</td>
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<tr>
<td><strong>Total</strong></td>
<td>458.3</td>
<td>11.0</td>
<td>384.2</td>
<td>9.4</td>
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</tbody>
</table>

GDP = gross domestic product, $ = US dollar, % = percent.
Note: Figure for mutual funds in Singapore only includes Singapore dollar funds domiciled in Singapore.
Sources: HongKong and Shanghai Banking Corporation, 2005; Dalla 2005, Bank Negara Malaysia (BNM), Bank of Thailand (BOT).

### Pension Assets and Major Schemes in Selected Asian Countries

<table>
<thead>
<tr>
<th>Economy</th>
<th>Pension assets ($ billion)</th>
<th>Pension assets (% of GDP)</th>
<th>Most important scheme</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Most important scheme</td>
<td>Total</td>
</tr>
<tr>
<td>Hong Kong, China</td>
<td>38.0</td>
<td>MPF 15.5</td>
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<td>India</td>
<td>60.0</td>
<td>EPFO 33.0</td>
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<td>Malaysia</td>
<td>70.0</td>
<td>EPF 63.3</td>
<td>59.4</td>
</tr>
<tr>
<td>Philippines</td>
<td>10.0</td>
<td>SSS 3.5</td>
<td>10.2</td>
</tr>
<tr>
<td>Singapore</td>
<td>68.0</td>
<td>CPF 68.0</td>
<td>63.7</td>
</tr>
<tr>
<td>Thailand</td>
<td>20.0</td>
<td>SSF 6.7</td>
<td>12.2</td>
</tr>
</tbody>
</table>

CPF = Central Provident Fund, DB = defined benefits, DC = defined contributions, EPF = Employees’ Provident Fund, EPFO = Employees Provident Fund Organization, GDP = gross domestic product, LS = lump sum, MPF = Mandatory Provident Funds, NPS = National Pension Scheme, PW = programmed withdrawal, SSF = Social Security Fund, SSS = Social Security System, $ = US dollar.

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Managing Asian Cities

gross yield and yield correlation characteristics, reduced the volatility and increased the return on the portfolio until infrastructure investment comprised 30% of the portfolio. Considering that such investment now comprises less than 5% of portfolios, the ability to fund infrastructure is very large. Such results argue strongly that national governments should encourage substantial supplies of infrastructure funding from wholesale institutions.

Motivating capital market institutions: An overview

Private finance for infrastructure can be raised from either the international or domestic capital markets. Both operate within the constraints of fiscal, monetary, and competition policies of national governments.

Participants in the capital markets include:

- **Banks**, which are really self-contained credit systems, where internal credit analysts determine the pricing of a borrower’s credit based on a combination of market and proprietary information. A loan contract gives both sides almost equal power. However, bank loans are not very liquid, even in the interbank market, where the bank has to monitor the borrower.

- **Insurance companies** that sell life and casualty insurance policies and need to reinvest the proceeds into a general reserve in case any customer files claims. For life insurance, the holding period is long and the average portfolio maturity should be 12–15 years. In a number of countries, life insurance companies also sell types of unit trusts, sometimes linked with the insurance policy. These also tend to be long-term funds needing securities with long maturities. Life insurance companies have difficulty in finding local-currency securities with long maturities.

- **Pension funds** have similar long-term requirements and face the same problem of insufficient supply of suitable paper. Current rules in most countries restrict most funds to sovereign or similar (credit) quality bonds, but as more local currency alternatives become available—including infrastructure backed notes—they should be natural buyers.

- **Mutual funds**, which outside Japan and the Republic of Korea, are equity funds, investing in listed stocks, although a growing number are fixed income funds. Since investors can buy and sell shares in these funds with fairly short notice, the managers are constrained to deal in liquid securities. Private equity funds are a new

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The assets of the life insurance industry are still relatively small in most Asian countries relative to those of developed countries but in the aggregate they approximate the size of pension funds. The future size of these assets will depend on the further development of insurance coverage and products. Mutual funds have grown quickly in most Asian countries, although they started from a relatively small base. By the end of 2004, East Asia accounted for about 10% of $16,152 billion global net asset value of mutual funds, according to the Investment Company Institute. At $465 billion, or 28% of GDP, assets under management were the largest in Hong Kong, China, where much of the funding is from overseas. In contrast, most money invested in other countries is of local origin.\(^{137}\)

Clearly, money is plentiful in pension, insurance, and mutual funds in Asia, and as the population and coverage of the various schemes increase, there is considerable scope for further growth of institutional assets. Institutional investors will play an expanding role in capital market development. Opportunities to invest such funds in urban infrastructure and city development are plentiful but instruments, institutions, and projects that will provide sufficiently attractive terms and security will need to be developed.

A study by Clark and Evans\(^{138}\) attempted an empirical assessment of risk in a balanced portfolio, based on the performance of Australian infrastructure projects over the last 70 years. The study reconstructed cost-benefit calculations and financial statements of each infrastructure investment chosen. These were reconstructed on a “commercial basis”—that is, as if the asset was owned by a private entity. The performance of infrastructure assets and the correlation of yield were compared with other assets. Average yield was high (over 25%), volatility was comparable to equity, and yields were strongly negatively correlated with equities.

The implications, for an ideal super-annuation fund portfolio, are striking. Including infrastructure in a portfolio, given its

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\(^{137}\) Ibid.

http://ssrn.com/abstract=15153
Private Sector Funds

There are over a dozen private sector funds focused on infrastructure in Asia. Most are organized in the format of private-equity funds and have committed funds in excess of $6 billion. While this is a considerable amount of equity, some of these funds were launched over 15 years ago and most have spanned a period of relatively slow infrastructure growth in Asia. As the pace of this growth speeds up, a much larger amount of funding will be required to provide the partial exit that private sector developers will require if they are to fund the equity for projects demanded. In the mid-1990s, private participation in infrastructure (PPI) accounted for up to 22% of the cost of new infrastructure, according to figures from the World Bank. This fell below 6% in 1998. Even in lower-risk markets such as the Republic of Korea, the PPI participation level has only come back to 15% now.


Private Sector Financing Channels

<table>
<thead>
<tr>
<th>Funds type</th>
<th>Funds source</th>
<th>Funds mobilized from</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity</td>
<td>Equity from foreign companies for direct investment (FDI)</td>
<td>Foreign savers (banks, pension funds)</td>
</tr>
<tr>
<td>Debt</td>
<td>Foreign stock exchange (equity)</td>
<td>Foreign equity holders</td>
</tr>
<tr>
<td></td>
<td>Local stock exchange (equity)</td>
<td>Local equity holders</td>
</tr>
<tr>
<td></td>
<td>Foreign banks</td>
<td>Local savers</td>
</tr>
<tr>
<td></td>
<td>Local banks</td>
<td>Local investors banks, pension funds</td>
</tr>
<tr>
<td></td>
<td>Foreign stock exchange (bonds)</td>
<td>Foreign company investors (FDI) (profit)</td>
</tr>
<tr>
<td></td>
<td>Local stock exchange (bonds)</td>
<td>Local investors (profit)</td>
</tr>
</tbody>
</table>

Note: Funds refers to mutual funds, unit trusts, equity funds, and venture capital funds.


Other participants are highly opportunistic in their activities in the sector. Hedge funds will be opportunistic in their purchase of liquid instruments and private equity firms can provide finance for leveraged buyouts of utilities from which some financial gain can be extracted—for example, by selling property assets.

variation, investing in illiquid—usually unlisted—equity and debt of relatively new companies. Typically, they restrict access to their funds and do not allow investors to sell out for 5 or even 10 years. The early infrastructure funds of the 1990s in Asia were of this type.

- **Securities and derivative dealers** hold licenses with the local exchanges and trade actively in inter-dealer markets. The chief function of dealers is to facilitate trading for end investors. As such, they are short-term oriented and not concerned with the long-term value of any given security.

- **Speculators** take risks that others have shunned, but their focus is very short term, often based on same-day purchases and sales. This makes them very active traders and they provide needed liquidity to the market as a whole.

- **Private bankers** serve as investment advisors, introducing wealthy individuals to both funds and specialized structured investments. In particular, their clients have become a major source of demand for the higher-risk portions of real estate equity investment trusts and collateralized debt obligations. This fairly reliable demand can be very important as a new investor channel for buying infrastructure-related securities and funding the growth of Asia’s cities.

Specialist funds in infrastructure cater mainly to institutional investors such as pension funds and mutual funds. They may be highly specialized—providing equity only for solid waste projects in the PRC, for example.

If you marked private sector funds, you were correct. These funds are important to the financing of infrastructure projects in Asia. They provide a source of capital that is not typically available through traditional government or public funding mechanisms.
**Financial institutions seek choice, liquidity, and incentives**

For domestic financial institutions to mobilize sufficient funds to meet their cities’ needs, they will need discretion on how they allocate their funds. This will allow them to impose some discipline on infrastructure sponsors who do not understand the need for commercial returns—and thereby improve governance on these projects in allocating funds. In addition to greater freedom, investors need a choice through which to exercise that discretion. The domestic range of investment alternatives and the discretion with which to choose have been lacking in most regional markets, although significant change is underway. Other factors in providing support to infrastructure finance are liquidity across the market and especially for the sovereign benchmark that defines the yield curve, capacity of the domestic securities dealers and corporate-data (including ratings) agencies, development of the domestic securitization market, and risk management tools available to investors.

Many countries in Asia have made substantial progress since the late 1990s in building up their local currency bond markets. Regulatory reform in a number of countries has allowed new bond issuers to come to the market and overall issue volumes have grown.

Incentive structures designed to mobilize long-term finance are pivotal to the funding of infrastructure. Life insurance companies and pension funds are important for infrastructure finance since they attract long-term savings and are willing to hold instruments for their long-term return. They are interested in relatively safe, lower-return investments. This need matches the type of funding required for infrastructure projects, which can be structured to provide a relatively safe, relatively long-term return.

Instruments appropriate to the needs of these institutions should be designed and established. Mutual funds, or unit trusts, and special-purpose funds can mobilize savings and through the purchase of equities and bonds direct these to infrastructure investments both in developed and in emerging markets, but very few such investments are yet available. While mutual funds are relatively short-term savings instruments for investors—in that they are usually relatively liquid—most exist for long periods and some take the long-term view on their investments.

**Typical Financing Structures**

Five groups were involved in the 2005 tender for the financing and construction of Manila’s 22-km Metro Rail Transit line 7 in the Philippines. Each group was led by an engineering company: Germany’s Siemens, Japan’s Sumitomo, France’s Alstom, China National Technical Import & Export Corporation (CNTIC) of the People’s Republic of China, and the Philippines’ EEI Corp. Universal Light Rail Transit (LRT) Corporation president Roberto de Ocampo said that 75% of the $1.2–2.0 billion project would be financed by loans and the rest by equity. The International Finance Corporation (IFC) offered to lead the financing process.

In the spring of 2005, the Ho Chi Minh City government approved an early feasibility study by Siemens of Germany on a planned 20.5-km metroline network. Its estimated cost of $795.0 million was to be financed by funds from the city government ($238.5 million), the German government ($20.0 million), and the Austrian government ($20.0 million), German banks ($126.5 million), and $290.0 million from multilateral donor banks. 52% of cost comes from funding agencies, 16% from commercial banks, and the remaining 32% from some combination of the builder and political sponsor.

In mid-2006, Indonesia’s Transportation Minister Hatta Radjasa said that discussions with agencies of the Japanese government on the financing and construction of a 15.4-km subway line were in progress. At that point, 68% of the estimated $768.0 million cost was to be covered by foreign loans and the rest by local finance. Japanese agencies were reported to be offering up to $870.0 million worth of financing for 40 years at a rate of 0.4% per annum.

Project Finance and Risks

Choosing investors: The process
Whether infrastructure is financed under state-owned and operated arrangements or through private participation in infrastructure (PPI), the financing options are similar—a combination of equity and debt with or without guarantees by other parties. Traditionally, the operator of the infrastructure and possibly a funding agency (providing a grant for capital cost) provide the equity, while the debt is usually a mixture of bank loans. A project’s guarantees are usually provided by the sponsoring sovereign government, its agency bank, or funding agencies. Normally a combination of investors, most efficiently through a competitive tender, bid for a wholly state-owned project or franchise. This involves competing consortiums of potential infrastructure operators and builders, with their own supporting lenders and guarantors, or with groups (syndicates) of lenders. In both cases, the financial terms are set and adjusted over time among the winning consortium or syndicate, its associated funding agencies, and the sponsoring government.

Competitive capital markets’ pricing of such financing is limited, except where banks hedge some of their currency or interest rate commitments in the capital markets. The additional time required to set up a coordination process that meets capital markets’ needs is one reason that project participants often favor bank financing.

Infrastructure often implies investments with regulated low returns and long payback and depreciation periods. Key prerequisites for attracting private financing are efficient financial markets, which can provide funding at suitable terms and tenors; reliable and transparent investment and regulatory frameworks; and predictable project revenues that ensure debt servicing and a positive rate of return.

Risks in infrastructure finance
Public infrastructure has a long life, high start-up costs, and significant operations and maintenance costs. Its revenues often start in the third to fifth year after design and they often exceed operations costs only after the fifth or seventh year. The full repayment in installments of initial debt takes 15–20 years. Financing for infrastructure needs to be long term. All market participants—including issuers raising funds—expect a balance between risk, whether from foreign exchange, political choices, central bank decisions, inflation, labor productivity or issuer credit, and return. Capital markets establish a price for the risk as embodied in traded financial instruments relating to particular assets and this pricing is updated frequently and regularly.

Common pitfalls
Credit risk derives from uncertainty about creditworthiness of a borrower. The key is the probability of the borrower defaulting—i.e., delayed payment of interest or principal, incomplete payment, or outright failure to pay. In infrastructure projects, a common cause of operating failure in the early stages is inadequate or inaccurate documentation as a result of poor planning. Next is an inadequate financial or operating reserve to cover mistakes or the unexpected. In addition, there are political risks, including lack of political continuity, demographic shifts, regulatory change, and poor court and enforcement systems for disputes. Local politicians can be both a cause of and a solution to certain political risks that discourage investment in

Korean and Japanese Municipal Bonds
The Republic of Korea’s regional development agencies have been issuing 5-year, fixed-rate bonds since 2000. Thirteen regional development agencies had more than 2,653 billion won (KRW) ($2.84 billion) worth of notes outstanding as of 30 September 2005, just over 1% of the Korean onshore market. There is a similar and growing number of municipally sponsored infrastructure bonds in the Republic of Korea, some of which use an asset-backed structure. By contrast, 16 of Japan’s prefectures and nine of its cities and towns had 16,938 billion yen (Y) ($144.8 billion) bonds outstanding at 15 May 2005, just over 1.9% of the Japanese onshore market. Considerably more is issued by national and regional infrastructure agencies.

city infrastructure. These include use of hidden subsidies that lower direct-user costs but create unmeasured citywide costs, or poorly controlled procurement and tendering.

**Changing assets, from fixed to financial**

As discussed above, infrastructure fixed assets are financed with debt, a financial liability to the borrower-issuer, with cash, or through equity sales. The borrower’s debt or shares issued are the lenders’ and shareholders’ financial assets. This accounting equation converts fixed assets into financial assets that can be valued regularly and transferred, and allows funds to be raised from those who have little or no contact with the infrastructure itself.

By specifying the rights of investors thoroughly in the financing contract and by supporting those rights and their transferability in law, securities are created, including documents through which the holder has a security interest (rather than a direct one) in the assets of the issuer. The clarity of the security holder’s rights and the ease of transfer allow securities to be traded among investors without a direct interest in the issuer, that is, the infrastructure owner or operator. Stocks and bonds are securities that require the investor to pay the full amount of principal to the seller, but there are also derivatives that require investors to pay a deposit on the full principal amount to gain exposure to the stock, bond, or index from which they are derived.

**Market response reflects creditworthiness, liquidity**

Banks and capital markets match the supply of money seeking an investment return with the demand for funding of operations, infrastructure, and consumption. The ease with which new assets are traded (market liquidity) depends on the number and financial size and strength of issuers and buyers, and on the quality of trading information on new sources of funds and new investment opportunities. The cost of that information is an expression of the cost of transactions in the capital market. In the debt capital markets, the price of information for a new issuer to communicate its creditworthiness to the investor is expressed mostly in the form of underwriting and advisory fees. The more known the issuer is, the lower information cost and the fees. For a bond already issued, the main expression of this cost of information is the difference between the price a bondholder is asking and the price a potential buyer is offering. If this offer–ask difference (called the bid–ask spread) is large, the buyer and seller are not confident that they know all the relevant information. Narrower bid–ask spreads are a feature of liquid markets—markets in which information flows quickly and widely. Other dimensions of liquidity are a ready supply of buyers and sellers, relatively smooth changes in prices as the markets absorb new information, and a high level of trading, specifically, investment-driven turnover.

Markets achieve liquidity through diversity of opinion because a capital market is essentially a forum for debate about the value of assets and liabilities and about the price of each kind of risk. This requires different types of investors and trading intermediaries, who provide financing appropriate to their risk preference and information.

**Controlling risk**

Management of financial risks centers on being able to achieve the expected return from investments, sell in the event of internal liquidity needs, and sell if a more general systemic and/or political problem threatens or occurs.

There are, in general, four techniques for controlling or managing risk and these can be employed in a variety of combinations. They are:

- **Risk transfer or “hedging.”** This can be done through a purchase or a sale agreement—because buying or selling a security is the most direct way to gain or lose exposure to the risk and return. Buying insurance, sometimes in the form of guarantees and other times in the form of options, is another method. This enables the transfer out (hedge) of some or most risk of default or price collapse. Likewise, by selling insurance or options, one gains exposure to that risk in exchange for an insurance (or option) premium. Futures and forward
contracts are used to hedge one’s risk but they usually require only one tenth or one twentieth of the cash generated by the asset being hedged.

- **Reserves.** Borrowers often build up reserves against uncertainty in repaying loans. These give the lender or bondholder greater confidence in repayment and usually result in lower interest rates. The most common form of reserve is a pledge of collateral to the lender; next is equity in the form of cash or an easily sold asset. Cash reserves such as sinking funds are often part of bond contracts.

- **Segmentation.** This provides a means of matching risk levels precisely to investor appetite and the most common way is through specialization or subordination—the process through which investors agree to rank below others and take the first or second, etc. losses that may occur in a pool of diverse assets, such as an investment fund. Bonds also specify subordination of interest. The holder of a subordinated note would have a lower claim than other bondholders for any cash derived in a bankruptcy proceeding, for example. Subordinated bonds pay a higher rate of interest than general or secured bonds and some, such as “preferred stock,” also pay a dividend.

- **Diversification.** This is a technique investors use for reducing risk more than return. If an investor’s portfolio contains securities (e.g., stocks and bonds) whose price changes under market conditions are not closely correlated to each other, it achieves some degree of diversification. This requires variety among the securities, whether by type, by the country, or business of the issuer. The average return of such portfolio will be lower than that from the riskiest security, but the average risk will be even lower.

The figure on the previous page shows how diversification and subordination effects work together. By pledging an asset as collateral to a fund in return for a loan (reserving) or by selling a portion of future revenue from an asset (risk transfer) to a fund in exchange for cash, an infrastructure operator can raise funds for development. If that fund then sells securities to financial investors with different claims on the revenue from the fund (subordination), some high-risk and most low-risk securities, it can increase overall demand. In the capital markets, this is also called restructuring the cash flows from the infrastructure or other asset. While it does not reduce the underlying risk of the operating asset, it segments the risk into different categories that appeal to specialized investors.

Most hedging mechanisms have been developed for loans. Indeed, the loan interest rates themselves are sometimes directly reduced—as in export credit schemes—partly to cover the extra risk involved. Often, access to these loans is confined to FDI partners. They are used where commercial products, such as interest rate and currency swaps hedging or insurance covering risks, cannot provide for the required length and/or terms of loan and/or country (nationalization and civil disturbance) risks. Both ADB and the World Bank\(^\text{139}\) have well-structured (partial) guarantee schemes covering these areas. These guarantee schemes also cover country risk to FDI equity. That the guarantees are partial is important to ensure that the commercial participants are not at “moral hazard”—that is, managers have an incentive to apply normal commercial prudential tests.

**Finding the numerous gaps in hedging instruments**

No rediscount facilities are available for commercial loans. In addition, commercial instruments are, in general, not available to smaller entities involved in infrastructure financing or to national financial institutions. In respect of equity and bonds, there appears to either be no schemes to hedge returns or provide discount windows for cashing out. Guarantees can, in principle, be applied to almost any aspect of project implementation. However, the organizational arrangements within ADB and the World Bank involve significant transaction costs and incentives for staff to utilize guarantees are lacking.

In respect of equity, almost no counterparty risk and foreign exchange risk can be hedged. Exit strategies may be negotiated on a project-by-project basis with each financier. Organizations, such as the International Finance Corporation (IFC), must ensure that they can exit the investment and have relatively strict requirements. In general, in respect of equity and bonds, if the local capital markets are liquid, local hedging mechanisms are possible. Foreign holders of equity and bonds are less well served by current capacity in the international markets. In respect of debt, the situation is reversed, with international markets often more liquid.

**In summary**

Effective infrastructure delivery systems will depend on incentive structures that facilitate the efficient transfers of debt, equity, and long-term capital by:

### Finance Risks and Required Hedging

<table>
<thead>
<tr>
<th>Security</th>
<th>Suppliers</th>
<th>Primary hedging needs (suppliers)</th>
<th>Appropriate instruments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity</td>
<td>FDI funds</td>
<td>Noncommercial risk</td>
<td>Insurance</td>
</tr>
<tr>
<td>Debt (Bonds)</td>
<td>Individuals</td>
<td>Counterparty risk</td>
<td>Partial guarantee</td>
</tr>
<tr>
<td>Debt (Loans)</td>
<td>Companies</td>
<td>Foreign exchange risk</td>
<td>Full guarantee</td>
</tr>
<tr>
<td></td>
<td>(equity partner)</td>
<td>Liquidity</td>
<td>Swap (equity to debt)</td>
</tr>
<tr>
<td></td>
<td>Institutions</td>
<td>Market risk</td>
<td>Options</td>
</tr>
<tr>
<td></td>
<td>Export Credit</td>
<td>Interest rate risk</td>
<td>Secondary market</td>
</tr>
<tr>
<td></td>
<td>FDI Partner Banks</td>
<td>Exchange rate risk</td>
<td>Discount window</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Asset mismatch</td>
<td>Secondary market (standard formats)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Credit risk</td>
<td>Secondary market (securitization)</td>
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<td></td>
<td></td>
<td></td>
<td>Credit enhancement</td>
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<td></td>
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<td>Rediscounting</td>
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<td></td>
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<td></td>
<td>Term guarantees</td>
</tr>
</tbody>
</table>

FDI = foreign direct investment.


- Reducing the perception of exchange rate and interest rate risk by catalyzing the association of local partners with a respected, highly rated company or an organization like ADB.
- Reducing the perception of risk by establishing a track record of consistent policy and/or by granting significant anti-inflation powers and autonomy to the central bank in the context of a deregulatory policy regime.
- Facilitating exchange rate hedges, although this is difficult and expensive over long periods.
- Facilitating insurance for country risk through multilateral agencies, for example.
- Maintaining free currency convertibility in a floating exchange rate regime.

There is a consensus, however, that effective incentive structures will promote competition through deregulation of the domestic capital markets. In particular, there is a need to progressively remove foreign ownership and capital controls, remove restrictions of sector access, strengthen the capacity of regulators, and remove directed credit programs. This will reduce the cost of finance through competition and foster the use of more advanced financial instruments to enhance the capacity of a country to better finance infrastructure.

### Structural problems that limit financing

One challenge in financing infrastructure is to have a government adopt an arm’s length commercial framework for financial assets. Political sponsors usually come to power under a broad mandate and with little background in financial

### Fuel Subsidies can Mask Effects

After the financial shock of the late 1990s, a number of countries adopted fuel subsidy funds or fuel price caps to limit the cost of currency devaluation on the poor. While the subsidies were quite explicit, they were not well targeted. The greatest currency benefit was realized by middle-class consumers and businesses. Total benefit was easy to measure because of the explicitness, but policy effectiveness was almost impossible to know because of poor targeting. When rising oil costs made these subsidies a large contributor to fiscal deficits, they were eventually trimmed or eliminated in Indonesia, the Philippines, and Thailand, among others.


### Unhedged Costs Passed on to Consumers

When the Philippine Government made a contract for two new coal-fired power plants at Pagbilao and Saul with Mirant Energy in 1994, the power off-take agreement was priced in United States (US) dollars, even though the fuel would be supplied domestically. Rather than hedge the US dollar operating services contract into pesos (P), the Government chose to avoid the hedging cost. It ended up paying for it when the peso fell from P25 per US dollar to P60 in 1997. Ultimately, Manila consumers bore the burden.

administration or utility operation. Even politically accountable agency heads may not fully appreciate the importance of separating the operations of services that have tariffs, or assets that can be pledged, from the city's general services such as road maintenance, safety, and law enforcement.

Social goals, such as providing utility services to the poor or redistributing income, are often included in pricing decisions for such services. The ostensible reason is usually the expediency of a direct, blanket approach that can also limit the petty corruption that a cash-rebate or coupon program may encourage. However, embedding such subsidies in nontransparent or indiscriminate ways makes it impossible to measure their effectiveness, in either relieving poverty or winning votes. The challenge, then, becomes to design institutions for managing infrastructure that have great fiscal integrity but are also politically responsive.

Separating subsidies into explicit grants and/or reimbursements to the target groups makes cost–benefit analysis possible both for the subsidy and for the performance of the infrastructure asset. The particular technique adopted might require investment in user registration or could be simply geographically based for targeting. Explicit and targeted subsidies may be adjusted over time to ensure they meet the government's budget goals and the stated social goal. As such, they reduce the confusion and politically charged atmosphere over defining and monitoring commercial levels of tariff on public utilities.

**Balancing role for government**

The purely commercial approach can lead to attractive, reliable looking cash-flow projections, once the throughput or utilization estimates are combined with the tariff targets. The weakness of a purely market-based approach to pricing and planning is that it can often ignore important economic externalities or transgress important social values. Quality-of-life concerns may encourage low-priced water or prohibit delivery vehicles in the city center during daylight hours. Both impose costs on commercial providers that will be passed on to the consumer in some form of price, access, or quality. A proper role for government is to balance the achievement of external and social benefits against potential higher costs for investors transparently. Measures such as rezoning to a lower density of development, for example, and regulatory reform can impose significant costs on both users and providers of infrastructure. Incentive payments and subsidies can reduce the economic dislocation of such changes, but they can quickly be seen as permanent entitlements if not made explicit and separate from commercial pricing of infrastructure.

**Poorly constrained and distributed political risk**

Separating the responsibilities for financial investment and social investment may generate a lot more debate than if both were bundled for joint consideration within the same government ministry. This debate should be treated as a useful and necessary part of stakeholder consultation. In cases of enmeshed goals—commercial with social—there will inevitably be powerful incumbents who must be wrestled into sharing their benefits more widely through reform. Otherwise, it will be very hard to attract private capital with a demonstration of integrity and even-handedness.

Even when political and social goals are made sufficiently transparent, there can be planning mistakes, including cost overruns that damage the commercial viability of the infrastructure. A common example of this is overestimating ridership trends for public transport, or failing to plan adequately for feeder channels to the new rail or bus lines. Ensuring the separation and independence of the design and finance functions and adequate use of experienced
specialists in senior positions may reduce such mistakes but cannot eliminate them.

Although other kinds of forecasting errors can be hedged, they usually are not because such insurance is seen as too expensive—until after it is needed. For example, the cost of US dollar-based contracts in power generation is usually lower and, in the case of the Pagbilao and Sual, the operator deemed plants in the Philippines as desirable. The foreign exchange risk, in such cases, is forced upon the consumer, the government, the operator, or the investor.

**Need for third- and fourth-party involvement**

All these complexities make planning and delivering an infrastructure project difficult. There are both political conflicts and operating uncertainties to contend with. To add a necessary degree of neutrality and instill confidence in outside investors, infrastructure projects should set up an independent unit for financial administration and another independent party must be hired to audit the results. These safeguards improve the ability of the project team to adapt to the unexpected and they can greatly reduce the leakage of finances that is common to large infrastructure projects globally.

The use of arm’s length institutions for financial administration, performance measurement, and audit can provide a necessary set of internal checks. While these alone will not eliminate mistakes, fraud, or collusive bidding, they act as a deterrent and they will help spot these problems early. Since infrastructure and utilities are public goods—even if operated by private sector concessionaires—public disclosure of their operating and financial performance should also become routine. Yet, this is not the case in many countries, even though many securities commissions hold such standards for listed companies.

**Using governments to reduce risk**

Normally, the political risk for investors is embodied in credit guarantees and government participation in project equity as a way to partially shield creditors. These risk instruments are usually kept in the hands of a small group of insiders, such as funding and export-credit agencies, the operator, and a lead bank. The logic is that these parties will have the most influence over the sponsoring government to support a high level of governance. The record around the world does not provide consistent evidence of this, however. The approach works well with the governments that have the best credit ratings but not so well with others.

If this risk were distributed to a wider population of investors, it would make the flow of information more public and increase market pressure on the sponsor and operator to run a tight operation. It should be standard for a government pension fund to invest in the equity and guarantee securities of these projects. A risk-control method such as this would go much further to eliminating moral hazard than banker oversight. Taking a direct, personal stake in a project’s operation would give government employees a new and more balanced perspective. If this political risk were priced in line with the wider market’s perception of it, then distributing it broadly would be quite feasible. If viewed from this perspective, the mispricing of political risk can easily be seen as a major bottleneck to both greater funding and reducing political risk.

**Poor coordination between users and investors**

When the government takes on all the roles of operator, regulator, guarantor, and financier, the users of infrastructure are completely isolated from investor concerns. Even when the private sector operates the infrastructure and provides all related services, a barrier remains between the user and investor if financing is on a general obligation basis. In such cases, the infrastructure tariff is only the first line of revenue to repay investors. The real security for investors is in the government’s general powers of taxation. The motive for investors to understand user needs in depth and for users to even be aware of investor concerns is removed. Thus, a virtue of limited-recourse revenue debt is that it requires the investor and user to get to know each other much better. This mutual knowledge is the basis of any credit relationship and is the first line of defense against credit risk.

**Patience, a planning requisite**

Nonetheless, if the demand for finance is to be met, the time invested in these relationships and in coordinating the interests of the various parties is just as important as the time invested in feasibility studies and operational planning. A major source of political and operating risk is insufficient time spent in developing and continually improving these coordination mechanisms. All parties get frustrated if the infrastructure’s construction and then launch date are delayed by incomplete agreement. This often leads to important differences being swept aside to meet a progress schedule until they bare up and raise credit risk. Failure to plan far enough to allow thorough and continual consultation can force the parties into an impasse at the mid-stages of planning and finance. They may then be pressured into committing to uncomfortable compromises.
If the infrastructure project is partly financed by bonds, it will have to submit itself to this greater discipline. This will raise the initial cost in terms of time spent developing a more rigorous coordination process, but it can ultimately lower overall project cost, in terms of credit pricing and time spent in the later stages of the project. If only domestic institutions provide capital, the time spent in setting up coordination will probably be shorter than if foreign investors are included. But at the current stage of capital market development for most developing member countries, domestic institutions may not have enough experience to hammer out a suitable process without the partnership of international investors or law firms.

So there is a trade-off between a local deal done entirely in the local currency and a composite deal, including international participants and mixed-currency financing. The latter path is one of somewhat greater complexity, but it can offer more flexibility while being more financially robust. As local debt capital markets develop more rigorous pricing discipline, they can take on all the financing at a comparable or lower cost but with a similar level of robustness in credit management and pricing.

The political sponsor may be more comfortable taking the former path, thus avoiding being exposed to a lot of new requirements for information sharing and coordination. A public consultation process may expose the government to more publicity of problem areas than it would prefer, before they are fixed. Since the price of that choice may be less rigorous governance and coordination processes, the city may then suffer more revenue leakage and a slower development of its access to the very capital markets it needs and, indeed, may impair capital market development in general.

These are not black and white choices but ones of degree. A politically acceptable process that works best is likely to be one that evolves over time, even during the planning for a single infrastructure project.

**Dual Goals: Openness and Financing Variety**

Pfandbriefe or covered bond is a bond backed by high quality loans on the books of a bank, meeting certain quality requirements. The loans backing or covering the bond are usually worth 110–140% of the bond's value as a form of credit enhancement. When these originated in the German market, they were vehicles for refinancing the balance sheets of banks that had lent money to the housing market. Later, commercial real estate and agency-guaranteed heavy capital equipment were added to the list of eligible assets. With the currency union of Europe, over 25 countries have now adopted covered bonds laws.

Another example of creating liquid investments from illiquid assets is the real estate equity investment trust (REIT), which is a pool of titles to commercial or residential real estate that is listed on a local stock exchange. REITs allow institutional investors with liquidity restrictions on their portfolio assets and individuals to buy direct exposure to real estate, thus refinancing the property developers. REITs are fairly liquid and provide an equity-like exposure that performs quite differently from MBSs throughout the interest-rate cycle. There are now REITs based on local real estate markets trading in several parts of Asia, including Hong Kong, China; Japan; Singapore; and now Taipei, China.

**Summary of Key Problems**

- **Failure to give commercial returns priority**
  - Without commercial returns, the private sector will not invest in infrastructure.
  - Subsidies and social goals need to be separately identified and measurable to work in parallel.

- **Political risk needs much narrower limits**
  - Independent measurement of performance and wide public ownership needed to force reduction in political risk.

- **Poor coordination between infrastructure users and investors**
  - Final consumers and investors do not really understand the other's expectations and limitations well.
  - Confusion over government's roles is main cause.

- **Few liquid instruments now available for investment**
  - Recent products could change this if provisional regulations are finalized.

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140 Pfandbriefe or covered bond is a bond backed by high quality loans on the books of a bank, meeting certain quality requirements. The loans backing or covering the bond are usually worth 110–140% of the bond's value as a form of credit enhancement. When these originated in the German market, they were vehicles for refinancing the balance sheets of banks that had lent money to the housing market. Later, commercial real estate and agency-guaranteed heavy capital equipment were added to the list of eligible assets. With the currency union of Europe, over 25 countries have now adopted covered bonds laws.

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Thus, the technical potential to create liquid securities based on infrastructure economics in Asia is very high today. However, doing so will require that political sponsors, operators, and investors take a small step together to develop a better process of coordinating both operations and finance. It may be easier for each to make that step in the form of a series of pilot deals advised by a third party that is not hemmed in by quarterly profit targets, such as a multilateral development bank.

**Main barriers to resolution**

Strengthening bond markets is seen as a key step in creating a viable source of infrastructure financing. Capital markets require further development to provide appropriate instruments that match the profiles of infrastructure project investments better. Likewise, reforms will also be needed in the contractual savings markets to increase the demand for long-term investment products. Most resources needed to fund Asia’s infrastructure demands currently exist within the region. What is required is the political will, feasible projects, and risk-sharing mechanisms to attract these resources to finance long-term infrastructure needs.

The structural problems noted above in financing urban infrastructure and their causes are widely understood. Yet, progress in addressing them has been slow. Timely, effective action to resolve these problems is obstructed by a number of institutional barriers that block market mechanisms. A combination of political self-restraint, perseverance, and regulatory reform could unblock these mechanisms and let the financial markets allocate adequate capital to worthwhile infrastructure.

**Expanding the resource base**

The considerable resource gap in financing infrastructure can potentially be bridged with private funding. International development organizations and national governments thus need to increase support for financing urban infrastructure through private capital markets. Because of its implicit focus on improving the efficiency of service delivery, this trend is undoubtedly welcome. But, as we show in the above analysis, it requires higher levels of institutional competence than does the government funding mechanism. The institutional structure linking governments, consultants, capital markets, and consumers under private sector participation arrangements is complex. It needs to be approached systematically if private sector participation is to be utilized to achieve efficiency gains and avoid unacceptable negative impacts on equity.
Several levels of institutional supports are required to overcome the structural problems, as discussed above, before private sector financing systems are operable. These are a policy context specific to the urban infrastructure sector: legislation to enable local and state authorities to enter into legal arrangements required of such funding mechanisms; organizations to support local and state authorities in the formulation and approval of projects; and organizations capable of filling, or arranging to fill, any financing gaps in respect of major projects where the private sector is not sufficiently confident to take on the full project risk or where the capital markets cannot take on the full financing. These institutional structures must be able to address issues in the land, capital goods, and service delivery markets to implement the project. In addition, contextual legislation and institutions need to be in place if they are not there already. These include laws relating to contract enforcement, commercially competent and fair courts, and so on. This system can vary significantly even between countries of comparable stages of economic development.

Encouraging the private sector

In contrast to the previous generation of private finance, mainly sourced externally and from government, finance in a number of countries is being provided through PPPs. Local governments, in partnership with development banks and international funding agencies, are pooling project credit risk and raising a substantial proportion of funds from the local capital markets through the creation of infrastructure banks and credit enhancements. This involves the initial payment of project debt by local user fees or taxes, including the ability to intercept intergovernmental transfers, and to use reserve funds and partial credit-risk guarantees from external sources. By providing an enhancement role with its capital, the partnership is able to lever its funds and domestic investors will benefit from the diversification of their investments.

Operators and/or construction companies remain important but their role is less for equity and more for their expertise in designing, constructing, and operating projects. Privately financed infrastructure banks that pool project risk can follow. In this new generation of PPPs, the private sector role shifts to the financial engineers who work in association with government authorities, and the role of development and multilateral banks is to create investment vehicles that are attractive to domestic capital. Stabilized revenue streams and the strong recovery value of infrastructure assets are suitable for longer-term debt, for institutions such as pension funds and life insurance companies, correcting the mismatch between the term of debt and the useful life of an infrastructure asset. Even if a state-owned highway or municipal water system defaults on its debt, there are assets with long useful lives that could be “wound up,” as in a bankruptcy of a corporation. The test for developing domestic debt markets is whether the more efficient allocation of risk between the public and private sectors will achieve positive rates of return on private investment. If it does, the allocation of capital will not only be efficient, it will also be sustainable. However, for PPPs to prosper, countries must promote a relatively stable macroeconomic environment, develop a legal and regulatory framework for infrastructure projects, and support the development of a domestic debt market. Unfortunately, these requirements do not exist in much of the developing world, and some traditional roles of the multilateral and development banks will be required over the long term.

In summary

Effective financial management structures

To improve living conditions, cities need to invest in infrastructure and in people. But current funding arrangements mean that resources are limited. Many cities rely on central government funding for capital investments and many are not in the position to borrow. Most have neither the incentives nor the will to increase their own-source revenues. Therefore, major

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141 Policy and legislation intended for privatization of state enterprises will not be sufficient, although specific legislation is not necessary if all the elements noted in this paragraph are in place.

infrastructure generally is left to national governments, which also have limited resources. Individual local governments, in the context of current intergovernmental fiscal relations under decentralization, cannot fund needed city-region infrastructure, especially public transport, sanitation, and, often, solid waste, even if they maximize their own-source revenue. There is no incentive, and strong disincentives, to maximize own-source revenues. Vehicles to structure and attract additional funding on a routine basis are inadequate.

But money is available, although it does not generally find its way as infrastructure investment. This is because of outdated restrictions on the use of long-term savings funds, the lack of incentives to invest, competition from lower-cost and longer-term foreign assistance funds, and the lack of appropriate risk-and-return profiles of the potential borrowers in the market, especially local governments and infrastructure providers. Despite large savings held within financial systems, finance for infrastructure is often ad hoc, with no or inadequate systems to channel long-term finance. For example, the use of infrastructure bonds on the supply side is restricted, and on the demand side there are restrictions on eligible investments for holders of long-term savings. Furthermore, there are no incentives for the providers of long-term funds to invest in longer-term, riskier but higher-return assets such as infrastructure. Foreign participation that could reduce perceived risk, provide longer term, lower-cost funds, and supply larger amounts of funding, is also restricted—both debt and equity, either formally or informally. There is no structure for catering to the diverse risk–return profiles of the varied participants in the local and international capital markets. All these issues need to be addressed as a national priority.

The need for transparency

But before the vision of capital market funding can be realized, local government must put its own house in order. All local governments should be required to manage financial matters in accordance with standard procedures, to maintain adequate and current accounts, and to be audited regularly. Central governments should maintain up-to-date and complete information on local finances and make such information publicly available. Very often in Asia, financial data is treated as a “state secret.” Major sources of local government revenues are through intergovernmental financial transfers, yet these receive little scrutiny.

Reform of Shanghai’s Urban Infrastructure Financing Mechanism

Shanghai municipal government prioritizes construction and management of its urban infrastructure. From 1989 to 2004, some 2,300 billion renminbi (RMB) was invested in fixed assets, of which RMB540 billion was urban infrastructure investment. To provide such funds, reform was needed and this occurred in three phases.

Phase I: Mid-1980s to mid-1990s borrowing to expand government investment. Shanghai’s economy grew slowly and the city needed to rehabilitate its municipal infrastructure. In 1986, supported by the central Government, Shanghai borrowed $3.2 billion from international financial entities, and established Jiushi Company for debt servicing. The Shen-energy Company was established—using the local electric fund—to construct electric facilities and Shanghai International Investment Company was set up to raise foreign funds. Later, 10 government investment companies were formed to be the main financing entities, covering industry and urban construction. The establishment of investment companies provided loan finance for the construction of major infrastructure, including a new railway station, major bridges, the inner-ring road, and a first metro line.

Phase II: Mid-1990s land releases to raise funds. Public land represented a major asset for the Government, but remained idle for many years. Shanghai realized more than RMB100 billion by releasing land for development. At the same time, the operation of toll roads was contracted out, the city adopted a buildoperate&transfer (BOT) approach, and raised funds to build major municipal transport projects.

Phase III: Late 1990s operation of assets to raise more local financing. After the Asian financial crisis, the demand for land slowed but the value of the domestic stock market rose rapidly and domestic savings increased. Local capital was abundant. The city attracted local capital to finance toll roads or expressways and raised more than RMB20 billion. At the same time, the city unbundled rail transport, by separating investment, construction, operation, and supervision and raised a further RMB100 billion for investment in the rail transport construction. In social services, reform of the investment and financing system was enacted in the health-sector reform. The city actively explored ways of raising investments for public hospitals.

Chapter 6
Capacity Development
Capacities are deficient in key areas of urban management, economic and social planning, environmental management, and financial management.

Structures to develop and sustain these capacities are weak.

National urban institutes, local government training institutions, and incentives for local civil servants to acquire needed skills are lacking.

**On running a city well**

If Asia’s cities are to enhance their urban management, they will need to build better systems for their institutions and improve the skills and capacities of their staff. As Asian cities grow, they must take on more diverse, difficult, and complex tasks—functions that demand the participation of multiple stakeholders and require more highly qualified personnel. The competencies that are essential for managing a city are shown in the headings above. They fall into three interdependent groups: planning and policy formulation, program and project formulation and structuring, and managing service delivery. These are the competencies that must be built through capacity development and programs for stakeholder groups.

**The competencies**

*Start with a plan, establish a policy...*

Planning and the policy formulation that follows are essential functions in managing a city. Planning is defining attainable goals for the future. Policy formulation proceeds from the plan and sets out the framework for the programs and activities to attain these goals. A policy sets guidelines for achieving the planned goals. Planning requires skills in setting a vision that involves government, businesses, residents, nongovernment organizations (NGOs), community-based organizations (CBOs), and politicians of a city at all levels. For some institutions, developing a mission statement is also helpful. Policy formulation requires the ability to draft and enact laws, regulations, and guidelines, and includes national, regional, and local governments and politicians. Academic and research institutions often take part in policy making, and their inputs—generally data and analyses of alternatives—need to be coordinated. Regulation is an important city management function too since its framework sets the minimum requirements for service delivery. Effective regulation must be independent of the government, providers, and consumers.

Strategic planning is needed to set in motion the vision for a city. It is long-term, involves establishing a vision, goal, and objectives, and focuses on the actions to be taken, the resources to be allocated, and the targets for attaining the objectives.

*...and look widely for support*

All levels of government, special purpose vehicles (SPVs), and politicians and policy makers—whether performing executive or legislative functions—should be involved. The private sector, represented by business entities and financial institutions, is also an important participant. The academe and research institutions provide the information support and technical backup in terms of surveys, evaluation, and analyses. City residents, whether as individuals, or represented by groups in civil society—including NGOs, CBOs, special interest groups, professional groups, and civic organizations—should participate and contribute in the planning process. This promotes ownership of plans. After approval of the strategic plan, local action area plans are required for specific areas to translate the long-term strategies into projects and activities. Stakeholder involvement and participation is required among partnerships or existing local networks, with inputs from academic or research organizations, and local...
## Core Competencies in City Management

<table>
<thead>
<tr>
<th>Stakeholder Groups</th>
<th>Planning and policy</th>
<th>Program/project formulation and structuring</th>
<th>Management of service delivery</th>
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<tr>
<td></td>
<td>Vision setting</td>
<td>Policy formulation</td>
<td>Stratiﬁcations</td>
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<td>Individuals</td>
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<td>NGOs/Community organizations</td>
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<td>Special interest groups</td>
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<td>Professional groups</td>
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<td>Civic organizations</td>
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<td>Business entities</td>
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<td>Developers</td>
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<td>Financial institutions</td>
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<td>Education/training institutions</td>
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<td>Academe/research institutions</td>
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<td>Health organizations</td>
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<td>Utility companies</td>
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<td>Partnerships</td>
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<td>Public development corporations</td>
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<tr>
<td>Public coordinating bodies</td>
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<td>National government (policy and line agencies)</td>
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<td>Regional government</td>
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<td>Local government</td>
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<tr>
<td>Politicians</td>
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<tr>
<td>Multilateral and bilateral development organizations</td>
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2Trade unions, chambers of commerce, among others.

NGO = nongovernment organization.

business. Individuals and civil society groups have a crucial role in local planning. Achieving consensus among them is a difficult task.

**Who and what makes an urban program**
The city must be able to formulate programs, estimate their resource requirements, and design processes that realize plans and programs through projects that support the implementation of adopted policies. With a vision in place and the plans and policies to attain it, existing urban structures must be strengthened to ensure effective cross-border and-sector coordination. The stakeholders involved in city management have varied roles that can overlap. Some may establish partnerships, either through consultation, research on best practices, or through legal instruments. This process involves city residents, civil society groups, academic and research institutions, business groups, and all levels of government. Politicians are likewise instrumental, and their support—or lack of it—often determines outcomes. Special interest groups, professional groups, business entities, and financial institutions have important roles. Some stakeholders become directly involved in a partnership as members. Skills in achieving consensus across diverse stakeholders are necessary.

SPVs and coordinating bodies provide technical or financial support, or both. Existing partnerships may do the same. Some entities, such as those in charge of transport and utilities, are often members of the highest policy-making bodies, boards, or councils. Cities need to be able to engage at these levels. For example, the Cairns Region Economic Development Council (CREDC) has established working partnerships with the Australian government, Queensland state government, Cairns Chamber of Commerce, Department of State Development and Innovation, the economic development agency Advance Cairns, and Cairns City Council, among others.

**The crucial human factor**
Programs and project implementation may focus on one specific utility such as water supply, or on a range of diverse sectors such as traffic management, urban development, environment, emergency response, planning for and development of growth centers, and urban regeneration. Individual residents, NGOs, and CBOs should be involved, if possible, in all aspects of the program and project cycles. Some programs involve costs that must be recovered from customers and the willingness of city residents and businesses to pay has to be established. There may be projects—especially those for infrastructure—that require the relocating and resettling residents and businesses, and this must be addressed at the outset. Issues on social impact require a mitigation plan for resolution. The participation of educational institutions, health organizations, and utility companies is essential when the programs involve these sectors. To avoid duplication and waste of resources, for better coordination, and to target the appropriate beneficiaries, all levels of government and other public agencies must be involved. Their participation helps define the role of stakeholders in the sector concerned. There may also be multilateral or bilateral commitments for specific programs, including financial support or technical assistance, and liaising with those institutions can be resource intensive.

City management institutions, to progress, need to mobilize a variety of resources—funds, organizational arrangements, and staffing—systems and procedures, land and other inputs, participatory mechanisms, and operations and maintenance (O&M). Developing an organization’s competencies in all these areas is usually required. Increasingly, organizational structures are becoming “flatter.” The people within such organizations are usually from the city but often have fewer skills than their national government counterparts. NGOs and training institutions can help build capacities and provide life-long learning. A national government agency—such as a labor department or a civil service authority—may be involved, too, especially in employment regulation.

**Involving them and informing stakeholders**
Institutional capacities are strengthened by systems that enable stakeholders to be involved in the day-to-day affairs of an organization. These systems must facilitate regular participation by individuals, NGOs and CBOs, special interest groups, professional groups, civic organizations, business entities, and institutional partners. Individuals and civil
society should be encouraged to express their views and opinions on new policies, programs, and projects. Access to information is the key to encouraging and gaining public participation. Communication between institutions and the public is enhanced through information dissemination, including the use of websites. Local consultative committees can be formed, where necessary, to support the management of major operational assets or where a high level of community interests exists.

**Delivering a city’s service effectively**

The list of areas of competency or specialized expertise needed to manage the delivery of urban services is long. It includes finance, development of services and assets, O&M, regulation, organizational development and human resource management, and monitoring and evaluation. City management institutions are created primarily to deliver these urban services. It is not enough that funds are available. The funds must be properly allocated among priority programs. Financial accountability is also critical. It is imperative that financing for performing service functions is designed to ensure efficient resource allocation and sound accountability. Financial institutions, as stakeholders, may provide support beyond financing, including technical assistance. The same is true for multilateral and bilateral development organizations. Existing partnership networks, SPVs, and public coordinating bodies often are involved in the financing of urban institutions. The government at all levels has a regulatory role since standards and financial rules and procedures have to be met and followed.

Service delivery involves skills and competencies in project planning, engineering design, bidding and award of contracts, and construction supervision. Stakeholders in developing infrastructure and services include professional groups, business entities, and financial institutions. Managing service delivery effectively requires appropriate O&M to ensure sustainability. Both the skills and resources for this are lacking. O&M of some local services can be handed over to CBOs with the government providing guidance. For those that remain, NGOs and CBOs can provide feedback on performance of delivery. Utility companies are also heavily involved in O&M.

City management institutions need to comply with regulations, including those that cover pricing, environmental matters, and standards. All levels of government monitor compliance. The delivery of services requires staff, who need orientation and training in operations management. Those involved often acquire the necessary skills on the job, learning by doing. Capacity development programs are needed to supplement this experience to prepare people for more highly technical tasks. For this, city management institutions often turn to formal training institutions, NGOs, and CBOs. Some institutions establish their own training units.

Managing service delivery also involves monitoring and evaluation, including assessing social impacts, poverty, and gender issues. Individuals, NGOs, and CBOs, other representatives of civil society, including environmental and women’s groups, and health organizations are involved in these assessments. Research institutes provide socioeconomic data, policy formulation, and evaluation methodologies. Partnerships, networks, strategy and policy units, and public coordinating bodies are also sources of information. Cities need the skills to plan such activities, supervise or undertake monitoring, evaluate the results, and incorporate them into future planning and programs.

**To summarize**

Multiple stakeholder involvement in the core competencies outlined here is crucial for better urban management. It is essential that there be capacity development at all levels and across all stakeholder organizations.

**Capacity development boost is critical**

Since the 1996 Habitat II Conference sponsored by the United Nations (UN), the paradigm of capacity development has taken center stage in urban development strategies. But current approaches to capacity development do not work well enough. Capacity development is the weakest element of funding assistance, according to recent evaluations by international
Capacity refers to the ability of individuals, communities, institutions, organizations, and social and political systems to use the natural, financial, political, social, and human resources that are available to them for defining and pursuing sustainable development goals.

Capacity building or capacity development is the process by which individuals, organizations, and society as a whole unleash, strengthen, create, adapt, and maintain these abilities over time. Capacity development reflects the fact that capacity is always available and its development is a matter of degree as well as a primarily endogenous process. Capacity building, in the strict sense of the word, implies that capacity is newly created. Therefore, capacity development is the more adequate term to describe the endogenous process of enhancing capacity to which external actors can lend assistance.

Development agencies. The global monitoring report, which reviews advancement toward achieving the Millennium Development Goals (MDGs), noted that improvements in public sector management and institutions—the key indicators for public sector capacity—have lagged behind all other MDG benchmarks. Adequate capacity is a critical factor missing from current efforts to meet MDGs. If developing sustainable capacity is not given greater, more careful attention, development efforts in many of the poorest countries will fail even when they are supported with substantially increased funding. This is now widely recognized, and was articulated in the 2005 Paris Declaration on Aid Effectiveness.

A 2006 evaluation study by ADB of its urban sector operations showed that most capacity development was designed to improve project management and implementation. Institutional development focused on specific actions, which included organizational changes, master plan revisions, improved planning systems and building codes, private sector participation, developing management information systems and computerizing, as well as improved financial

Institutional strengthening or institutional development is also widely used; it overlaps with capacity development but is not identical. According to Morgan and Qualman (1997), traditional institutional development focuses on what an organization has in terms of resources and structure, and on how it performs its various functions. It has the character of organizational engineering that concentrates on improving administrative procedures through the supply of training, technical assistance, and some systems development. Institutional development aims primarily on government institutions and public sector organizations.

**Capacity Development in the 2005 Paris Declaration**

The capacity to plan, manage, implement, and account for results of policies and programs, is critical for achieving development objectives from analysis and dialogue through implementation, monitoring, and evaluation. Capacity development is the responsibility of partner countries with funding agencies playing a support role. It need not only be based on sound technical analysis, but it must also be responsive to the broader social, political, and economic environment, including the need to strengthen human resources. Under the 2005 Paris Declaration, partner countries commit to integrating specific capacity-strengthening objectives in national development strategies and pursue their implementation through country-led capacity development strategies where needed. Funding agencies, in turn, commit to align their analytic and financial support with partners’ capacity development objectives and strategies, make effective use of existing capacities, and harmonize support for capacity development accordingly.

Source: 2005 Paris Declaration on Aid Effectiveness.

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146 Footnote 43.
<table>
<thead>
<tr>
<th>Decade</th>
<th>Terminology</th>
<th>Capacity development approaches</th>
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<tbody>
<tr>
<td>1960</td>
<td>Institution building</td>
<td>Provide public sector institutions. Design functioning organizations. Focus on individual organizations. Models transplanted from developed countries. Training in universities of developed countries.</td>
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<tr>
<td>1970</td>
<td>Development management/administration</td>
<td>Reach neglected target groups. Improve delivery systems and public programs to reach target groups.</td>
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<tr>
<td>1990</td>
<td>Capacity development</td>
<td>Reassessment of technical cooperation. Donor discussions on capacity development. Emergence of importance of local ownership. Participatory approaches seen as key.</td>
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management, including tariff revisions, billing, and collection improvements. Loan-financed assistance helped corporatize or transform public utilities into more autonomous entities, improve accounting systems and revenue collection, and improve garbage collection. ADB’s project completion reports rated 65% of capacity development efforts as successful but only 50% of the institutional development initiatives were similarly rated. The report identified further needs in capacity development in financial management, O&M, project performance and management systems, and urban economic development.

**Institutions to information—40 years of developing capacity**

Capacity development efforts have changed considerably over the past four decades. Approaches have ranged from the 1960s model of setting up externally funded institutions to the emphasis on strengthening existing agencies in combination with overseas training in 1970s. A shift from project-related to sustainable program and sector-oriented governance reforms occurred in the 1970s and 1980s, leading toward participatory approaches in capacity development in the 1990s. The stress most recently has been on knowledge development and sharing, together with systems approaches for improved management capacities. The latter development of knowledge networks is being combined with the emergence of results-based capacity development strategies geared to accomplish the MDGs.

**Studying capacity development in action**

Evaluations carried out recently of a number of capacity development projects implemented over the past 10 years measured their performance against eight known principles that support successful interventions. Each project was evaluated against these principles.

<table>
<thead>
<tr>
<th>Summary of Positive and Negative Aspects of Selected Capacity Development Projects</th>
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<td><strong>Projects</strong></td>
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<td>Short, tailor-made, and in-country: Capacity Development for Heritage Societies, Sumatra</td>
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<tr>
<td>Short overseas course (Netherlands): Inner City Development in Transitional Economies</td>
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<tr>
<td>Refresher course: Urban Management in West Africa</td>
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<tr>
<td>Institution strengthening: Strengthening the Institutional Capacity of the Urban and Regional Development Institute, Indonesia</td>
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<tr>
<td>Long-term, tailor-made, and in-country: Strengthening the Role of Local Government in Housing, Bulgaria</td>
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<tr>
<td>Career mapping system: Capacity Development in Urban Infrastructure Management, Indonesia</td>
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<tr>
<td>Large-scale capacity development: Capacity Development in Urban Infrastructure Management, Ministry of Public Works, Indonesia</td>
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</table>

+ = positive contribution, - = negative contribution.

analyzed and scored against each principle. The table on the previous page provides a summary of the negative and positive results. Tailor-made courses appear the most appropriate.

Making capacity development more meaningful

Most of the generally academic capacity development programs (CDPs) offered by institutional providers in both developed and developing countries have limited relevance to Asian cities. There are few examples of long-term tailor-made capacity development efforts. Experience shows that most programs neither offer an integrated multidisciplinary approach nor reach the people responsible for change. Peer-to-peer learning programs—the comparative field study programs of the Bangkok-based Asian Coalition for Housing Rights (ACHR), for instance, which supports young professionals visiting slum improvement projects—operate only on a microscale. Most off-the-shelf programs offered by academic institutions are unable to reflect the rapid changes taking place in Asian cities. Their knowledge products are not backed by relevant research on the ground. Institutional academic service providers do not, or cannot, provide tailor-made support to agencies in need of capacity support, and they do not offer a longer-term hands-on involvement on the ground.

A new paradigm?

The consensus appears to be that capacity development for city region management in Asia needs to change from supply- and donor-driven to more demand-responsive approaches.147 Capacity development involves equipping managers and staff to effectively perform their jobs and work with others. A key part of local development is handing down authority by transferring responsibility to people, communities, and enterprises, and creating an enabling environment where people obtain information, technology, skills, and technical support to exercise their new authority. Capacity development of public sector organizations means training and human resource development, encouraged by an institutional and organizational environment that supports technical staff and managers. This calls for local governments to formulate capacity development action plans as part of their development agenda. Pioneering work of this kind has taken place in Indonesia under the sustainable capacity building for decentralization project.

Major changes in management require a new mind-set, organizational processes, and structure. And this requires capacity development. All stakeholders must understand why change is required, and must adapt the way they operate. Capacity development must stimulate and facilitate the eminently important changes our cities need. Current CDPs need to catch up with contemporary developments in Asia’s cities, not only in relation to urban and economic development, but also to changes in management and finance that involve new central-to-local government relations, politics, community involvement, and public–private partnerships. Innovations in communications also impact on how CDPs, which are about communicating knowledge and skills to other people, should address their target groups (see figure on next page).

Capacity development must not only target the individual but also consider the wider institutional environment. Evaluations of CDPs by the Organization for Economic Co-operation and Development (OECD)148 and others confirm that the failure or limited success of CDPs is because of a lack of coordination between programs and the institutional environment. To succeed, programs must address the three interdependent levels of capacity, namely individual, organizational, and the enabling environment.

Bringing change through capacity development

Capacity development must allow change to happen, while conveying the knowledge, skills, tools, and instruments necessary for change. Capacity development can become a driver of change. International experience shows that capacity development for urban management requires strong political commitment and support and local ownership. To pursue change in urban management and financing for Asian cities, demand-driven, tailor-made CDPs are needed. This

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148 Footnote 145.
should focus not only on the public sector but on the private sector and the community as well. Likewise, strengthening institutional capacity by establishing new management instruments for cities is paramount. This includes hardware and software support to improve the management of public finance and revenues, assets, physical planning, environmental monitoring, and the administration of development licenses, including business and planning permits.

Training, however, takes time and this depends on the levels of effort required to achieve change (see figure).

**Training a new breed of urban manager**
There are many ways throughout Asia for students and professionals to learn about managing urban development, municipal finance, provision of basic services, and housing, among others. Four types of learning opportunities are available:

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Managing Asian Cities

For example, problem-based learning is a commonly accepted methodology employing case study analysis and simulation games rather than conventional lectures and exam-based learning. Many coordinators of curricula at these schools have strong academic backgrounds, but the lecturers are often from industry rather than the academe and have recent hands-on experience in their disciplines. The programs can be cutting-edge and take education to another level. Students, or their employers, are willing to pay for traditional education through universities and vocational training.

All Asian countries have universities and technical colleges where architecture, city planning, engineering, and environmental management are being taught at undergraduate level. However, the curricula of these educational programs focus on specific areas of study, with little or no orientation toward an integrated or holistic approach. Some curricula are still based on traditional approaches and concepts and do not prepare students for the specific challenges of today’s world. The inability of these institutions to respond to rapid change is often a major constraint. Moreover, some Asian universities tend to create an environment that encourages the reproduction of knowledge rather than critical, problem-oriented thinking or action-oriented research. In certain specialist institutions and some universities, students are encouraged to develop cross-cutting analytical skills and adopt a more proactive attitude toward developmental issues.

Innovative Postgraduate Programs. In several Asian countries, training at postgraduate level includes Master of Business Administration (MBA) programs, such as those of INSEAD, the Asian Institute of Management (AIM), and those of prestigious schools that train top-level civil servants, including the National School for Public Administration (NSPA) in Beijing. These schools typically use innovative learning methods. For example, problem-based learning is a commonly accepted methodology employing case study analysis and simulation games rather than conventional lectures and exam-based learning. Many coordinators of curricula at these schools have strong academic backgrounds, but the lecturers are often from industry rather than the academe and have recent hands-on experience in their disciplines. The programs can be cutting-edge and take education to another level. Students, or their employers, are willing to pay for traditional education through universities and vocational training.

Capacity building—action plans (CBAPs) are a new part of the capacity development process of local governments in Indonesia. CBAPs will become the prime tool of local governments in defining their capacity development strategy and investments and organizational interventions under the government’s sustainable capacity building for decentralization project, with funding from ADB and the Government of the Netherlands. Components include capacity development framework, performance assessment, institutional strengthening, human resource management and development, and financing and budgeting. What is innovative is the link between capacity development and the obligation to measure improved local government performance as an outcome of all capacity development actions. This approach is a departure from the conventional training concept through courses alone. The impact of this training-only method was often questioned. The Government of Indonesia pioneered this new approach in 2003 to generate modern and capable local governments that are able to handle their own development in a sustainable manner and provide citizens with basic urban services. The project is designed to help local governments develop effective capacity building—action plans; support the implementation of such plans through access to appropriate funding and technical assistance; support the development of a competitive market for providers to meet the needs of capacity development in local government; and implement a national capacity-building framework and disseminate supporting policies and subsectoral strategies.


Level of Effort Required for Capacity Development

- Skills, information
- Knowledge
- Attitudes
- Individual behavior
- Organizational behavior

Time needed
Degree of difficulty
Depth and breadth of change

these courses because of the high quality and the status of the degrees. But these schools are targeted at business and are not usually accessible to public sector urban managers. However, they demonstrate that the inclusion of business principle in educational programs can make courses more relevant and attractive.

- **International Courses at Universities Outside Asia.**
  Long-term degree courses outside the region help foster beneficial changes in working attitudes, critical thinking, and other nontechnical attributes, including self-confidence. But experience shows that these degree-oriented educational programs often do not provide a multidisciplinary approach. Their reach is too limited when compared with the need for quality postgraduate education. Many government officials and others who have participated in these courses find it difficult to apply the acquired knowledge once back at their home offices. Many participants return to the same work as before. Very few of these universities offer short-term courses, and those that do usually offer off-the-shelf rather than tailor-made and client-oriented learning products. Few have provided additional in-country, follow-up assistance in implementing innovative practices.149

- **Tailor-made training programs.** In recent years, many Asian countries have benefited from tailor-made training, funded or organized by funding agencies. These include training for government officials, NGOs, and private sector personnel. They have focused on specific topics such as the environment, gender, or health issues. In size, they can vary from small-scale tailor-made training,150 to a national capacity development support.

### The INSEAD Asia Campus

As a leading business school, INSEAD “brings together people, cultures, and ideas from around the world to change lives and transform organizations.”

The school has two campuses, one in Singapore and one in France, with 143 faculty members from 31 countries and more than 880 Master of Business Administration (MBA) participants, 56 executive MBAs, over 7,000 executives, and 64 Doctorate in Philosophy (PhD) candidates. Faculty conduct research projects on both campuses with the support of 17 “centers of excellence.”

Source: www.insead.edu

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### National School for Public Administration (NSPA) in Beijing

NSPA is where all the top and middle-level civil servants of the People’s Republic of China are trained and retrained. It offers courses for ministers and mayors of large cities. French President Jacques Chirac and the Japanese Prime Minister have given guest lectures and Dr. Margaret Chan, newly elected head of the World Health Organization (WHO), received her education there. NSPA recently signed a memorandum of understanding with Harvard University and Maxwell School of Syracuse. NSPA was established in 1998. It is mandated to: train senior public managers; initiate academic research focused on government work and training needs; participate in formulating relevant training material and reference books; write or translate training material; organize and coordinate professional exchange between various local institutes of public administration and other training institutes; conduct international exchange and collaboration; educate a certain number of master and doctorate students in public administration and management; and recommend talented officials to government agencies.


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149 This post-training technical assistance could be termed as “after-sales” services.
150 The Dutch government sponsors such tailor-made events. These may be targeted at the needs of small NGOs or government entities.
Managing Asian Cities

To summarize, among the various forms of capacity development the few tailor-made courses as well as on-the-job training come closest to meeting the requirements of Asian cities. Others are project-specific, often conducted only once, have a limited time span, and are generally designed to achieve project outcomes. Their relevance to the development of the management capacity of a particular city is limited.

Achieving effective capacity building

Capacity must be developed at every level and cover all necessary core competencies. Focus should be on its integration into the existing social, economic, and political environment. The urban challengers of megacities in particular should involve all levels of government, the private

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With the shift toward more capacity development, SCP also moved toward decentralizing the program. The anchoring institutions initiative implies that subregional and national institutes have the overall ability to strengthen the capacity of and assist local authorities. In Asia, the main participants in this network are the Asian Institute of Management, the Asian Institute of Technology (AIT), School of Urban and Regional Planning of the Philippines, and the Thailand Environment Institute.

SCP is a valuable program but constraints impede its overall successful implementation. Because it has existed for a long time, its ideas about a successful process toward sustainable EPM have crystallized. This makes any changes in the direction difficult to pursue, even though local authorities and anchoring institutions indicate that some steps, and especially the tolls for them, are not functioning well. This inflexibility also obstructs effective capacity development of authorities and the sustainability of established programs is endangered.

SCP Phase Two, 2002–2007

The second phase of SCP builds on the lessons and achievements of phase one. It is a long-term initiative to strengthen the institutional capacity of city and local authorities and their partners in the area of urban EPM. Phase two represented a shift toward more capacity development. The objectives of this SCP phase are threefold: to improve the EPM/SCP application and policy implementation processes, to develop an institutional framework and network for sustained EPM support, and to institutionalize SCP’s normative functions.

The key components of Phase Two are:

- Strengthening EPM implementation by reviewing its implementation modalities, and strengthening the packaging and implementation of demonstration projects;
- Supporting regional and national institutions and partners through capacity development programs by the anchoring institutions’ initiative and the adaptation of SCP and EPM tools at local level; and
- Mainstreaming EPM into standards for SCP partners through improved knowledge management, the development of new EPM tools, an updated and expanded SCP global website, and regular global meetings for partners.

 SCP Demo City, Ministries; Local Government Association(s); National Resource Center(s)

EPM = environmental planning and management; SCP = Sustainable Cities Programme.

Elements of Sustainable Cities Programme

1. Environmental Profile
2. City Consultation
3. Working Groups
5. Consolidation & Institutionalization

Lessons from an ADB Project in the Design of Capacity Development Programs in the Urban Sector

ADB’s capacity building in urban infrastructure management project was a pilot project to strengthen the capability of selected local governments in Indonesia to manage urban infrastructure services and urban planning. The project was implemented from mid-1998 to December 2003. An ADB evaluation documented important lessons for formulating and implementing capacity development projects for Indonesia and in general: The project was too short and focused on formal qualifications rather than cultural change in “organizations, thus reflecting the need for long-term, in-depth engagement.”

While foreign consultant-led training under the project built on existing capacities and strove to ensure that global best practice was incorporated, the environment into which trainees returned was not conducive to the application of that practice and further support was required for real organizational change.

The career-mapping system, an attempt to “establish positive incentives,” for good performance, was excellent in concept but did not adequately integrate into national priorities, processes, and systems.

In the context of the poor governance record of Indonesia and of significant economic and institutional shocks, the project did not adequately reflect the need to be more accountable to ultimate beneficiaries. A longer-term, more structured engagement providing support to incremental extension of citizen participation was required.


Thematic Orientation of Capacity Development by Target Groups

<table>
<thead>
<tr>
<th>Target groups</th>
<th>Thematic orientation of capacity development</th>
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</thead>
<tbody>
<tr>
<td>Public sector</td>
<td>Long-term strategic planning—10 to 15 years.</td>
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<tr>
<td></td>
<td>Integrated urban management, linking economic, environmental, and social development, through interdisciplinary and cross-sectoral approaches.(^a)</td>
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<tr>
<td></td>
<td>Capacity for dialogue and formulation of business deals with private sector and community, through participatory approaches.(^b)</td>
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<tr>
<td></td>
<td>New management instruments for public finance and revenues, public asset management, physical planning, environmental monitoring, and the administration of development licenses, including business and building permits.(^c)</td>
</tr>
<tr>
<td>Private sector</td>
<td>Awareness of roles and responsibilities of the private sector in urban development.</td>
</tr>
<tr>
<td></td>
<td>Legal, financial, and managerial parameters for public-private partnerships for service-delivery and development projects.</td>
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<td></td>
<td>Viability of pro-poor approaches and the formulation of sustainable programs.</td>
</tr>
<tr>
<td>Community</td>
<td>Awareness of roles and responsibilities of the community in urban development.</td>
</tr>
<tr>
<td></td>
<td>Role and responsibilities of community-based organizations and nongovernment organizations, and capacity to dialogue and cooperate with the public and private sector.</td>
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<tr>
<td></td>
<td>Lessons of community-based sustainable urban development programs in relation to physical development, urban services, savings and credit schemes, and leadership enhancement.</td>
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sector, and the community. The thematic orientation of required capacity development is shown over the page and highlights the new paradigms and approaches of urban management that are proactive, problem-oriented, and geared toward strategic longer-term change.

Ownership, leadership, and the need for better management

Local ownership is the key to successful capacity development and this is enhanced if activities are demand-driven.153 There must be a shift from supply-side, donor-driven approaches to demand-led ones.154 Political, not technical, processes will determine the specific pathways of interaction between demand and supply of nurturing capacity development. Where governance is weak or institutional capacity is inadequate, development partnerships may require external funding assistance rather than being totally country-led. Inadequate governance because of civil strife, fragile accountability structures, or weak institutional capacity among service providers may mean the continuing domination of donor-driven strategies (see figure).

National and local governments need to formulate sustainable capacity development strategy under institutional and organizational reform agendas and commit funds for their implementation. Change is urgently needed in the management of Asia’s cities and this calls for a multidisciplinary and multisectoral approach to capacity development.

Call is for new, innovative teaching

Programs for capacity development ideally comprise a combination of training methods that enhance communication, facilitate the practice of skills, and embrace new technologies in teaching. To make these appropriate for adult education, there needs to be a mixture of teaching methods, including workshops, lectures, case-study exercises, role plays, and group discussions. This requires professional help and process-related, hands-on support. Peer-to-peer learning, which entails the exchange of knowledge and experiences between colleagues and fellow professionals, has gained ground over the last decade. The experiences of practitioners in one city or region can be used by others. Twinning programs between local governments have facilitated peer-to-peer learning. There are interactive platforms, such as the Development Gateway community (www.developmentgateway.org), that can greatly enhance the dissemination of good practice, and function as a medium of peer-to-peer exchanges. But the exchange of information and references needs to be guided.

New information technologies and the capacity development agenda

Information technology (IT) is now assuming an important role in capacity development, bridging distances between the target groups and the facilitators or trainers. The World Bank led the way in web-based capacity development with, for example, the outreach site of the World Bank Institute. Video conferencing enables visual communication between trainers and participants even if they are apart. Access-

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Promotion of Capacity Development through Establishment of Urban Institutes

One way to improve training is to start a new institute locally with the assistance of foreign institutes, financed by funding agencies and/or local funds. Such institutes can help build, strengthen, and meet the demand for local government capacities. A new training institute requires not only curriculum development but management and financing arrangements that will ensure continued operations after the initial support ends. Good examples are the training institutes created with bilateral assistance from the Netherlands in the 1980s and 1990s, which are now functioning without foreign financial assistance. Their training courses continue to obtain financial support from various sources, including national governments, multilateral, or bilateral agencies. They continue because:

- The initiative originated locally with the institutes, universities and/or national governments, and they retained ownership.
- The institutes had local management from the beginning and were supported by expatriate team leaders.
- The bilateral assistance under a special international education program of the Netherlands government supported these institutes for 4–5 years, developing not only a training program but also the training institutes’ management capability. When bilateral assistance ended, the institutes were able to continue operations through other financial sources. Multiyear support for those institutes is essential for survival.

Staff of these institutes were trained through extensive transfer of technology programs, both in-country and in the Netherlands.

A network was established for some years between institutes to exchange ideas.

Indonesia provided another similar example with the establishment in 1995 of the Urban and Regional Development Institute (URDI). The initiative to start this independent, private institute was taken by the Indonesian Government with Real Estate Indonesia (REI). Finance for the first year came from the United Nations Development Programme and Swiss development assistance. After 1 year, URDI had to finance itself, and it has done this successfully. Now URDI has firmly established itself in the market. Other examples of existing urban institutes and training centers established with the assistance of the Institute for Housing and Urban Development Studies (IHS), Rotterdam, are: Sri Lanka—Center for Housing, Planning, and Building (CHPB), Ministry of Housing, Construction, and Public Utilities (1980); Thailand—Center for Housing Studies, National Housing Authority (1982); India—Human Settlement Management Institute (HSMI), Housing and Urban Development Corporation (1985); Tanzania—Center for Housing Studies, Ministry of Lands and Urban Development (1980); Colombia—Center for Popular Habitat Studies, National University, Medellin (1986); Egypt—Urban Training Institute in the Housing and Building Research Institute (1992); and Ghana—Institute for Local Government Studies (ILG), established in 1998.


The human touch

Not all communication can be dealt with through cyberspace. Face-to-face contact is still irreplaceable when it comes to in-depth guidance of individuals and groups. To differentiate between the modes of communication and put together a balanced program with the right mix of new technology and traditional workshops requires a special skill. Where old-school capacity development needed a teacher to give lectures to course participants, new-school capacity development requires a person who can manage the program and act as a facilitator during sessions. To combine approaches, methods, and tools of capacity development into attractive and effective programs, proper management is essential.
CBOs and local NGOs function alongside local government and should be priority target groups for capacity development. The emerging role of neighborhood and community groups has been mirrored by a new tier of local governance, or community extension workers, who provide the interface between individual households and municipal authorities. The capacity development support they need is in the skills of political negotiation, communication, community management, and the administration of local infrastructure, services, and financial resources.

Although the private sector is expected to build or maintain its own capacity to remain competitive in the market, there are circumstances where some entities—including microenterprises, both informal and formal—may need assistance. This can be provided in the form of legislative deregulation and incentives that encourage and enable them to enter the market as providers of basic urban services, or through technical and managerial training.

**Complementary forms of knowledge transfer**

We have shown that the transfer of knowledge to city and local government staff has been undertaken by academic institutions, such as universities, schools of higher learning, or local government training institutes. However, the diversity of core competencies requires a more complex capacity development agenda.

This should comprise five major elements:

- **In-Service training.** This represents formal training for public servants that can be delivered by conventional service providers, such as universities, schools of higher learning, local government training institutes, or by consultants. This training can be either standardized by using off-the-shelf curricula and learning materials or tailor-made to fit certain institution-specific requirements.

- **On-the-job, hands-on training and peer learning:** Needs to be undertaken by consultants who may follow up on earlier in-service training through in-house advisory services and hands-on exercises and practice sessions relating to the newly installed management systems, software, and hardware. The nature is tailor-made and personalized. Peer learning through exchange visits, domestic or even international, has become a popular supplementary form of learning, which can help deepen knowledge and provide incentives for attitudinal changes because first-hand experience may be more convincing than academic training—“seeing is better than just believing.”

- **Postgraduate education.** Formal degree-oriented learning represents an attractive modality for those who want to advance their careers and acquire additional qualifications. From the institutional perspective, it may be desirable that staff have higher qualifications, although career path planning and opportunities for promotion may not be available within the same organization. Postgraduate research work can contribute to knowledge products that may directly benefit the organization of the postgraduate students. Postgraduate education can be one most appropriate way to develop training skills and higher education institutes can provide specialized “training-of-trainers” courses.

**VOIP and videoconferencing offer cheap means for bringing people closer**

- **Systems and Management Instruments.** Recent developments have supported the creation of a variety of electronic data management and planning tools for office use, many of which are commercially available.
They embody knowledge, but are not a panacea. Some software packages can be purchased as off-the-shelf products, including those for administration, financial management, accounting, asset management, geographical information systems, construction management, human resource management, and e-governance. Others need to be tailored to the specific requirements of an institution—systems for environmental data management, for example, and for planning and budgeting, the management of monitoring data, and human resource tracking. Although these tools and systems can substantially improve the capacities of institutions, their introduction may encounter opposition. This, in turn, will require training and attitudinal change, which can be provided through hands-on approaches by the system providers or in-house consultants.

**Research.** Rapid urban development makes it necessary that independent research provides feedback through baseline studies, and that good management practices are assessed and documented. Research institutions are important sources of knowledge products that become increasingly relevant as cities need to make informed choices in their development planning. Such research is normally undertaken by urban institutes, either independent ones such as the Australian Housing and Urban Research Institute or those embedded within universities like the urban “cell” within the Asian Institute of Management.

**Required: institutes to stimulate urban learning**

The mix of a country’s or city’s capacity development needs will vary depending on its existing skill base. The chosen capacity development strategy at both these levels will, in turn, influence the role and resources channeled to the variety of intermediary organizations, from universities to consultants, who provide the on-the-job training that deliver the various modes of capacity development. New, interdisciplinary, and innovative forms of knowledge transfer also require a considered review of the roles, practices, and capacities of training providers. The role of urban institutes, not a strong feature of the Asian urban scene, needs to be articulated. They need the capacity to generate and sustain a learning environment for other urban institutions. The chosen strategy may require fundamental change, not only to approaches of training delivery, but also in the relationships between the suppliers and their clients, local government agencies, private sector, community, and grassroots organizations. Improving the effectiveness of capacity developers is to become a key agenda.
Intermediary organizations operating at regional and international levels can provide such support to national or local training providers, and some already do. Besides developing knowledge products and tool kits for their dissemination, these organizations should assume a major role in helping service providers become hands-on technical assistance agencies. A new role is required for training service providers, who need to be more proactive in helping municipal organizations with their institutional and human resource agenda. New types of relationships are needed between executive authorities, including local councils, management consultants, and training and capacity development institutes. This means that local training establishments must become demand-responsive service providers.

The Way Forward
Clearly, national and local governments need to formulate sustainable capacity development strategy and prepare action plans within the context of institutional and organizational reform programs. This requires a commitment of funds by national and local governments and support from multi- and bilateral funding agencies. In addition, there is a need to establish an operational network linking local, national, and international education and training institutions. Such a network would provide institutional and professional support to all levels of capacity development through the exchange of information and good practice, focusing on training, education, and the introduction of innovative management.
Chapter 7

Visions are Lacking
Think positively and strategically.

The challenge is change.

**City institutions are failing before congestion, inefficiency**

The growth of Asian cities has been responsible for improving the living standards of many and helping to reduce poverty. The challenge now is to maximize the benefits of urban development and ensure their equitable distribution in a sustainable manner. But severe congestion and environmental and social problems could hurt the economic growth of Asian cities, which would also endanger further increases in standards of living and declines in poverty. Much can be learned from the achievements of some cities and from the successful local initiatives, projects, and programs of national governments and development institutions. But there is little indication of systemic demonstration effects.

Asian city regions are not as efficient as they can and need to be. Many show serious financial, administrative, and coordination weaknesses in the face of unprecedented and often overwhelming growth and change. The effects of population increase combined with rising standards of living pose fundamental challenges for city management. Cities can be socially excluding. They suffer severe shelter and social problems. Most lack affordable adequate housing not only for the poor but also for the lower middle class, leading to substantial shelter backlogs and extensive informal or illegal settlements. Community participation in planning and implementation is limited and self-interest normally determines development priorities. Consultation with communities is limited.

Cities must be ready to take up the role of economic drivers if current export-led growth falters. But many do not have a citywide strategy for economic development and often they are not business-friendly and are burdened by regulations and poor infrastructure. Many national governments have adopted poorly targeted mechanisms for redressing imbalances and differential regional growth. Considerable investment in infrastructure is needed but funding the great gaps that now exist is a major difficulty. Asset management—rather than asset shortage—is also a major problem and appropriate infrastructure maintenance and rehabilitation programs need to be designed and funded. The environmental impact of Asia’s cities on their hinterland and on the planet is now a global concern. New approaches to take on this challenge must be planned and developed.

If the full potential of Asia’s city regions is to be realized, action is clearly needed through systemic initiatives tailored to local circumstance.

Under the ADB-financed regional technical assistance project on managing Asian cities, the urban sectors in five Asian countries were assessed, and case studies prepared on two cities in each of the developing member countries involved. The results of these country and city analyses formed the basis of the issues that were identified earlier in this book and are summarized in this chapter. The solutions to the problems are presented in part Two and stem directly from the city case studies and national urban road maps. Summaries of each country assessment and the city case studies are contained on the accompanying CD. The process followed is outlined in the box on the next page.

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The Country and City Case Study Process

Five countries with the largest and often the fastest-growing urban populations in Asia were selected for study under ADB’s regional technical assistance project on managing Asian cities. National and international workshops were conducted, and two cities were selected in each country to provide examples of various problems. Generally, one was a megacity region and the other a smaller regional settlement.

An assessment of the urban sector issues was undertaken at the national level. This involved an overview that identified key issues, problems, and constraints. An outline of an urban sector road map was prepared, which included a national urban development and spatial strategy. The focus was on the national and local institutional context, financing issues, and capacity development. The considerable in-country work involved data gathering and analysis as well as discussions with key stakeholders in the sector, including representatives of national, provincial, and local governments; the business community; civil society, and the academe.

Consultations were undertaken, data gathered and analyzed, and issues identified for each city study. Based on this work, key objectives were established for future city development. A spatial strategy emerged that not only resolved the issues and problems within each city but also supported the national urban sector road map. Key investments required to implement the city spatial strategy were identified, and examples were established regarding the most appropriate way to organize for implementation and financing.


But is there an environment for urban change?

Until recently most countries had highly centralized systems of government, with either the central or the provincial or state governments exercising control over the local authorities. This weakened the institution of local government. Reforms have promoted devolution but central authorities in many countries are still reluctant to relinquish power and control over local governments. Clear action is needed by national governments almost everywhere to correct the imbalance between the devolved responsibilities and the lack of authority and resources to undertake them. The coordination of city planning, development, and management is very much government-driven, fragmented, and unable to respond effectively to change. There is a tendency to micromanage cities when strategic thinking is required. Planning is generally short-term and physically oriented. Coordination structures, where they exist, are often too limited in terms of both geography and range of participants. They recognize neither the differences among stakeholders nor their importance in urban planning and management. Management structures are lacking to undertake appropriate analysis, risk assessments, and strategic thinking and planning. As a result, investment needs and the demand for infrastructure required for sustainable growth are not matched with available finance. This failure endangers not only local but national economies as well. Although better systems and instruments to encourage change are required, management styles are closed, unresponsive, regulating, and state-dominated.

Management capacity is also lacking to handle the complexities of administering Asian cities—particularly for finance and for strategic economic, social, and environmental planning, and efficient implementation and maintenance of investments. Despite much effort, capacity within local governments has not improved because traditional approaches provide neither the correct skills nor the incentives to use them if and when they are acquired. These shortfalls mean that urban management institutions are, in general, not capable of coping with the current demands of urbanization, let alone with the changes needed to build sustainable social, economic, and environmental infrastructure. These institutions were designed to manage the steady growth of urban regions, not the massive scale of change under way in Asia’s city regions today.

Available financing options are not responsive to the project types or the needs of the diverse stakeholders involved. Urban development finance remains taxpayer-dominated within systems of limited local government autonomy and weak capacity in financial management. Cost recovery is not as high as it should be from utilities and services, where effective pricing and collections often are poor. There is a heavy dependency on central or provincial transfers to finance capital investments in infrastructure.

Service provision is dominated by line departments and public corporations with little incentive for efficiency. Ineffective environmental management systems lack international incentives for action to preserve global public goods, capacity, and funding. Consequently, inaction leads to unprecedented levels of pollution, rising sea levels, and the associated
economic and social costs. Social development is not seen as integral to investment project implementation; instead, it is viewed as inimical to investment. Coordination mechanisms necessary to achieve integration are lacking. Communities seldom contribute to infrastructure improvements.

Enabling frameworks must be created or strengthened to address these vital issues. This is what will determine the environment for the interaction of government, communities, and the private sector.

**The enabling frameworks: where are they?**

At the national level, appropriate enabling frameworks are missing. These relate to:

- Capital markets, where there are few incentives to mobilize the currently liquid capital markets, especially pension and life insurance funds, to finance infrastructure.
- Intergovernmental transfers, which are now often primarily formula- and largely population-based and do not foster intergovernmental coordination, efficient use of assets, the generation of own-source revenues, and the needed infrastructure investment.
- The civil service, which has few mechanisms and incentives for building capacity of staff in local governments.

Given the urgent need for change to build sustainable social, economic, and environmental infrastructure, these constraints must be addressed and urban management must focus on implementation.

**Needed: plans, systems, resources—action**

In summary, many Asian cities seem to be in crisis. They lack strategic plans to define investments to address their social, economic, and environmental issues in an integrated manner. They do not have enough systems in place to plan and finance the investments to achieve the strategies; in many cases, the resources available to carry out the proposed programs and projects are insufficient. Compounding the situation is the fact that many cities approach these problems with little sense of urgency and many officials feel overwhelmed by them. To some, the city appears ungovernable. This cannot continue. Failure to act now risks economic, social, and environmental disruption on a massive scale.

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**Changing management, that is the challenge**

But there is hope. First, however, we must recognize that city life can be improved and that the challenges are not insurmountable. If we believe it cannot be done, it will not be done. Thinking positively is a key first step.

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**Changing Management Cultures**

<table>
<thead>
<tr>
<th>Responsive management</th>
<th>Intergrated management</th>
<th>Strategic management</th>
</tr>
</thead>
<tbody>
<tr>
<td>FROM Closed, Unresponsive, Regulating, and State-dominated.</td>
<td>FROM Fragmented planning and organization on functions</td>
<td>FROM Short-term</td>
</tr>
<tr>
<td>TO Open, Responding, Enabling, and Partnership-based.</td>
<td>TO Coordinated planning and coordinated service delivery</td>
<td>TO Strategic</td>
</tr>
</tbody>
</table>


There must be clear incentives for strengthening city management and encouraging better quality development of Asian cities. This means recognizing that action is necessary at both macro- and micro-levels and that the speed and scale of urbanization demands new approaches. National governments must also put an enabling framework in place in the priority areas of coordination, financial management, and capacity building. Responsibility for city development rests with each local government, citizens, and businesses, and all these stakeholders need to be involved. If the potential benefits from project and program interventions are to be achieved, change must be systemic. Prescriptive approaches should be avoided where possible because they are the antithesis of decentralization, and change should be encouraged through market forces and incentives.

The challenge is to change management cultures—from a prescriptive orientation to one that enables frameworks.
and management. This change has three dimensions and will allow the management of Asia’s cities to become more responsive, integrated, and strategic.

The priorities for improving city management

The priorities are:

- To improve coordination systems, both multistakeholder, and cross border—including better strategic planning for city regions, integrated with jurisdictional and cross-sectoral management systems, as well as far greater community and private sector involvement.
- To improve financial structuring, including local capital markets, private sector participation, and viable projects, and also upgrade the financial viability of the city region authorities and the mechanisms for financing infrastructure and services.
- To enhance the capacity to manage the above activities across administrative and jurisdictional boundaries and to improve management and service delivery within the region.

Achieving results in these three priority areas requires action on the enabling environment in which cities function, and on the internal administration, coordination, and operation of each city.

Cross-boundary and-sector coordination must be improved

Sustainable development is not possible without better cross-boundary and-sector coordination. Planning can be effective only if it involves an entire city region regardless of administrative boundaries. A better understanding is needed of the institutions required for cross-border coordination and to allow private-sector and community representation in the process. How to make such agencies democratically accountable is a key issue. In addition, city regions need better planning instruments, supported by capacity building to make sure they work.

Financial structuring and raising resources is essential

Raising more finance to develop strategic and local infrastructure will be instrumental in coping with the demand burgeoning populations of cities. The required funding must come as a result of better access to capital markets. Governments cannot provide it on their own. Central to this better access is improving the financial viability of local governments and enhancing their creditworthiness. There is an immense need to clarify land policy and tenure arrangements to enable more productive land uses and the collection of more land taxes.

Improving capacity is vital

International experience has shown that the success of capacity development for urban management is strongly influenced by political commitment and support. Local ownership, an understanding of international and country contexts, proper assessment of the institutional environment and present capacities, and an acknowledgment of capacity development as an endogenous process of change—all these are essential. Nevertheless, the capacity development process is time consuming and requires feedback, reflection, and follow-up support. Capacity development is needed at three levels: individual, organizational, and the enabling environment. Pursuing organizational change requires a critical mass of staff participation, along with the integration of training and human capital formation with the organizational reforms and institutional changes needed to put skills to effective use. Capacity development is essential not only within the public sector, but in private firms and nonprofit private organizations and associations as well.

For sustainability, the economy and society also matter

Any plan for a sustainable city should aim at a simpler, more organic version of town living and planning must include better public transport, places for pedestrians, and attractive public areas. It must develop designs with more local identity. Public spaces must be improved so that people can go out at night and feel safe. And cities should build on their own local culture and history. They need not look for another brand or follow ephemeral international trends. Cities should use the raw materials available locally, and their residents, to promote local identity.

What makes a sustainable city?

Three requirements are essential to making a city sustainable: a sustainable economy, a quality environment, and social development and community involvement. So how does a city get its sustainability act together? Sustainability calls for a clear vision of the future and demands that cities promote equity and encourage participation to improve the quality of life and meet needs. Thinking must be for the long term so that the physical and social environment can last. Modern cities can prosper if they reduce their
consumption of resources and energy. Waste recycling, for instance, can reduce the use of resources and create new jobs. The use of new materials and architectural designs in construction can improve the environmental performance of buildings. Cities can also adopt new ideas in transport planning and management and in the use of urban space. They can encourage people and developers to live in well-designed and well-functioning settlements with effective transport and areas of open, green space. The most successful cities—cities that are sustainable in economic and environmental terms—have encouraged diversity and have turned themselves into places of cultural vigor and aesthetic beauty.

**Thinking positively and strategically is a must**
Most successful cities have a clear, shared vision of their future that recognizes their competitiveness within the global, national, and local economies. Successful cities think strategically. They make the most of what assets they have and support the positive driving economic forces both globally and regionally. They recognize at the same time that change enacted at the local level also contributes significantly to improving sustainability. Removing vehicles from streets in central areas, putting people first, greening the city with more open space, adopting human urban design standards, and promoting local identity all make a difference. Consultation and participation are essential to gain community and business support. National and local governments, meanwhile, need to ensure that cities make better use of their resources and assets and take advantage of location.

Sustainable policies and programs should be adopted that not only enable and maintain cities as the engines of economic growth in Asia but also ensure that cities remain places where people want to live. The leadership culture and values of local government officials are important in achieving the goal of a sustainable city. Despite some successes in Asia’s cities, much more must be done. Asian megacities are globally important and are recognized as such. But coordination, financing, capacity—and development assistance, too—must change and improve to ensure that their economies, societies, and environments become sustainable.
Part Two:
Key conclusions are that technical solutions are well known but most need to be bought up to scale, and institutions must change.

Part Two describes what is required for such change, and provides a framework and actions for improving institutions involved in city management.
Chapter 1
Improving City Management
Changing urban management: the mission

Asian city regions are neither as competitive nor as efficient as they should be. They are socially excluding and many Asian cities are damaging the environment. City management must address these problems in a practical way and it must build capacity to do so.

The goal of improved city management is to promote stable, sustainable economic growth. To accomplish this within the context of rapid development and change requires a practical approach that concentrates on implementing physical, social, and environmental infrastructure and establishing enabling frameworks. Focused on implementation, the objective is to identify coordination and financing structures that support equitable, efficient, and sustainable development. Cities and their hinterlands are the crucibles for this effort; to attain sustainable urban development, there has to be a balance between economic, environmental, and social development. Considerable capacity building will be required to improve urban management and finance.

<table>
<thead>
<tr>
<th>Urban management</th>
<th>Economic development</th>
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<tr>
<td>Actors</td>
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<td>Government</td>
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<td>Private Sector</td>
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<tr>
<td>Community</td>
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<tr>
<th>Requirements for Sustainable Urban Development</th>
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<tr>
<td>Capacity</td>
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<td>Finance</td>
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The management concept: think coordination, finance, change

The city regions demand a new concept in management that reflects the reality of their coherent economic systems, some of which have populations and the economic product of a nation state. They have problems and rapid rates of population and spatial growth that are unique. To change and operate more successfully, city governments need to introduce implementation-oriented management that addresses three key priorities:

- Better coordination, which covers the preparation of a long-term city region strategic and spatial plan and the restructuring of organizations for change, including better cross-border and-sector coordination and more effective participation.
- Increased finance for implementing projects, policies, and programs of the strategic plan and to restructure city management, including the improvement of the city region’s financial viability and the development of appropriate financial mechanisms for infrastructure and services.
- Enhanced capacity to enable change, especially the changes required to ensure effective coordination and better access to finance. This includes improving technical and managerial capabilities, facilities, and systems.

Challenges to be confronted

City governance involves multiple actors and boundary issues. This makes it difficult to develop consistent, coordinated citywide strategies and policies. The strategic environment for urban development in Asia that provides the context for city governance is often below standard and gives confusing signals. The institutions of city governance—mainly local governments and special purpose authorities—often have poorly developed capacity in leadership, processes, and systems, and in human and financial resources. This has led to poor strategic plans and policies and in problems of administration and implementation.

These priorities apply across the key dimensions of sustainability: maintaining and increasing competitiveness—a sustainable economy; encouraging participation—a sustainable society; and promoting sustainable development—the environment.

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### Ingredients for Success


### Actors for Capacity Development

<table>
<thead>
<tr>
<th>Improve</th>
<th>Sustainability (Environment)</th>
<th>Participation (Social)</th>
<th>Competitiveness (Economic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coordination</td>
<td>Actions</td>
<td></td>
<td></td>
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<tr>
<td>Finance</td>
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<td></td>
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<tr>
<td>Capacity</td>
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</table>

The multiple benefits of better management

Effecting improved city management will involve the strengthening of enabling environments and the implementation of measures to enhance the capacity and coordination arrangements of city governance. The details of actual policies and approaches will vary between countries and cities. But overall, they will require an increased focus on strategic planning and the financial viability of local government and special purpose authorities, as well as providing effective and efficient infrastructure and service, community and private sector participation, using markets and pricing approaches, and the efficiency of government operations and processes.

The price

The management of cities in Asia will not change immediately. Moreover, the type of urban management approaches that are required must recognize the constraints facing city governments and be predicated on minimizing the depletion of government resource. All change costs money and uses human talent, both of which are in short supply relative to the task.

Road maps structured for strategies, priorities, and vision

Change should be implemented in a structured way by preparing country urban road maps. They should include a national spatial strategy setting out key city-region economic roles within the national economy; enabling strategies for facilitating coordination, finance, and capacity building; and priority investments to make the country spatial strategy work. Local urban or city road maps are also needed. These would provide a clear vision, a city-region spatial strategy, and a description of the objectives for development set within the context of the economic, social, and environmental conditions of the city and within the framework of the national road map. Enabling strategies are also needed for facilitating coordination, finance, and capacity building, and for core investments to support the economic and social development of the city and to improve the environment. Both the national and the city road maps would indicate a clear role for the funding community. A local urban road map is not a traditional physical master plan.

How to manage change and its outcome

To ensure that outcomes for government, citizens, and businesses support sustainable development, effective ways to improve institutions in response to change must be defined. This requires an understanding of the incentives operating for institutions in the urban sector and the development of a plan for change toward an end state where the incentives match the desired outcomes.

Quezon City: Competing on Strength

In 2001, 5 years after a change in local administration, Quezon City transformed itself from a poorly performing, financially distressed authority into the premier metropolis of the Philippines’ national capital region. Quezon City’s success has attracted the attention of international development institutions, business conglomerates, and urban developers. Opportunities were being stimulated where once there were none. It was a classic debt-to-riches story that involved a dramatic turnaround for a city government that in 2001 had bank debts of over 1.0 billion pesos (P), and P2.0 billion more in payables, but by 2005 had become the highest income-earning local government in the Philippines. All debts were repaid. Total revenues in 2005 were almost P7.0 billion, up from only P3.6 billion in 2001. The increase in local taxes was even more impressive, rising from P1.5 billion in 2001 to P4.8 billion in 2005. With a net income of some P2.7 billion in 2005, the city government was building up its resources and investing in livelihood and entrepreneurship through investments in productivity that lead to enterprise creation and job generation; in infrastructure development that contributes to the physical transformation of the city, and improves the environment for business and communities; in fiscal and financial management, with investments in strengthening governance and management capacity; and in education, especially in creating and expanding knowledge. Effective capacity building and fiscal and financial management systems were the backbone and foundation of change within the city government.

The market as a base

Key inputs to urban services, such as finance, design, construction, and manufacture, and the management of operations and maintenance, can all be supplied from established markets, except perhaps for trunk infrastructure, which is less subject to competition.\textsuperscript{156} A market consists of an independent regulatory framework, service providers from the public and private sectors, and consumers. Underpinning markets is an administrative system that has enforceable property rights transferable through a contract and includes the means to resolve disputes. To effect change, it is necessary to work within markets and involve institutions at the community, local, and national levels, as well as the private sector. This can be achieved only with the commitment of both operational staff and politicians. It requires a clear and appropriate design, organizational roles and responsibilities, structures and relationships, including the appropriate incentives. There must also be a process to put these in place. Sufficient resources are essential to finance the change process, including training or retraining for staff. The Indian Jawaharlal Nehru National Urban Renewal Mission provides an example of a structure designed to address these issues.

The process of managing change

There are a number conceptualizations of change and change management.\textsuperscript{157} Perhaps the more applicable to urban management is that put forward by Newell and Simon.\textsuperscript{158} This model sets out a clear process that can be followed by internal change managed with or without external support. Diagnosis or problem analysis is essential. Goals are set and achieved for various levels, areas, or functions. Ends and means are discussed and related to one another. Planning is accompanied by efforts to obtain buy-in, support, and commitment. The process requires identifying differences between the current and desired states and designing actions to eliminate the differences.

The institutional change process requires not only changing interventions over time\textsuperscript{159} but also an integrated approach across the markets involved in city management. Integration is needed both at the citywide level and at the community level to address the priorities for local improvements. To achieve this, it is necessary to engage concerned stakeholders. In summary, the process follows four stages.

Change will not be uniform

The processes for improving city management will vary from place to place and country to country, responding to the distinctive needs of individual settlements and urban regions. The roles and functions of cities are important too. Capital cities, for example, are different from industrial centers, which differ from secondary cities. Even successful cities experience change in their local, national, and economic circumstances.

Increased competition demands a response. For instance, how do Hong Kong, China and Singapore change now that they have to deal with competition from Shanghai and Malaysia? How do PRC cities respond to competition for

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\textsuperscript{159} “Spelling out more precisely—or with any precision at all—how to get from bad to good institutions is… the real challenge of development economics.” The Economist, 5 October 2002, p. 74.
To be eligible for assistance, urban local bodies (ULBs) and state governments have to undertake a set of mandatory reforms. In the case of ULBs, these include full operations and maintenance (O&M) cost recovery over 5 years, and adopting accrual accounting, e-governance, and pro-poor budgeting. Similarly, mandatory reforms for states include the repeal of the Urban Land Ceiling and Regulation Act, reform of rent control laws, and establishing independent regulators for urban services. In addition, states and ULBs are required to implement any five optional reforms, such as bylaws to streamline the approval process for construction, introducing a property title certification system, and introducing a computerized land and property registration and administration.

Each of the assistance-seeking ULBs is required to prepare a city development plan based on a rapid city assessment. The assessment is expected to help ULBs develop a vision for their city, establish the gap between infrastructure and investments, and set out priorities, sequencing, and time lines for undertaking various reforms and investments. While preparing its plan, the ULB is expected to pay particular attention to the delivery of services, governance, and financing, and to identify investment projects for assistance. The city development plan and the detailed project reports for proposed investments are used to formulate a memorandum of agreement between the ULB, state, and central government. The tripartite memorandum of agreement sets out reform targets and milestones to be achieved by ULBs and states, the Government of India funding commitments, and procedures for monitoring, evaluation, disclosure, and dispute resolution.


**Structure of Project Finance under JNNURM by Source of Assistance**

<table>
<thead>
<tr>
<th>City</th>
<th>Number</th>
<th>Percentage of funding (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Central grant</td>
</tr>
<tr>
<td>Cities with 4 million population per 2001 Census</td>
<td>7</td>
<td>35</td>
</tr>
<tr>
<td>Cities with population of 1–4 million per 2001 Census</td>
<td>28</td>
<td>50</td>
</tr>
<tr>
<td>Other cities (including all State capitals)</td>
<td>28</td>
<td>80</td>
</tr>
</tbody>
</table>

**The Change Process**

manufacturing jobs from Viet Nam? As economies develop, the priorities of the stakeholders change, increasing the pressure for settlements to become better places to live in. In these circumstances, the environment becomes a key concern. In contrast, other settlements may be in decline, losing population and economic opportunities. A clear understanding of the causes of this decline and the development of policies to attract investment will be required. Policies will differ according to the type, role, or size of the settlement, its relationship with wider regional urban systems, and according to changing or growing population and economic activity. Decentralization in Asia has profound implications for the management of cities but change needs to reflect local political realities, the exigencies of federal or unitary systems of national government, and the extent of real decentralization in the structures of local government. Much also depends upon the stage of economic development, which determines the resources and systems available.

Political realities in most of Asia are certain to mean that change will be more incremental than all embracing, occurring when circumstances permit. Hence, governments—both at national and local levels—should focus on a few priority areas where change is possible rather than attempting more comprehensive reform that can involve trying to do too much at one time, and failing to achieve tangible results.

**Guidelines for well-managed cities**

The following chapters describe how to improve city management, detailing how to enhance coordination, how to better finance city infrastructure and services, and explaining how capacity should be built. Recommendations on how to promote the sustainable economic growth of cities, how to work toward a sustainable environment, and how to develop a sustainable society follow. Finally, the changes needed in providing development assistance are discussed.

The recommendations on approaches and instruments for improved city management vary according to what we characterize as their self-reliance or dependence. The former refers to a local government or cluster of local governments with the potential ability and capacity to plan and implement infrastructure investments, contribute substantially to their financial requirements—including raising funds from capital markets—and to operate and maintain assets. The metropolitan areas of Bangkok, Delhi, and Shanghai provide obvious examples. Towns and villages are by definition dependent and lack all three of these requirements. Those local authorities that do not satisfy at least one of these criteria are dependent cities. The table on the next page shows how this classification relates to the typology of towns, cities, and regions outlined in Part 1, and the concerned levels of government. It also previews some key principles guiding management actions in each of the areas that are essential for sustainable urban development. The recommendations in each area are structured in the following chapters according to this characterization.
Matrix of Priorities: Strategic Principles

<table>
<thead>
<tr>
<th>Typology</th>
<th>Population range</th>
<th>Concerned levels of government</th>
<th>Classification</th>
<th>Coordination</th>
<th>Financing</th>
<th>Capacity development</th>
<th>Economic growth</th>
<th>Environment</th>
<th>Society</th>
</tr>
</thead>
<tbody>
<tr>
<td>National</td>
<td></td>
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<td></td>
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<tr>
<td>Regional urban systems:</td>
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<td></td>
<td></td>
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<tr>
<td>Megalopolis</td>
<td>15–60 million</td>
<td>National, provincial, and district</td>
<td></td>
<td>Focus on national/local/private mechanisms of coordination and how these intercept with local implementation</td>
<td>Focus on capital markets</td>
<td>Focus on strategic planning, coordinating, project feasibility, financing, and implementation</td>
<td>Fostering innovation</td>
<td>Focus on national/regional impacts Land use/transport integration to reduce footprint Principles: increase density &amp; reduce movement; reduce, recycle, and reuse waste; efficient use of energy; water and sanitation for all; appropriate drainage</td>
<td></td>
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<tr>
<td>Regional cluster/corridor</td>
<td>5–15 million</td>
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<tr>
<td>Single city-centered</td>
<td>3–10 million</td>
<td>National, provincial, and district</td>
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<tr>
<td>Settlement regions:</td>
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<tr>
<td>Metropolitan</td>
<td>1 million plus</td>
<td>Provinical, district, and city</td>
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<tr>
<td>Urban</td>
<td>0.5–1 million</td>
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<tr>
<td>Town</td>
<td>100,000–500,000</td>
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<td>Settlements:</td>
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<tr>
<td>Large metropolis</td>
<td>5 million plus</td>
<td>City and municipality</td>
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<tr>
<td>Metropolis</td>
<td>1–5 million</td>
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<tr>
<td>Large/intermediate city</td>
<td>0.25–1 million</td>
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<tr>
<td>Small city/provincial center</td>
<td>100,000–250,000</td>
<td>Municipality</td>
<td></td>
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<tr>
<td>Town</td>
<td>25,000–100,000</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Small town</td>
<td>5,000–25,000</td>
<td>Parish, village</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Village, hamlet, isolated dwelling</td>
<td>Less than 5,000</td>
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</table>
Chapter 2
Appropriate Coordinating Structures
Improving coordination involves the key elements of good metropolitan management, which are participation and consultation; clear functions, with a delineation of roles, responsibilities, and accountability; competent management; financial sustainability; and positive leadership.

**Improve coordination: start with a clear vision**

Coordinating development and services is a major problem in the rapidly growing cities of Asia. Built-up areas are constantly spreading beyond local administrative boundaries and rapidly encroaching on rural land. Earlier chapters showed that Asia’s cities need new ways to coordinate development and planning for services. This chapter sets out how this can be achieved. The chapter makes the distinction between strategies, which describe spatial or other objectives, and road maps, which set out detailed institutional changes and investments.

Better coordination requires more effective planning at the strategic level and it is recommended that national urban road maps be prepared to support this goal. At the local level, city development strategies, including road maps, are needed to set the context for a new approach to planning. There must be a clear vision of the future and what is to be attained at both levels. A national urban spatial plan similar to those prepared for city regions is recommended. These strategies and road maps are described below, followed by details on how to restructure city organization so that they can be implemented. This involves strengthening and refocusing existing agencies and creating new organizations for planning and coordination. Within this new planning and institutional framework, land-use management needs to change, and the chapter discusses the adoption of progressive zoning ordinances and subdivision regulations appropriate to Asian cities. City governments must also do more to improve their operations, to become more efficient in providing services, and to be far more accountable to their residents and businesses. The step-by-step introduction of e-governance initiatives is discussed and people’s right to information is given prominence within the context of greater accountability. Throughout the chapter, practical examples, mostly from within Asia, are provided to illustrate the proposals.

**National urban road maps—the enabling frameworks for urban investments**

Cities are not only connected to their rural hinterlands but also to other city regions nationally and globally. Cities in clusters and corridors are now merging. National governments need to respond to this trend proactively by providing the incentives for investments that will enable a city region to achieve its full productive potential. Nations...
need to have a vision for the future development of their cities that is set within the context of national economic growth and its spatial implications. A national urban sector road map is such a document and sets the country context for the development of cities. The preparation of individual road maps for cities will ensure that their development supports national urban development objectives as set out in the country road map.

National urban road maps include a spatial strategy that supports economic development, such as the National Trade Corridor in Pakistan. The road map summarizes trends in urbanization, identifies the key issues and problem areas, and assesses the constraints to investment. It provides a vision or mission for the urban sector, identifies objectives, and includes an action plan for development. A national urban spatial strategy forms a key part of the road map. How cities fit into this national strategy provides the context for future city development. The national road map will require each city road map to include prioritized investment plans and their proposed financing. The road map will reflect current plans, programs, and strategies, including, if available, the latest city development strategy and city-without-slums program. It should be time-bound and action-oriented, and identify the urban infrastructure and services funding gap, along with possible areas for international assistance.

**Government leadership through incentives**

Central governments play a critical role in city management and development. At a minimum, they provide national infrastructure, maintain national fiscal and financial integrity, as well as aspects of environmental policy, manage cross-border jurisdictional coordination, and supervise local government. Other roles will include: managing intergovernmental transfers for revenue sharing and fiscal equity across regions; setting local government accounting and service standards; monitoring and publishing information on local government performance; local government capacity development, with support through training programs and technical assistance; and providing incentives for improved local governance.

An incentives program requires that standards be established and performance be measured against those standards. Standards will be set according to country and circumstances and can range across many areas, including the financial and environmental sectors. They can be formulated for matters as diverse as the return on assets for government trading enterprises, tax collection, and water governance.

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**Contents of a National Urban Sector Road Map**

A summary overview of the urban sector that covers:

- (i) urbanization trends within the country, including demographic, economic, social, and poverty aspects;
- (ii) status of urban services, covering land, housing, and informal settlements, urban utilities and needs, summary of conditions by sector including environmental impacts and future demands, transport and other urban infrastructure and needs and social infrastructure; and
- (iii) institutional and financial frameworks, urban policies and programs, including urban sector institutional arrangements, legal and regulatory frameworks, decentralization and impact on the urban sector, urban development policies and programs, and urban finance policies.

- A summary of urban sector issues, including those of urban services delivery, urban development planning, institutional reform and strengthening, urban finance, participation, urban land management and administration, and capacity building.

- An outline of the constraints to investment in the urban sector and overall estimate of investment needs for physical and social infrastructure for the next 10 years. This includes estimates for capital investments in water supply, sanitation and wastewater management, drainage and flood control, solid waste management, energy including electricity and gas, roads and highways, urban transport, and health and education facilities.

- A summary of external assistance in the sector.

- Vision or mission of the country for the urban sector.

- Identification of economic, social, and environmental objectives that support the attainment of the vision/mission manifested in a national spatial strategy.

- An action plan for the development of the urban sector institutions to include identifying the areas for intervention and the future directions of external assistance needed.

- A national urban spatial strategy that shows the geographic focus of urban growth in cities, clusters, and corridors linked to economic, social, and environmental objectives.

- Key investments to achieve these objectives.

Within the road map, the national government will also need to design an implementation framework that establishes organizations to set strategic development priorities and carry out investments. This framework should include investment grants for projects and programs, prepared in line with a defined road map process, and for effective implementation of those projects and programs, including:

- Intergovernmental transfers contingent on efficient performance in implementation—both investment and operations; and
- Civil service incentives for proactive participation in such coordination structures and for building their capacity.

**New directions for coordinating city development and investments**

**What is new about city road maps?**

City and city-region road maps, like national road maps, have two primary functions. The first is to take stock of where the city is from the economic, environmental, and social viewpoints, and to decide on development objectives—a vision. This process should be as rigorous as possible, informed by careful study and comprehensive involvement of stakeholders. It should certainly involve a SWOT analysis (strengths, weaknesses, opportunities, threats) in each economic, social, and environmental dimension of sustainability. It must also set out how these objectives are to be reached—including the investments required and the organizational changes needed to finance and to put them in place.

Given the footprint of modern city regions, this exercise should not be confined to the area under the jurisdiction of the core city and should include the areas of its socioeconomic and environmental hinterland. For example, the hinterland of Chennai encompasses Vellore in Andhra Pradesh State as part of the Bangalore–Chennai Corridor. In undertaking the first task—stocktaking and developing a vision—there are many possible approaches. For developing countries where cities are growing rapidly and where infrastructure shortfalls are often severe, it is important to concentrate on an overall strategy and focus detail planning on key problem areas. It must be ensured that all the elements of sustainable development—economic, social, and environmental—are addressed. A spatial plan is not enough. Later chapters will provide methodologies and examples of how to address the elements of sustainability in preparing road maps.
A city profile, expressed in the form of a series of tables with data relating to the past 10–15 years, including that of its economic base; sector statements that cover key issues, opportunities, and constraints; and likely futures and expectations for the city overall.

Summary of key problem areas impacting on the competitive nature of the city, which would be determined from the sector statements supplemented by a diagnostics analysis.

City strengths and weaknesses, and opportunities and threats, as perceived by government and other stakeholders.

Overall vision for the future of the city.

Summary of the development strategies that are to be adopted to accomplish the vision.

A spatial growth plan for the city.

Major projects by sector for future implementation.

An overall citywide infrastructure and services investment plan for the medium term, perhaps the next 10 years, expressed in terms of its likely annual outlays by sector and the major sources of funds for each.

Summary of the implementation arrangements setting out actions required of all key agencies and other stakeholders, where applicable, for the plan, including key action plans and any capacity building and institutional strengthening needed.

Evaluation of past and current international assistance programs.

Areas for possible international assistance, including investment financing, capacity development, and institutional strengthening.

Outline of a City Development Road Map

Cities need to fine-tune strategies or find out why they are not working. A city might also choose this model if it is experiencing a large number of issues around internal efficiencies. Overall steps include: (i) outlines of the city’s mission, programs, resources, and needed support; (ii) identification of what is working well and what needs change; (iii) identification of how change should be made; and (iv) inclusion of the changes as strategies in the strategic plan.

Another element is scenario planning, which can be used with other models to ensure true strategic thinking. The model is particularly useful in identifying strategic issues and goals. Key steps involved are to: (i) select several external forces and set out changes that might influence the city, such as the economic structure and demographic changes; (ii) discuss different future city development scenarios for each change, including a best case, a worst case, and a reasonable case; (iii) suggest how the city can respond—potential strategies—in each of the three scenarios to adapt to each change; (iv) determine common considerations or strategies to be addressed to respond to possible external changes; (v) identify the most likely external changes to affect the city over the next 3–5 years; and (vi) identify the most reasonable strategies the city can undertake to respond to the change.


**Strategic Planning Approaches**

The basic strategic planning model involves: (i) the identification of purpose (mission statement) to describe what stakeholder needs are to be met and with what services; (ii) goal formulation—general statements about what is needed to accomplish the mission and address major issues facing the city; (iii) identification of specific approaches or strategies to reach each goal; (iv) action plans to implement each strategy—activities to ensure the effective implementation of each strategy; and (v) monitoring and updating the plan.

An issue-based (or goal-based) planning model is generally adopted once the basic model has been undertaken and the approach evolves. The model involves: (i) external/internal assessment of the city to identify SWOT (strengths, weaknesses, opportunities, and threats); (ii) strategic analysis to identify and prioritize major issues/goals; (iii) design of major strategies (or programs) to address issues/goals; (iv) design and/or update of the vision, mission, and values; (v) development of action plans, comprising objectives, resource needs, and roles and responsibilities for implementation; (vi) summary of issues, goals, strategies/programs, updated mission and vision, and action plans for the plan document, with attached supporting papers; (vii) development of a yearly operating plan and document from year 1 of the multiyear strategic plan; (viii) development and authorization of the budget for year 1; (ix) the carrying out of the city’s year-1 operations; and (x) monitoring, reviewing, evaluating, and updating the strategic plan document.

It includes an alignment model, which ensures a strong alignment of the city’s mission and its resources to effectively operate the administration. This model is useful where cities need to fine-tune strategies or find out why they are not working. A city might also choose this model if it is experiencing a large number of issues around internal efficiencies. Overall steps include: (i) outlines of the city’s mission, programs, resources, and needed support; (ii) identification of what is working well and what needs change; (iii) identification of how change should be made; and (iv) inclusion of the changes as strategies in the strategic plan.

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**A plan on which to sketch an investment road map**

A city development strategy (CDS), as developed by the Cities Alliance, provides a planning basis for coordination under current Asian conditions. The approach takes a strategic view of the future of a city region to reflect its economic and ecological footprints. Such plans must not only consider national trends and economic growth but also incorporate the views of a city’s stakeholders. Furthermore, cities need a plan that ensures that neighborhood development conforms to the priorities of local communities. Ideally it will combine a strategic city regional plan that sets the main directions for growth with a plan that identifies key problem neighborhoods or areas requiring specific attention. An example is the London Plan of 2004.

Extending the CDS into an investment road map requires work to assign detailed organizational roles for implementation, and to set out how the organizations involved will coordinate, and how they will finance their activities and the investments under their responsibility.

Problem areas needing specific attention should be identified in the plan, including those targeted for undertakings in urban renewal, town center redevelopment, slum upgrading, cultural heritage, pedestrianization, etc. Local business plans
Managing Asian Cities

resources for development. The objectives and targets that measure the accomplishment of the vision should reflect what people want.160

The focus of the CDS should be economic development and improved governance as a mechanism to achieve regional growth and poverty alleviation. A CDS should guide the future development of a city and contain action plans that are agency-specific and time-bound. A key output is an investment and development program for the city and an associated financing strategy that identifies the potential scale and sources of funds. This enables a city administration to link with institutions on local financial markets for funding. A City Without Slums (CWS) program, or a shelter strategy, should be prepared and integrated with the CDS within the context of citywide poverty reduction programs. The CDS should be developed through participatory processes and consensus, which require time, especially when there is no culture or tradition of consultation among stakeholders.161

The process is summarized in the box on the next page and more details are contained in an earlier ADB publication.162

Financing options should be canvassed for identified investments and a “first-cut” allocation of national government, local government, private sector, and development assistance funding should be undertaken for each project. This initial allocation will almost certainly change when the actual project financial structuring occurs (see next chapter) but it serves as a reality check to force the prioritization of investments, to establish targets for own-source and external funds mobilization, and to generate an initial list of projects that can be discussed with private sector financiers.

CDS is a key to good city management

The CDS can provide a sound basis for strategic city management, appropriate direction, and good leadership. It is a process through which all stakeholders arrive at a common vision of what the future city should be in 10 or 20 years. This aligns stakeholder efforts and guides the use of

161 Footnote 160.
162 Footnote 160.
The CDS Process

Preparatory Stage (A program for the plan)
- Identify those responsible for driving city development strategy (CDS) process and appoint team members
- Define objectives and output of work
- Identify stakeholders (municipality, private sector, civil society, service providers, among others) and assign responsibilities
- Set up CDS management and reporting system

Analysis Stage (Where are we now?)
- Compile city profile
- Prepare sector or theme statements:
  - Local economic development; Poverty, housing and social inclusion; Environmental degradation and geographic constraints; Infrastructure coverage, urban transport and service delivery; Governance and management; City finances and resources
- Likely futures and expectations (targets, forecasts, and gaps)
- Prepare state of the city report that identifies key problem areas
- Strengths, weaknesses, opportunities, and threats for the city region

Strategy Formulation (Where would we like to be and how do we get there?)
- Define vision, mission statement, and supporting targets or objectives
- Develop and cost strategies for each sector or theme
  - Define vision/mission; Objectives; Interventions (policy changes, programs, and projects)
  - Devise citywide strategies
- Prepare action plans for each selected strategy identifying key projects/programs
- Prepare CDS document

Implementation, Monitoring, and Evaluation (How do we measure performance and what changes are necessary?)
- Establish arrangements for monitoring progress
- Set up system for evaluating how the vision and strategies are being achieved
- Define feedback mechanisms

Ideally, the CDS should be presented as a summary document, comprising an executive summary and a main text of not more than 30 pages. It should contain the:

- State of the city report, including a summary city profile, economic base analysis, and sector statements.
- Summary of the key problem areas.
- Findings of strengths, weaknesses, opportunities, and threats analysis.
- Vision and mission statement, including measurable targets or objectives.
- Spatial growth plan and identified areas for special attention.
- Outline development strategies, including cost estimates.
- Action plans for each strategy, including interventions, priority projects, and programs that match projected resource availability.
- Monitoring, evaluation, and feedback mechanisms.

Partnership

Governance goes beyond government and includes informal and nongovernment organizations. It comprises mechanisms, processes, and institutions through which citizens and groups articulate their interests, exercise their legal rights, meet their obligations, and mediate their differences. Roles for non-state actors must be encouraged, including local participation. Hence, there is a focus on state agencies entering into partnerships with civil society, especially the nonprofit sector.


Managing Asian Cities

Implementing the road map: structuring city organizations for change

New or stronger agencies to coordinate, plan development

To improve a city’s management, all levels of government need to work together within an enabling environment defined within the context of national and local government capacities. Coordination structures must ensure that the efforts of stakeholder agencies are directed toward implementing the prioritized set of investments identified in a city region road map. They may do this either by having an unchallengeable mandate from central government that can be imposed on stakeholders or by providing incentives for coordination and resources for the necessary structures. The latter works better in a decentralized political environment.

The conceptual framework set out in part one describes a three-tiered structure necessary to efficiently manage an urban area: coordination, investment, and implementation. In the context of a decentralized environment, these structures need to be set up in two stages. The first involves the establishment of a broad umbrella entity—they are called strategic development companies (SDCs)—that will obtain a consensus on strategic priorities. The United Kingdom urban regeneration companies are a model on a larger scale. This is followed by the establishment of sector- or purpose-specific implementation entities called special investment organizations (SIOs). Examples would include water boards and public transport coordinating authorities. The structures of both these kinds of entities should ensure the active participation of the private sector and civil society. These SIOs would either establish or tap into existing sector or spatial special purpose vehicles (SPVs) for project implementation.

The umbrella company is established for a major city region as a nonprofit corporation but not a statutory body. Its purpose is to coordinate the city region development activities, including the preparation of a strategic development plan. The super region includes the functional area of the city region. Such an organization would have a board comprising the local government political heads (governors and mayors), and representatives of the private sector and civil society. It could be chaired by a nominee of the president or head of the country or province.

The Board decides general policy for the super region. The company would be advised by a technical working group (TWG), comprising a small group of experienced and respected professionals who would be supported by a secretariat. The TWG would decide operational strategy to be implemented by the secretariat, while the company would decide the super region core investments and their priority. For example, based on the analysis in Part 1, key investment areas for environmental sustainability are: public transport—reducing car dependence for commuting; sanitation—reducing water pollution; and solid waste—reducing water pollution and
Urban Regeneration Companies

Three pilot urban regeneration companies (URCs) were set up in the United Kingdom in 1999. English Partnerships (EP), the government-owned national urban regeneration agency, together with Liverpool City Council and the North West Development Agency, established the first Liverpool Vision. By 2006, 23 URCs were operating in England and Wales. URCs are formal corporations set up as private legal entities whose precise form is determined locally and is not prescribed. A governing board is appointed and the chair is drawn from the private sector, as are several other members. The strategic balance of the board, together with a focus on public consultation at key stages, helps cement vital links between the public sector bodies, businesses, and the public. URCs aim to deliver a high-quality urban environment. They provide a focus for regeneration activity in defined areas with particular needs, attract private sector investment, and deliver physical projects that will enhance economic prosperity. They develop the regeneration strategy for the area following a baseline study and a business plan arrived at through public consultation. An exit strategy is also devised for the company. URCs are funded by the regional development agencies (RDAs), local authorities, and EP. RDAs and EP provide expertise and substantial financial input for the majority of URC running costs and major projects in each area. Through implementation of a shared vision, URCs seek to achieve a physical transformation of their areas in a way that could not be achieved through individual ad hoc decisions. URCs are experts in their local areas, and the local authority, local employers, amenity groups, and community representatives play an important part, with the regional context represented by the RDAs and the national dimension by EP. URCs coordinate investment plans from the public and the private sectors, and attract new investment through promotion and regeneration activities.


greenhouse gases. For economic development, investment key areas are logistics infrastructure and support to regional business development.

In concept, there should be one SIO for each priority investment sector to enable the coordination of investment in that sector. Each SIO would have a structure like the umbrella company’s, with representations of all stakeholders constituting a board, an appointed chair, a TWG of key sector representatives, and a secretariat. The head of the SIO secretariat would be a member of the secretariat for the umbrella company. These entities could be constituted as nonprofit corporations. Examples of potential SIOs in the environmental sector:

- A public transport organization that includes representatives of all levels of government and the local governments concerned, of government entities that can provide incentives for appropriate densities to foster demand, and of those organizations potentially involved in building, managing, and financing the prioritized public transport investments. The SIO would reconcile key transport plans and design coherent investment packages, including those supporting urban renewal.

- An energy conservation organization that is to foster the public development of an energy-efficient city and includes representatives of the local government; public entities that provide incentives for the adoption of appropriate technologies to conserve energy; community and business leaders; and others involved in building, managing, and financing the prioritized investments.

- A sanitation organization that includes representatives of all levels of government; the concerned local governments; those entities that can provide incentives for the adoption of appropriate sanitation technologies; communities affected by wastewater treatment investments; and those potentially involved in building, managing, and financing the prioritized investments.

- A solid waste management organization that includes representatives of both the generating and receiving local governments; the public entities that can provide incentives for waste reduction and recycling; and those organizations potentially involved in transport, management, and financing.

- A public transport organization that includes representatives of all levels of government and the local governments concerned, of government entities that can provide incentives for appropriate densities to foster demand, and of those organizations potentially involved in building, managing, and financing the prioritized public transport investments. The SIO would reconcile key transport plans and design coherent investment packages, including those supporting urban renewal.

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Potential economic development SIOs:

- An urban renewal or a cultural heritage organization to coordinate the renewal of a historic or blighted area.
- A logistics infrastructure organization that includes representatives of all key logistics infrastructure—ports, rails, expressways, etc.—of the local, state, or provincial governments and of the client enterprises to implement priority investments identified in the city road map.
- A city regional economic development organization that includes representatives of core industry clusters, financiers, and governments that will regularly monitor economic activity and undertake risk assessments, prepare a business development plan, and secure financing for human capital development, all to promote investment in core industries and promising ventures, and coordinate infrastructure and property development.

A word of caution: the above recommendation is not a proposal for the wholesale creation of more government entities. These are proposed partnerships with significant involvement by the private sector. They are corporate bodies and as such would be responsible to boards with extensive private sector and civil society representation. And they should be established with a sunset clause—i.e., once their objectives are satisfied, they would be dissolved. Many cities already have private and public agencies that, in effect, are embryo SDCs and SIOs and simply require redirection and a greater involvement and representation from outside the public sector. An example of an existing SDC is the Metro Naga Development Council of the Philippines, while the Pasig River Commission, also of the Philippines, is an SIO.

E-governance and accountability: the basis for more effective coordination

E-governance—clicking on to government

E-governance is the public sector’s use of information and communication technologies like wide area networks; the Internet; and mobile computing to improve information and service delivery, encourage citizen participation, and make government more accountable, transparent, and effective. It generally leads to an improved interface with business and industry, and increased transparency in operations that can lead to less corruption.163

E-governance transforms city government transactions with citizens, businesses, and other public agencies. Traditionally, the interaction between a citizen or business and government was in a public office. Now, with available information and communication technologies, it is possible to locate service facilities much closer to clients. These may be an unattended kiosk in a government agency, a service kiosk located close to the client, or the use of a personal computer in the home or office. Key sectors of e-governance164 are:

- Government-to-government (G2G), involving the sharing of data and conducting electronic exchanges between public agencies;
- Government-to-business (G2B), which offers considerable opportunities to improve procurement practices and increase competition; and
- Government-to-citizen (G2C), which facilitates citizen interaction with government, particularly to make transactions less time consuming and easier to carry out, improves access to public information, and increases citizen participation.

The introduction of e-governance, so critical for improving city management and government accountability, should be implemented in stages as shown in the box on page 159.

E-procurement in Andhra Pradesh, India

The government of Andhra Pradesh has implemented many statewide e-government applications since 2000, when the Central Government of India enacted the Information Technology Act of 2000 to provide legal recognition to electronic transactions. The state government has set up a procurement marketplace, linking government departments, agencies, and local bodies with their vendors. The main objectives are to: reduce the time and cost of doing business for both vendors and government; realize better value for money spent through increased competition and the prevention of cartel formation; standardize the procurement processes across government departments and agencies; increase buying power through demand aggregation; provide a single-stop shop for all procurements; allow equal opportunity to all vendors; and bring transparency and ultimately reduce corruption.


163 www.adb.org/

E-governance Initiatives in Tirunelveli Corporation, Tamil Nadu, India

Urban local bodies see the importance of transparent, accessible, and user-friendly citizen services. For example, Tirunelveli Corporation has implemented a number of e-governance initiatives:

- **Street Electricity.** Details of 40,000 streetlights were computerized and citizens can register complaints about their condition. Each complainant is given a unique identification. All electricians have a secure login area through which they view complaints in their ward. The electrician, after completing the job to rectify the complaint, provides a report that is posted on the website. The complainant and the municipal employee can track the responses.

- **Compost Yard Online Weighing System.** The weight of collected garbage is posted electronically and uploaded, along with the details of the collecting driver and vehicle. Reports can be generated on the web from remote locations on garbage collected by driver, ward, vehicle, and date.

- **E-Legal Seva.** This intranet-based system tracks legal cases. It handles the corporation’s estimated 1,000 cases and is programmed to produce daily alerts of which ones will be heard, in which court, and through which advocate. It tracks affidavit filing dates and deadlines, and accounts for the fees paid to the advocate. The system defines the stages of a case—whether it is in trial, for example, or awaiting judgment. The system can check the history of any case and input details of all hearings.

- **E-Survey.** A web-based, land-use, and reserved land schemes reporting system, e-survey maintains records of land use and the details of each plot for each development scheme, as well as such details as whether it is reserved or for disposal, its geographical location, the original survey number, and the subdivision history.

- **E-Town Plan:** This web-based system tracks and processes new construction and renovation applications and post the details on the Internet. Citizens and officials update information and track application status. The system can alert the authorities as to who has to handle the application at what stage. It can segregate applications by the area of building and purpose, and according to whether they have to be forwarded to higher authorities. It prompts officials about application deadlines, in accordance with the citizen’s charter, and tracks movements of files at all stages as well as payments.

- **Citihelp.** Using this web-based system designed to redress general complaints, citizens can register complaints and download forms with proper help on how to fill them up, any payment required, and to whom they should be submitted. They can seek information from various departments and can track the status of all the requests submitted. Complaints are routed to the appropriate department heads and then to appropriate staff. Field staff can complete the task and reroute to their department head for closure. The commissioner can view all complaints and the action taken. Citizens are shown the citizens charter as well as the expected response time. Field staff are alerted and shown deadlines. Citizens can regularly track the status of their complaints on the net.

- **E-Cash Collection Center.** This is a single-window online tax and services collection center.

Stages of E-government

Stage one: A presence, which involves the establishment of a placeholder web page for delivering information in the future. A typical example is a basic website that lists information about an agency.

Stage two: Interaction through web-based initiatives. Interactions are simple and relate to information provision. They are designed to help the customer avoid a trip to an office or a phone call by making commonly requested information and forms available on the web. These resources may include instructions for obtaining services, downloadable forms to be printed and mailed back to an agency, or perhaps an e-mail contact for simple questions.

Stage three: Transaction, which comprises the types of activities normally associated with E-government. They enable clients to complete whole tasks electronically. These initiatives effectively create self-service operations, including license renewals, paying taxes and fees, and submitting bids for procurement contracts.

Stage four: Transformation, involving the use of the full capabilities of technology to transform government functions. Such initiatives would have the robust customer relationship management capabilities required to handle a full range of questions, problems, and needs. Currently, there are very few examples of this type of initiative, partly because of administrative, technical, and fiscal constraints.


Making local government more accountable

An underlying theme in democratic government is political accountability or the relationship between what citizens want and what government does. Accountability covers government processes, actions, and policy outcomes. It also calls for the public to play an active role in tackling the inefficiency and neglect of government officials.

Representative governments seek and receive citizen support but they also need the active cooperation of their public servants. The right of the public to information is crucial in modern city management. Enacting freedom of information legislation is required to change the culture from one based on the need to know to one based on the right to know. Mandating such access usually requires national legislation.

Information encompasses all material in any form, including all records and documents. The right includes that to inspect works, documents, and records; to take notes regarding this material, or copies of documents or records; and to obtain information in any form.

Tackling the complexities of Asian land ownership, policies

Local land-use management is the central tool in implementing a city road map, and a difficult one to use. Land tenure is one of the most serious and intractable issues facing the management and development of cities in Asia. In most cities, more than 50% of urban populations live on land where title is disputed, unknown, or undergoing some form of litigation related to tenure and/or land-use rights. Poor land administration and management make the rationalization and planning of how land is used a major challenge. The weakness of land markets leads to corruption, speculation, and sporadic forms of development. These in turn impact the efficiency and effectiveness of local land tax revenue collection, compensation claims, and operation of rental property markets.

The first steps are to set clear, long-term objectives regarding the use of land, to adopt land policies that influence physical development well in advance of city growth, and to make administrative frameworks more efficient. Next, cities will need to adopt land policies that not only continue to promote economic development but also limit the negative impact on the environment and the poor.
The Right to Information Act of India

This law grants people access to government records. Any citizen of India may request a department of the central government, state government, or a public sector company or bank for information on almost any subject related to department or company activities. All government bodies are expected to comply within 30 days, failing which the officials responsible for noncompliance face financial penalties and, if noncompliance persists, jail terms. The act also requires government bodies to publish certain specified information on websites. The act was passed by Parliament on 15 June 2005 and came into force on 12 October 2005. Civil society groups consider it a major milestone toward transparency in governance and an important tool in the fight against corruption. One major success was in Rajasthan, where nongovernment organizations and activists have used the act to expose corruption and leakages in the state government’s right-to-work programs. The Indian media has carried out concerted campaigns to make citizens aware of the power of the law. In many instances, the threat of disclosure by itself ensured that work moved faster. However, there have also been cases of stonewalling, harassment, and intimidation. Activists also contend that the law does not go far enough, since there are blanket exceptions for certain departments based on national security. Some groups have also called for a duty-to-publish law that would require government bodies to publish substantially more information than they are obligated to now. Some government officials have complained that the act goes too far but the law’s supporters have generally not been sympathetic to these claims. In July and August 2006, the central Government, allegedly under pressure from bureaucrats, tried to bring in an amendment that would substantially limit the scope of the information required to be disclosed. It had to back down under public pressure.

New Site of Brgy. Ma-ao Specialized Housing Project in Bago City

7.50 Hectares
P12.00 per sq.m.
391 Beneficiaries
LGU-owned

LGU = local government unit, P = Philippine Peso, sq.m = square meter.

Government should focus on developing the major infrastructure networks, especially to rationalize development of the urban periphery in advance of major growth. Cities also need to ensure that landowners pay the full costs of infrastructure provision either through the adoption of betterment techniques or through regulations that insist on appropriate infrastructure being built to adequately service all developments. There is also a strong case for citizens, through their government, to get a large part of the increase in values resulting from public investments. Advance land acquisition of certain key plots is essential for the planning and development of trunk infrastructure networks to avoid governments being forced to pay excessive land prices. However, large public land banks for other purposes such as housing have almost always been unsuccessful and should not be encouraged. The use of expropriation is recommended only as a last resort but city administrations should not hesitate to use such provisions when landowners are resisting acquisition for public good. Land must be acquired at existing use value so that planning gains return to the community.

Land registration and information systems need to be improved. In Asia, it is not unusual for only 10–20% of transactions to be formally registered. A functional land registration system provides tenure security and support for the property taxation system and facilitates efficient physical planning based on a good land information system. Such a system is a cost-effective means of storing, extracting, and sharing data on land, including transactions, use, ownership, population densities, and values.

City governments need to reduce the number of administrative procedures and time needed to obtain permits and approvals. Complicated procedures and administrative frameworks help delay the response of land markets to the changing demands of the population and to land speculation. Current physical planning instruments used in Asian cities are generally too static for rapidly growing cities and standards under typical building regulations are often too high, making building plans are almost impossible to monitor. More dynamic tools are required and zoning ordinances need updating through the adoption of mixed-use zoning and floor area ratios. Minimum plot sizes for residential use have proved unenforceable in many countries.

since they bear no relation to market forces or affordability. In general, they should be abandoned.

**Progressive zoning ordinances**

Zoning involves land-use regulation by permitting uses according to mapped zones. Its purpose is to segregate uses that are incompatible but in practice it prevents new development from harming existing residents or businesses. Zoning restricts the activities that are acceptable on particular lots, be they open space, residential, agricultural, commercial, or industrial. It regulates the densities at which those activities can be undertaken, for example, low-density or high-density housing, and the amount of space structures may occupy. It also lays down allowable setbacks, i.e., the location of a building on the lot, and the proportions of land use on a lot—for example, how much landscaped space, how much paved space, and how much parking must be provided.

Zoning codes have evolved over the years as urban planning theory has changed, legal constraints have fluctuated, and political priorities have shifted. Euclidean or building block zoning,\(^{165}\) the most common zoning used in Asian cities, involves the classification of land uses into specified geographic districts and standards, including limitations on permitted development activity. Such zoning is relatively effective, easy to implement, has a long-established legal precedent, and is familiar to city administrations. But in many cities, zoning has proved impractical. More flexible new approaches are needed. One is to change regulations that specify requirements of open space around buildings, placement of building by height limitations, and setback regulations, and instead use of floor area ratios that relate floor space and the lot size. Zoning can be a powerful planning tool because it enables a city to select which land uses should be allowed. But land in Asian cities is often in multiple or informal use and the introduction of a more flexible, mixed-use zoning approach would make implementation easier. Zoning also works better as a planning tool when it is supported by appropriate subdivision and building regulations.

**Subdivision regulations in an Asian context**

Subdivision regulations govern the development of raw land for its zoned purpose. They define standards for layout and lot sizes, street improvements, and procedures for assigning private land for public purposes. While subdivision plans and regulations have proved to be an efficient tool in European countries as a means to ensure that developers finance some or all the costs of the provision of public infrastructure, they have been less successful in developing countries. Problems have included the difficulty of ensuring appropriate access to

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\(^{165}\) Named for the type of zoning code adopted in the town of Euclid, Ohio.
New Approaches to Zoning

Performance zoning adopts performance-based or goal-oriented criteria to establish review parameters for proposed development projects. Often such an approach uses a points-based system under which a property developer can apply credits toward meeting established zoning goals through selecting from a menu of compliance options, such as the mitigation of environmental impacts, providing public amenities, and building affordable housing units. The system is highly flexible but can be difficult to implement and often requires a high level of discretion by the supervising authority. For this reason, performance zoning has not been widely adopted and is usually limited to specific categories within a broader prescriptive code.

Incentive zoning provides a reward-based system to encourage development that meets established urban development goals. Typically, a base level of prescriptive limitations on development will be established and an extensive list of incentive criteria will be established for developers to adopt or not at their discretion. A reward scale connected to the incentive criteria provides an enticement for developers to incorporate the desired development criteria into their projects. Common examples include floor-area-ratio bonuses for affordable housing provided onsite, and height limit bonuses for the inclusion of public amenities onsite. Incentive zoning has become more common and allows for a high degree of flexibility but it can be complex to administer.

Design-based zoning relies on interrelated schedules of rules to be applied to development sites according to both prescriptive and discretionary criteria. These criteria are typically dependent on lot size, location, proximity, and other various site- and use-specific characteristics. Design-based codes offer considerably more flexibility than Euclidean codes, but can be very complex to create and administer. In any case, design-based codes are not common and, where they have been used, they have been often criticized as overly constraining and difficult to interpret.


Improved coordination: a summary

The needs and conditions of development in Asian cities require a flexible set of standards that consider the rapid changes in the urban fabric, relate more to local conditions—including the requirements of informal settlements—and are easy to implement. A more permissive system of development control is needed to allow some construction within a clearly defined category to go ahead without planning and/or building permission. Such an approach shifts implementation to the builder, who must follow the design standards, and relies on a system of spot checks and strict enforcement. This would facilitate the gradual introduction of incremental development standards for housing, recognizing the nature of the extensive informal settlements in most Asian cities.
Key Actions
At the local government level

- Prepare city development road maps and city region strategic plans which identify directions for growth and “opportunity” areas.
- Establish a broad umbrella entity which agrees strategic priorities—the model is a larger area version of United Kingdom’s urban regeneration companies—which we term “strategic development companies.”
- Establish sector, purpose-specific implementation entities such as water boards called “special investment organizations.”
- Improve local government accountability to stakeholders, including the public’s right to information and stakeholder/community engagement; implement supporting e-governance systems.
- Prepare, with stakeholder involvement, action/activity area plans for opportunity areas.

At the national government level

- Prepare and synthesize country urban and city region road maps and determine options for national government role in city development and improving city efficiency, balancing the need for investment against that to capture the benefits of local governance, participation, and ownership.
- Establish the enabling framework for cross-border agencies, partnerships, and their linkages for city region management including metropolitan government, partnerships, regional bodies for specific services, voluntary cooperation, and strategic development companies.
- Set the context for institutional reform for infrastructure and service provision including the options and circumstances for different ownership structures (private → joint-venture → community → public) and modalities of provision (BOOT → concession → contracting → in house).
- Foster independent research institutions to provide advice across administrations; nationally coordinated, but decentralized to major centers to reflect diversity of circumstances.
- Establish appropriate regulatory regimes for improved land management, including zoning and privatization regulations, and building codes.
- Sponsor necessary enabling legislation and administrative arrangements for the above.
- Establish the enabling framework for sector and geographic investment organizations and implementing special purpose vehicles.
- Promote legislation to ensure the public’s right to information at all levels of government.
The priorities for action for the different types of communities, the nation, or the province, self-reliant and dependent cities and smaller towns and villages, are set out below.

### Matrix of Priorities for Action: Appropriate Coordinating Structures

<table>
<thead>
<tr>
<th>Classification</th>
<th>Structuring for Change</th>
<th>New Planning Approaches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nation or Province</td>
<td>Enabling legislation, guidelines, and regulatory framework for strategic development companies and special purpose vehicles (SPVs)</td>
<td>National urban sector road map</td>
</tr>
<tr>
<td></td>
<td>Right-to-information legislation</td>
<td>Guidelines for the preparation of city road maps</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Enabling legislation and guidelines for improved land management and progressive zoning and subdivision regulations</td>
</tr>
<tr>
<td>Self-Reliant Urban Areas</td>
<td>Link to national/state agencies</td>
<td>Linkage with national strategy</td>
</tr>
<tr>
<td></td>
<td>Establish cross-jurisdictional strategic development company</td>
<td>City region road map/development strategy</td>
</tr>
<tr>
<td></td>
<td>Set up/strengthen special investment organizations and other SPVs for improved infrastructure and service delivery</td>
<td>Action/opportunity area plans</td>
</tr>
<tr>
<td></td>
<td>E-governance enhancements</td>
<td></td>
</tr>
<tr>
<td>Dependent Urban Areas</td>
<td>Link with city regions and their agencies</td>
<td>Linkage to regional strategy</td>
</tr>
<tr>
<td></td>
<td>Set up/strengthen special purpose vehicles for improved infrastructure and service delivery</td>
<td>City/municipal road map/development strategy</td>
</tr>
<tr>
<td></td>
<td>Introduce/improve e-governance</td>
<td></td>
</tr>
<tr>
<td>Towns and Villages</td>
<td>Phased introduction of e-governance</td>
<td>Urban road map</td>
</tr>
<tr>
<td></td>
<td>Link with major urban centers or regions</td>
<td>Plan to improve linkages with nearby towns and cities</td>
</tr>
<tr>
<td></td>
<td>Coordinate with adjacent local governments</td>
<td></td>
</tr>
</tbody>
</table>
Chapter 3
Effective Financing Responses
Seeking investment finance for cities: how to start

A lack of financing to develop infrastructure is a major constraint on city governments everywhere. Some have more resources than others because they are better able to access funds, either by improving own-source revenues or by raising money from higher levels of government, the private sector, or through borrowing. But all cities are short of money. This chapter responds to issues raised earlier and suggests ways in which infrastructure can be funded in Asia’s cities. It starts by outlining a financing and development framework. Special-purpose vehicles (SPVs) are recommended as an appropriate institutional structure for implementing the plans of special investment organizations (SIOs) described in the previous chapter. Own-source revenues are unlikely ever to be sufficient to finance the capital investments needed in today’s fast-expanding Asian megacities, but considerable amounts of money are available on local capital markets and the international capital markets. They are seeking investment opportunities.

Activating capital markets to finance urban infrastructure is recommended and four pathways for governments to access sustainable new sources of finance are outlined. Not all cities will be able to access capital markets immediately through more sophisticated channels such as bonds. Many are not ready and the capital market is not able to respond in these circumstances. But as a basis for developing alternatives for investment finance, local governments need to increase their financing options and improve creditworthiness.

These challenges are discussed next in the chapter that highlights the need to match funds with functions at all levels of government, for cities to greatly improve local revenue generation, for national governments to move toward incentive-based transfer systems, and for local governments to take specific measures to improve their creditworthiness. City governments have assets and these can be used more effectively to raise resources also. Similarly, communities too can be encouraged to contribute to infrastructure improvements. Lastly, governments need to prepare more commercially viable projects, where development finance can be raised and secured through SPVs and other mechanisms based on future revenue streams. Measures that national government should take to encourage such action are also described.

An infrastructure financing and development framework

Financing the investments required under a city road map has been shown previously to require:

- Detailed financial structuring, recognizing that the demand for finance far exceeds current local

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**Reasons for Change**

<table>
<thead>
<tr>
<th>Taxpayer-dominated financing</th>
<th>Dominance of capital market financing</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Limited local government unit borrowing</td>
<td>- Creditworthy local governments</td>
</tr>
<tr>
<td>- Limited revenues from utilities, services, and land</td>
<td>- Commercially viable infrastructure projects</td>
</tr>
<tr>
<td>- Heavy dependency on central or provincial transfers</td>
<td>- Active capital markets</td>
</tr>
<tr>
<td>- Dominance of central line departments and public corporations</td>
<td>- New institutions and special purpose vehicles</td>
</tr>
<tr>
<td>- Nonresponsive communities</td>
<td>- Attracting community resources</td>
</tr>
</tbody>
</table>
government revenue-raising capacity and that private finance and community resources need to be encouraged to fund infrastructure development. But the range of financing sources has never been wider. Financial structures need to be tailored to the requirements of the capital market and those of a particular project.

Maximizing own-source revenue and funding options for local governments, recognizing that they need both the mandate and tools to raise revenue for local projects, establishing national enabling frameworks to provide this mandate, and the incentives to use it. Support for local governments is necessary to develop capacity in initiating and controlling financial structuring, in maximizing their own revenues, and in efficiently using national transfers.

Under current systems of intergovernmental fiscal relations, most decentralized local governments cannot fund needed city region infrastructure, even if they maximize their own-source revenues. Current arrangements often offer no incentives to maximize own-source revenues. While governments are able to borrow at a lower cost than the private sector, this does not reflect real project risks of design, construction, and ongoing operations and finance. Where a government project has cost overruns, these are passed on to the community through higher taxes. Under these circumstances, the lower borrowing rate provides no benefit to the community. Cost overruns are common on public projects, especially those in developing countries. But the private sector has an incentive to bring projects in on time and under budget if they are structured well.

At present, the financial vehicles needed to structure and attract the additional funding required to manage a city’s growth are lacking. Despite large savings held by financial organizations, money for infrastructure is often ad hoc, with no or inadequate systems to channel long-term funding—through infrastructure bonds, for example, which are currently constrained by restrictions on eligible investments for holders of long-term savings. There are no incentives for the trustees of funds to invest in longer-term, riskier, higher-return assets such as infrastructure. Foreign participation, which could reduce perceived risk, provide longer-term, lower-cost funds, and supply larger amounts of funding, is restricted—both

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**Urban Infrastructure Financing and Development Framework**

<table>
<thead>
<tr>
<th>Assets</th>
<th>Maintenance</th>
<th>Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government Grants and Loans</td>
<td>Internal Revenue Generation</td>
<td>Capital Markets</td>
</tr>
<tr>
<td>Public–Private Partnerships</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual budget Public revenues Domestic and foreign borrowing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounting reforms Tax and revenue reforms Operational efficiencies Tariff enhancements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leveraging resources Accounting/revenues reform Credit enhancement/rating Business Plan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project development process management Project development funds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounting, tax and operational reforms; private sector management; project development and planning; tariff reforms; credit enhancement instruments; and capital market management</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


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166 Audit Office figures from the UK show 73% of government projects run over budget compared to only 20% of public–private partnership projects.
Special Purpose Vehicles: The new “It” organization

Special purpose vehicles (SPVs) or entities are companies established for a specific activity with powers limited to those required to attain its purpose and a life span that ends when this has been achieved. When a government or a company—commonly called the sponsor of the SPV—wants to achieve a particular purpose, it separates an asset, activity, or operation by forming an SPV. SPVs normally have three participants: (i) the transferor, originator, or sponsor that transfers the assets, liabilities, or rights that creates the SPV; (ii) the transferee, which is the newly created SPV that receives the transferred assets, liabilities, or rights; and (iii) the investors that provide funding for the activities through loans to the SPV, often through the issuance of marketable securities. As legal devices, SPVs are relatively cheap to create and maintain while offering possible taxation, regulatory burden, and confidentiality benefits.

Asset swaps and structured finance have developed rapidly over the past 10–15 years. Starting in the United States in the early 1980s, the use and development of such structured finance transactions have become common in most of the world’s major financial markets. From the initial use of the SPV to enhance tax efficiency, SPVs are now used for many transactions as financial markets become more sophisticated.

These include securitizing loan portfolios of a bank and securitizing financial assets such as car loans, credit card and hire-purchase receivables, finance leases, aircraft operating leases, and real estate mortgages.

SPVs are incorporated as companies whose articles of association limit business to the particular purpose, such as providing an infrastructure asset or service or the issue of securities. To maintain the integrity of the structure, the directors, officers, and the administrators of the SPV should be independent of the originator. The use of SPVs has spread to all sectors of the economy. In the financial services industry, the most common application is found in the asset-backed securities market, including collateralized debt obligations and mortgage-backed securities. In the public sector, the activities of SPVs are often undertaken through public–private partnerships, build-own-operate-transfer (BOOT) schemes, and joint ventures to construct infrastructure, manage financial assets or liabilities, or deliver services on behalf of government. In addition, securitization also exists with regard to assets expected to arise in the future, such as future receivables and expected income flows, that are often referred to as future flows securitization.

Enable and encourage superannuation and life insurance companies to invest a significant part of their portfolio in infrastructure finance by eliminating the restrictions on their eligible investments.

Improve civil service incentives for the development of skills in designing and structuring such SPVs.

**How the special purpose vehicle functions**

Examples of SPVs in the development of city infrastructure are public-private partnerships (PPPs) or private finance initiatives (PFIs). These SPVs vary in form and detail but usually involve a private sector company or consortium that finances and operates a company whose purpose is to deliver, operate, and manage new public infrastructure or services, often for more than 20 years. The company receives a payment that recognizes the cost and risk of the business. In most cases, the created asset is eventually returned to government ownership, having being maintained and handed back “as new.” The payments by government can be toll fees or revenues on infrastructure, such as roads or water supply systems, or an agreed service fee on social infrastructure, such as schools or hospitals. The approach enables the private sector to innovate through better design, technology, and service delivery that help mitigate risk and provide higher-quality service. Some SPVs raise funds for infrastructure development by others, including government.

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**Suzhou City Infrastructure Investment Company**

In 2001, Suzhou Infrastructure Investment Company (SIIC) was established. Its mission was to manage the construction, financing, and operation of infrastructure in Suzhou. SIIC had a registered capital of 0.4 billion renminbi (RMB) but by 2006, its total assets had reached RMB18 billion, with a net worth of RMB5 billion and RMB13 billion in liabilities. The city government, according to its 5-year plan, plans its infrastructure. SIIC raises financing and develops infrastructure projects. Financing is raised from a number of sources including loans from the China Development Bank and local commercial banks, trust fund financing, project financing including build and transfer, land rent revenue, and project revenues.


**Tianjin Infrastructure Investment Group**

In November 2004, Tianjin Infrastructure Investment Group (TIIG) was established. Its registered capital was 14 billion renminbi (RMB) and the city government committed to increasing the registered capital using its own resources, fee revenue, and land rent. The company adopted a shareholding model with a holding company and subcompanies. Now there are four subcompanies, and one consulting firm. Under the subcompanies are other low-level subcompanies and shareholding companies. At the end of June 2005, TIIG’s assets totaled RMB49.5 billion, of which net assets were RMB20.1 billion and total debt was RMB29.4 billion. TIIG had 427 employees at the time.


**Philippine Infrastructure Company**

The Philippine Infrastructure Company (PIC), a government corporation, was set up in 2006 as a wholly owned subsidiary of the publicly owned National Development Corporation (NDC) and is to be the fund manager of infrastructure projects. Its functions include the structuring, packaging, bidding out, and awarding of construction projects to the private sector. The PIC was funded initially by a 100% equity participation of the NDC worth 80 million pesos (P). The Development Bank of the Philippines (DBP) will be the financial advisor to identify the financial sources of the PIC. A number of ways to raise capital for infrastructure projects have been identified and include an outright loan from DBP, securitization of government assets, and the flotation of PIC bonds with government guarantees. The target is to raise at least P200 billion to finance infrastructure.

Activating Capital Markets to Finance Urban Infrastructure

The principles

SPVs structured as companies allow capital markets to finance projects either by providing equity—i.e., buying shares in the company—or through debt, that is, by providing the company with loans. The returns the capital markets require for providing such finance depend on a number of factors. One is the liquidity of the asset and/or financial instrument that is being used—can it be sold if they need cash? Another involves the perceived risk and the market’s risk appetite—what types and levels of risk can they manage? Financial structuring of an SPV is about matching the instruments available in the capital market to the characteristics of the project. For national governments, the first challenge is to open up the possibility of funding infrastructure to a wide range of institutions, particularly those like pension funds and life insurers that have a need for long-term, stable assets. The second challenge is to enable the introduction of liquid financial instruments that are “predictable” in terms of being legally and administratively sound, and cover a wide range of risk/return profiles. An important aspect is encouraging the development of secondary transactions such as securitization and swaps, and the development of different risk/return instruments, for example, tranching debt into prime and subordinated assets.

Financial structuring will seek to establish the appropriate balance of debt and equity. Equity can be sourced from international or local operators, suppliers, and from equity funds. Debt sources are even more diverse, with international and local banks and funds able to offer loans and buy bonds. Guarantee, insurance, and hedging facilities are also available for a wide variety of institutions and instruments.

The four pillars of sustainable finance

The Asian region has made considerable progress toward developing its capital markets over the last decade. The annex to this chapter provides an overview of selected capital markets in Asia. More than a few are at a stage where their domestic capital markets could provide substantial new funding for infrastructure. A number of others could link their domestic markets to offshore vehicles that could offer competitive finance, as shown on the figure on the next page.

Pillar One: Specify risks narrowly to encourage trading and liquidity

By recognizing that 20–30% of any infrastructure project’s cost-base is highly risky, ways can be developed to package the high-risk portions to appeal to investors. Subordination methods used in securitization can convert some of what was

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**Four Pillars of Better Finance for Infrastructure**

- Structure funds to narrowly specify credit risks and make them easier to sell and trade—for example, the covered bonds that are an economical option used in Europe.
- Plan to finance infrastructure in stages that clearly match reductions in risk as the project matures.
- Pool a range of infrastructure projects into a structured fund to offer the investors diversification.
- Instill a culture of risk control and continuous improvement and project ownership to reduce risk.

* A bond that is backed by high-quality loans on the book of a bank meeting certain quality requirement. The loans backing the bond are usually worth 110–140% of the bond’s value, as a form of credit enhancement. Such bonds are usually rated AAA and regulated under national law.


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**Regional CDO Mitigates SME Credit Risk**

A recent example of using a collateralized debt obligation (CDO) to distribute a relatively high-risk pool of credit assets is a pilot project in April 2006 by the SME Credit Assist (Singapore) Ltd. A local bank and government agency collaborated to create this special purpose vehicle fund, two thirds of whose assets were funded at an AAA-rating level and 17% of which were funded through an unrated, residual-risk class, all in Singapore dollars.


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167 Where projected revenue flows, for example, from a loan or tolls, are “bundled” into a bond.
168 Where variable interest flows from a loan are “stripped” from the repayment of principal and the variable rate returns swapped with the holder of fixed rate returns, for example.
169 An agreement to take a lower-ranking position in the queue of claimants for the assets of a borrower in the event of default. The lowest ranked or most subordinated, thus, will take the “first loss” if there is a default by the borrower (issuer). By defining several layers of subordination for bonds issued by a fund, the fund creates agreements paying different rates of interest to investors at each layer. The highest-ranking investor gets the lowest rate of interest for taking the least risk, and so on.
an untraded asset (project equity or a guarantee) into several tradable securities (junior and equity classes of a credit-asset pool and the related credit default swaps). As tradable credit, these securities could give investors more confidence to buy into new projects.

Restructuring the loans issued by infrastructure projects into a combination of subordinated bonds and credit-enhanced bonds can lower the average cost of capital to the project. By narrowly specifying project risks according to the probability of default, these securities can be sold to a much wider range of investors and develop new channels of finance. If structured funds are arranged under national covered-bond legislation rather than simply as collateralized debt obligations (CDOs), they can be produced very cheaply and regularly, thus supporting greater liquidity in the market.

**Pillar Two: Plan finance around the asset’s life cycle to lower funding costs as risk declines**

A staged approach to finance avoids burdening the operating infrastructure with a high cost of finance throughout its life. It is only during the early stages of development and regulatory stabilization, while the asset is still proving itself as a viable service to the community, that it should pay a risk premium to its initial debt and equity investors.

As the initial high-yield debt is refinanced at a lower rate 3–5 years into the operating life of an asset, the infrastructure should be running above its break-even capacity level and planning for expansion may have begun.

It may then shift from relying entirely on subordinated financing structures and operator equity to refinance itself with direct bond issues from the operating company. Within another 2–5 years, the cash-flow risk will be lower and the equity of the operating company may be ready for listing on a local exchange. It could be listed either by itself or bundled together with similar infrastructure providers in a holding company. The figure on the next page illustrates how the time line of this financial structure might look.

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170 Usually a form of guarantee to improve the credit quality of a loan or bond. The guarantee or insurance enhances the credit standing of the issuer (borrower). A reserve or collateral pledged to the investor (lender) can also enhance credit.

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**Typical CDO Contract Structure**

- **Fund Manager**
  - Bond Portfolio
    - Rated Baa3 (on average)
    - Includes 15% High-Yield Debt
  - Asset Management Agreement
- **SPV**
  - Domiciled in Ireland
  - Investment
    - Interest Rate & Currency Hedges
  - Indenture
  - Administrative Agreement
  - P & I
- **Trustee**
  - Aaa and Rated Notes LIBOR + 50 bps
  - Aa2 and Rated Notes LIBOR + 100 bps
  - Baa2 and Rated Notes LIBOR + 350 bps
  - Equity Manager may Invest in Equity
- **Bank Arranger (Aa1/AA+)**
  - Hedge Counterparty


An equity investment trust (EIT) is an investment product taking advantage of such structuring. A group of cities could pool several infrastructure projects with similar uses or cash-flow profiles to form an EIT. Where the projects are mature enough to have highly predictable cash flows and offer some geographic diversity, they could be listed on a local or regional stock exchange as an operating company responsible for managing several assets. Such special-purpose instruments can be seen as alternatives to a utility company because they operate and pay dividends in a very similar way. This is similar to an approach adopted, before their listing, for a number of infrastructure assets in low-risk markets over recent years.

A recent example is the Macquarie Korea Infrastructure Fund, which acquired the operations of many Korean toll roads over the last 3 years and was listed in March 2006 on both the Korean Exchange and the London Stock Exchange. Many large cities in Asia already have a number of mature infrastructure assets that have established stable cash flows and some of these could be refinanced through an EIT structure. If the cash flow from tariffs and public concession fees exceeds debt amortization, and maintenance and administration costs, the asset should produce a dividend for the owners. Several such assets within one country could be acquired by a special-purpose corporation (SPC) that might initially be jointly owned by the owners of the individual assets. The assets could also be located in several countries if the target equity investors felt comfortable with a common currency, or a suitable dual listing could be arranged. By floating the SPC on the local exchange, new funds could be raised, some foreign-currency debts could be repaid, and some owners could achieve a partial exit. To make such a security appealing to retail and institutional investors alike, it is common for the SPC to borrow new funds and raise its leverage up to 40% of the total assets. Instead of using bank borrowings, the SPC could issue local currency bonds. If they were adequately secured by the new assets, these bonds might also be suitable for retail investors. These funds can be used for acquiring new assets and improving existing ones. The higher leverage can also raise the return on investment for shareholders, so long as the yield on new investments exceeds the cost of debt and operations. Where infrastructure is built in stages, the early success record in producing reliable cash flows and communicating effectively with all investors can yield a lower cost when it comes to extending a network or increasing the size of projects than is common for the earlier investment phase. Similarly, if a city demonstrates that its management of tariffs and operating regulations can produce lower-than-average risk for its infrastructure operators, the political risk premium for that city will diminish. This is what the major cities of the Republic of Korea have begun to do.

If the rates of return paid to investors at each stage of an infrastructure project’s life reflect the perceived risk at that stage, then attracting enough capital from the private sector will not be a problem. But funding agencies often subsidize the initial risk so that neither lenders nor sponsors are motivated to refinance and lower the project’s commercial cost of finance later. By planning a high-cost stage early, followed by two or three successively lower-risk financings, the whole-life cost of capital can be reduced. Cities can achieve this lower-cost benefit early by refinancing existing infrastructure into a pilot EIT structure that could be sold to retail investors and institutional investors who require a high degree of liquidity.

**Pillar Three: Support risk diversification for investors**

Perhaps the most effective way to finance infrastructure is to allow pension funds and life insurance companies to invest a proportion of their holdings in infrastructure-related assets. Through the use of infrastructure bonds issued directly by SPVs or by banks issuing covered bonds backed by receivables from infrastructure projects, these institutions can...
Infrastructure Funds

Over a dozen private-sector funds are now focused on infrastructure in Asia, mostly organized as private-equity funds. They have committed funds in excess of $6 billion. While this amount is considerable, some of these funds were launched over 15 years ago and most have spanned a period of relatively slow infrastructure growth in Asia. As this growth quickens, much greater funding will be needed to provide the partial exit that private-sector developers will require if they are to fund the equity for projects demanded. In the mid-1990s, private participation in infrastructure (PPI) accounted for up to 22% of the cost of new infrastructure, according to figures from the World Bank. This fell below 6% in 1998. Even in lower-risk markets such as the Republic of Korea, the PPI participation level has only come back to 15%.

Some governments have started to develop focused institutions to refine and encourage use of PPI and capital market techniques to attract more capital to infrastructure development. There are also several domestic funds and investment facilitation agencies in the region with portfolios of infrastructure project debt or equity. These entities seek to act as catalysts for investment, usually drawing in PPI partners. The Private Infrastructure Investment Center of Korea (PICKO), formed in 1998, the India Infrastructure Finance Company (IIFCL), approved in November 2005, and the Indonesian Government’s Committee for Acceleration of Infrastructure Development (KKPPI) are three examples.

PICKO is more of a concession arranger than IIFCL and the related guarantees are handled by other public agencies, under PICKO coordination. The IIFCL intends to provide public capital through guarantees for up to 20% of project cost to fill identified financing gaps. While it is a new agency and still defining its policies, there is a risk that a supply-side approach may displace some higher-risk capital rather than address the risk-pricing and risk-sharing concerns of potential private investors. A previous catalyst, the Infrastructure Leasing & Financial Services Limited, began operations in 1988 as an investment manager and deal arranger, bringing private sector skills for financing to the public sector without using the public budget. Indonesia’s KKPPI fills a similar role as PICKO does in the Republic of Korea.


The use of structured finance vehicles such as CDOs, credit debt swaps, and EITs can provide various means of risk spreading and specialization. These modalities can produce a large amount of low-risk bonds by transferring the risk that investors must face for the majority of the financing needed. More importantly, they can convert a majority of reserved financing into a liquid, tradable form. Liquidity opens the door wider to the most appropriate risk mitigation—technique diversification. In particular, structuring vehicles placed between users and investors can help diversify the investors’ portfolio risk and can build confidence for other institutional investors in the reliability of risk pricing. Two requirements for diversification are a sufficiently large number and a variety of assets. If the cash flows of two assets respond differently to the economic and political cycles, then their investment returns are likely to have a low correlation with each other. This creates the diversification benefit—an improvement in the amount of risk taken for a given investment return.

Another way to diversify a fund is to spread its investment across more than one country or across widely separated cities. Both add to the cost of managing the collateral pool of the fund because of different regulations and operating economics but they lower the probability of a large default within the pool. The resulting improvement in the risk-return tradeoff makes it easier to sell the securitized notes to a wider audience of investors, further lowering the cost of finance for the infrastructure. Pooling infrastructure assets of the same kind, such as urban bus systems, from a variety of cities across a country or region would facilitate capacity building but its biggest benefit would be in risk diversification. This would make shares in a fund or bonds from a related CDO or asset-backed security more attractive than those of a single project within the pool. A much larger number and variety of investors could buy these securities. This would produce a lower cost of finance through both increased scale and diversification.

Pillar Four: Employ accountability, adaptability, and learning mechanisms

On their own, the three pillars of more precisely specifying risk, of adapting the financial structure behind the infrastructure over its lifetime, and of diversification can only spread and reduce risk to a certain degree. If political sponsors and asset operators are not strictly accountable to users and investors and if they fail to adapt to a changing environment, the risk
they generate will soon saturate the financial markets’ capacity to bear risk again. This requires continuous improvement in a city’s ability to communicate plans, decisions, and actions to users and investors. While revenues and expenses are easier to measure, the actions behind them will also be closely watched. They need to be transparent.

**Keep stakeholders in the loop**

This is not merely public relations. It is integral to sustainable financing, especially in the construction and early operation phases of an infrastructure investment. The stakeholder consultation process, which should begin during design and planning for construction, must continue through the life of the infrastructure, adapting with each phase. If users and investors are involved in the ongoing process of planning, they will share some of the responsibility for adjusting to demand and to the unexpected, whether currency or political changes or large shifts in demographic trends.

The definition of accountability practiced within government should become continually stricter. Continuous feedback from users and investors will help them and the infrastructure operator overcome institutional inertia and defensiveness. But the mechanisms for that feedback need to be set up from the beginning and adapted over time. The most useful indicators should be part of the ongoing consultation process, with subcommittees set up to design and monitor them, each chaired by a visible figure in the local government. A fundamental indicator should be tradable guarantees, such as credit default swaps derived from the debt of the initial financing phase. Municipal governments should give high priority to establishing an independent agency for the fiscal administration of infrastructure or to setting up specific utility companies. A genuinely independent entity can produce regular performance reports that have credibility and can be viewed with detachment by all parties, including the asset operator. By combining such data with regular user surveys and the pricing of financial risk instruments, including project bonds and credit debt swaps, the community will have a complete picture of performance against the standard of highest and best use.

**Securing and keeping government involvement**

The most effective means of motivating parties to improve accountability is not public censure but the risk of profiting or losing one’s own money. As governments have been shifting from the comprehensive provider-and-regulator role to one of sponsor and regulator, the norm has been for public decision makers to remain disinterested in the infrastructure’s operations. Although some claim that electoral accountability provides sufficient motive to maintain high standards of governance, experience around the world shows that it is clearly not enough. It may be more effective for the government to take on the perspective of a minority shareholder in the infrastructure. If the government pension fund was encouraged to buy a 3% stake in an operating infrastructure company and a 2% residual-risk position in the project’s debt, the political sponsor’s attitude toward risk management would change dramatically. This alignment of interest with financial investors would balance its basic alignment, through elections, with users.
Infrastructure operation and finance are a politically charged business that needs to be balanced by clear positive and negative incentives for improvement of accountability. Internal processes designed for continuous improvement will help the infrastructure operation adapt over time and increase its accountability to users and investors. Requiring the political sponsor to take a direct financial stake in tradable guarantees and the residual risk of any debt would place government in a more balanced position between user and investor needs.

**Phased development to overcome inhibitions**

The measures outlined above extend and set a new direction for current practice. The four pillars of sustainable finance—bundling different risks, adaptive financial structure, diversification of investors, and participative sponsorship—will foster better user–investor collaboration and ease bottlenecks that are limiting private finance for infrastructure. But political inertia and risk aversion will inhibit wholesale adoption of these techniques in many cities. Nevertheless, as part of their national urban road maps, governments should build these measures into their plans for developing capital markets, for financing new infrastructure projects, and for refinancing existing assets. They should invest resources on a carefully structured series of demonstration pilot projects to prove the concepts and reduce risk perceptions.

**Changes in local government financing**

City governments often indicate that they lack financial resources to provide appropriate services to their residents. In some cases, this gap results from a demand for unrealistically high standards of service. In others, it stems from the mismatch between functions and revenues at different levels of government. But rapid urban population growth will bring continually increasing demand for public services while a sustained rise in incomes will build pressure for these services to improve in quality. The revenues of most urban local governments have not increased in line with this demand because their revenue-raising authority is limited in many cases to relatively income-inelastic sources, including property taxes, fees and fines, and transfers. Hence, strengthening the financial viability—notably the revenue base and expenditure controls of city authorities—is a priority.

While a national government response and reforms to tax-sharing arrangements are part of the solution, it should not be forgotten that one reason behind decentralization in Asian countries was the financial inability of national governments themselves to fund necessary infrastructure and services. The answer then clearly requires all to work as one—national governments, local governments, communities, and the private sector—to reduce the resource gap.

The difference between expenditure needs and the availability of resources can be addressed through reforms in local government finance. This is best undertaken through a phased, focused approach over the medium term that addresses change in a gradual manner. Early stages often involve legal and regulatory changes that lead to clear functional responsibilities between levels of government and an appropriate framework for intergovernmental fiscal relations so that funding more realistically follows function. This would then be followed by improving financial management systems and capacity. More specifically, this

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Reducing Risk: Potential Pilot Programs

Establishing a conduit collateralized debt obligation (CDO) that acquires much of the debt of several new and existing infrastructure projects in a market and redistributes it through structured notes is one way to reduce risk. By working with domestic and international banks, such a vehicle could be used to develop structuring skills within domestic institutions. Some of the project credit risk could be acquired through credit debt swaps for each project in the pool, thus buying in first-loss risk to enhance the balance sheets of the domestic banks exposed to each project. The conduit CDO could then distribute the riskiest portions to sophisticated investors who might have an appetite for this risk, if priced correctly. If the original credits are seriously mispriced, specific credit enhancement from ADB or some other agency at the pool level or for some subordinated notes could facilitate the distribution.

Another option is to establish an equity investment trust (EIT) to acquire controlling equity interest in several different mature projects and to list it on a local stock exchange. For either the CDO suggested above or bonds issued by the EIT to further ramp up its portfolio, a basket-currency structure could be used in the notes to represent the markets in which the underlying infrastructure assets operate. This would reduce any currency mismatch that might otherwise arise from a multimarket pool of assets.

involves policy actions that lead to expanding the financial resources available to local governments and encouraging their more efficient use. These actions should focus not only on own-source revenues, local government borrowing, and intergovernmental transfers but also on reducing local expenditures through improved productivity, revisions of standards, attracting community resources, and reducing responsibilities that require local expenditure.

**Getting responsibilities and authorities right**

Clarity is essential in determining the expenditure responsibilities of each level of government. A guide is the principle of subsidiary, which prescribes that services should be provided by the lowest possible level of government. In practice, each public service should be provided by the level of government administering the minimum spatial area that would internalize the benefits and costs of its provision. The resources available to each level of government should reflect the costs of services that they are mandated to provide. These can be provided by a combination of tax and revenue assignment such as sharing agreements, unconditional grants, transfers based on conditions or service standards, targeted subsidies for specific purposes or projects, and the authority to borrow. Such resources should be capable of being affirmed.

City governments also need a high degree of authority over the revenues they can raise and budgeted expenditures. Too often, these are controlled by central governments.

**Improving local government financing**

The above means expanding not only a city’s own-source revenues but also the region’s. But the current policy environment is not conducive to enabling local governments to enhance own-source revenues. Local governments need greater control over tax policy, including the setting of rates and defining the tax base. Many also need to strengthen the administration of their local tax systems and reduce high rates of noncompliance.

The figure on the next page shows that collection of property taxes by city governments can be low compared with the revenue potential indicated by the tax base. For each tax, city governments must start with identifying the potential resource base, its appropriate measurement, and subsequent valuation for tax purposes. After valuation, estimates need to be prepared based on the proportion of the value to be taxed, with the billing amount as the tax rate applied to the value.

The simplest way for local governments to improve revenues is to collect the arrears on current billings. Very often, major debtors are agencies of government. Substantial revenue can be raised by focusing on the major clients in arrears.

Too often government properties are exempt from tax. Other public agencies are in arrears because of their refusal to pay tax. Local governments need to be sure that they actually bill for what is to be collected and follow up with rigorous enforcement of collections to ensure that arrears are containable. Increasing tax rates should occur only after these steps have been taken.

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**A Framework for Local Government Revenues**

There are issues in many Asian cities over the assignment of revenue responsibility between levels of government, which differ substantially. Bahl and Linn have suggested a basic framework to determine revenue sources for various purposes:

- User charges for public goods and services that provide benefits to identifiable communities, such as water supply;
- Local taxes for goods and services to the general public such as administration, street lighting, policing, where costs and benefits are difficult to identify among individual beneficiaries;
- Transfers for those services with spillover effects on other jurisdictions such as education, health, and social security; and
- Borrowing for capital investment in physical infrastructure.

increases are unlikely to fund significant capital expenditures.\footnote{Property taxation in general contributes less than 20\% of the total budget. It is much less in many countries.} Funds for trunk infrastructure—major roads, drainage, and flood control systems, for example—are likely to still come from central government. City region and local infrastructure will need to be financed either through these central transfers or borrowing or by the private sector. But to mobilize such resources, change is needed.

A number of countries have prescribed the proportion of national revenues that can be transferred in bulk to local governments and dispersal is often based on formulas relating the population size, area, and equal transfers. Changes can be made to use transfers as incentives for local governments to improve performance, to support local governments in poorer regions, and to make subventions from higher levels less discretionary.

**Incentives: Their form . . .**

Specific approaches will vary between countries and legal jurisdictions but the central component would be an **Incentive-based and poverty-alleviating transfer system**

Although improvements in own-source revenues like property tax will provide local governments with additional funds,
adjustment of the enabling environments for urban management to provide incentives to improve city management. Many aspects of the Indian Government’s National Urban Renewal Mission reflect this approach. Providing incentives requires that standards be set and that performance be measured against them. The types of standards would depend on the country and circumstances, range across wide areas—from financial to environmental, for example—and involve matters as diverse as the return on assets for government trading enterprises, tax collection efficiency, and the quality and quantity of water supply. Reforms like introducing accrual accounting or preparing city road maps may also be a mandatory requirement for local governments seeking assistance.

... and how to make them work

To be successful, this system must focus on a small number of key, measurable, monitorable variables and keep administrative costs down. The form and structure of the incentives are also important. For achieving or surpassing standards, for example, local governments could gain increased financing provided directly by central governments or through greater access to markets, or specific or general purpose grants. There could be one-off incentives or ones that moved the local government to a new category for ongoing assistance. The aim is to create a culture of constant performance improvement within city government and management. The effects will be enhanced if national governments collect and publish comparative information on the performance of cities and their governance institutions. One form of consultation that resonates strongly in local politics is simply the wide dissemination of information on local government performance.

Incremental local finance reforms that have proven successful include the creation of special districts for capital cities with more powers to raise revenues and spend; expansion of enlarging metropolitan jurisdictions through the absorption of surrounding local government areas; and phased implementation of new sources of revenues and the reform of existing ones. This suggests that municipal finance reform should start with the larger cities.

Boosting the financial responsibility of local government

We have shown that local government borrowing limits are restricted by the level of grants they receive from central government. Furthermore, most local governments in Asia do not have the authority to raise local capital for revenue-generating projects because of public sector borrowing limits set by a central financial agency. As a result, local governments have little incentive to become more entrepreneurial and to work with the private sector to develop key infrastructure and other capacity-building projects. While non or semi-financially viable local authorities are never going to be able to access capital markets in their own right, those that are viable can. Strengthening financial viability, which comprises the revenue base and expenditure controls of city authorities, is essential for local governments throughout the region.

National governments need to transfer financial risks to local governments and to make them more responsible and accountable for financial management. Many local governments in Asia now simply pass off loan-risk responsibility to central governments and feel they have no obligation to repay debt or to improve the efficiency and effectiveness of their own financial management systems. Improving the capability of local government to borrow requires financially sound entities, improved revenue streams, and more commercially viable investment projects. It also requires credit ratings.

Credit risk: Difficult to determine in Asia’s cities

Any financing system relies on the ability of lenders and borrowers to assess credit risk. Municipal credit markets have developed slowly in Asia mainly because the risks have been difficult to identify and control, except through government guarantees. Many loans to local government—including those through public municipal development funds—have high loan-loss rates, while lenders have had problems in assessing local government creditworthiness on account of insufficient information on financial performance. A municipality is creditworthy when its borrowing meets the risk standards of the lender. However, no definitive level of credit risk determines creditworthiness. Governments and lenders decide what risk to tolerate.

The job of improving local government creditworthiness rests with both national and local governments and requires changes within the lending community. At the national level, governments must improve the enabling environment for municipal credit. At the local level, it demands specific actions to improve financial performance and is directly related to enhancing local government capacity and local revenue generation.
Local Government Credit Risk

Risk is expressed in the rate of interest charged on borrowing—the higher the risk, the greater the rate of interest. Credit risk is that a borrower will not make full and timely payment of a debt. Normally, it is measured on a scale that sets risk against that of other similar borrowing within a country. In the developed world, independent rating agencies use alphabetic or numerical scales to classify such risk. Local government creditworthiness depends on default rates and the borrowing capacity.

Much of the experience with publicly released municipal credit ratings is from the United States, which has had extensive experience of credit risk analysis for local governments. But risks are different in Asia, where they derive from central government policy toward financing local governments and to national rules that determine municipal borrowing. Asia’s local governments rely heavily on central transfers, where formula-based funding is often the largest revenue source. The levels of transfers are often subject to national government discretion, even where they are mandated by law. Hence, it is difficult to compute local government capacity to repay general obligation debt secured against the municipality. This uncertainty translates in to risk, which becomes higher when local governments have limited capacity to raise taxes and charges and set local rates.

Risk also relates to the prevailing municipal loan culture in a country, reflecting the overall status of debt repayment. The tolerance by national governments of high default rates by municipalities is detrimental to the creditworthiness of the market. The ease at which money can be recovered in case of default is critical, too.


Making urban infrastructure projects commercially attractive

Projects must be designed to attract debt financing. In particular, the project components that must be subsidized, such as community service obligations or environmental components, need to be clearly differentiated from commercial components. Most major local government investment projects that have a guaranteed revenue stream are candidates for credit financing. Debt can be issued against the revenue stream and the assets of the project. This kind of financing is common in the private sector and includes funding for privatized utility investments in water supply and public transport. In these cases, both the lender and borrower have an interest in the performance of the investment. Hence, a project’s financial and economic viability requires assessment. Due diligence of the operating agency and project financial viability—usually expressed as the financial rate of return—become the prime determinants of creditworthiness.

The Government of India provides tax-free status for municipal bonds. Several urban local bodies and utility organizations have mobilized over $200 million through municipal bonds, about 55% of which were tax-free bonds, including pooled financing. The India Securities Exchange Board in 2000 issued guidelines for private placement of corporate bonds. These guidelines were issued to provide greater transparency to such issuances and to protect the interest of investors. Municipal bonds issued through private placement have yet to be listed on stock exchanges. Political risk is important too and has three facets: the chance that the regulators will not allow the tariff increases that make a project financially viable; the possibility that competing projects will be approved or subsidized by government and undercut demand for the proposed investment; and the danger that that government will expropriate at some stage and take over the assets of a project or terminate the operating concession.

To reduce such risks, a legally binding agreement is needed to govern the terms of project financing. This would include:

- A requirement that the public agency operating the project is legally separated from the local government as a stand-alone body with the revenues ring-fenced to the project.
- Assurances that tariffs will be automatically adjusted periodically to maintain a minimum debt service ratio.
- A clause that would prohibit the government from building directly competing investments.
- Clauses that set maintenance and performance standards and empower government to change the management or call in the credit if these are not met.

Attracting community resources

Over the past few years, many governments and international agencies have supported participatory, demand-led projects. These seek to establish sustainability at the local level through institutional mechanisms that encourage community control of decisions and resources.
during development. These projects include such local infrastructure as water supply and sanitation, electrification, drainage and local roads, day-care centers, schools, and health posts or centers. They can also cover livelihood activities such as training, production centers, and communal assets or equipment. Such projects involve partnerships between a community and a funding agency. Communities receive funds directly from either a funding agency, central government, local government, or a nongovernment organization (NGO). They then procure materials, hire contractors and consultants or technical experts, employ skilled and unskilled labor, and ultimately manage the overall implementation of the project. Often communities are required to contribute matching resources in either cash or kind.

**Role of national government in regulation and oversight**

National government must establish more appropriate regulations and guidelines on municipal debt. These will differ across the region according to current formulation of borrowing rules and regulations and depending on the sophistication of the local capital market.

**Determining appropriate structures for municipal borrowing**

The nature and extent of borrowing by local governments will vary between nations. National governments should first define appropriate measures of required solvency and of default and then routinely monitor these across local government. There are currently no internationally accepted indicators to measure default rates. But those that measure one or the other of the flows—debt service payments—or stock—principal outstanding—should be used, rather than those that mix the two on municipal budget and debt ratios (see box on the next page). The routine monitoring of default rates is required to assess credit risk. Supporting this, the national government must set targets for the maximum acceptable problem loans.

**Appropriate assessment of borrowing capacity**

National and local governments need to agree on a suitable methodology for determining borrowing capacities for non-project-specific lending. This should always be based on the amount that a potential borrower can afford to repay that relates to the revenues that a local government has, including

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**Community-led Development**

Local governments that act as a sponsoring agency become a facilitator for development by providing funds and technical support and guidance to the community. The roles a city government can play include:

- **Preparation**, by conducting an information and education campaign to communities and other stakeholders throughout the implementation process.
- **Facilitation**, by employing field workers or contracting nongovernment organizations (NGOs) who facilitate the local planning process.
- **Appraisal**, through review of community applications to ensure they satisfy objectives and meet the guidelines and criteria set out by the funding agency.

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**Field appraisal**, by assessing the technical, social, and environmental aspects of a project and the capability of the community to implement.

**Financing**, by developing a contract and financing agreement with the community, with release of funds in tranches.

**Implementation**, by training communities in implementation, including accounting, procurement, and operation and maintenance.

**Monitoring and evaluation**, by preparing the plan and undertaking the financial audits of community accounts, technical audits, and beneficiary assessments.

those from the assets acquired or developed as a result of the borrowing, and to the cost and tenure of the potential loan. Realistic computations of capacities to pay would establish clear borrowing limits for local governments. Enabling guidelines should be promulgated at the national level and applied nationwide.

**Projecting finances into the future**
Local authorities must be able to prepare long-term financial projections so that their borrowing requirements can be adequately assessed and the impact of debt on financial performance deduced. A 3–5 year business plan is one way to do this, with the capital investment programs determined from the city development strategy or road map. Projections of local government cash flows, revenues and expenditures, and balance sheets would be prepared and set alongside performance over the past 5 years.

**Establish credit-rating mechanics for municipal borrowing**
All local governments that contemplate borrowing need credit ratings. A program to obtain these ratings could begin with a country’s largest cities and work progressively down through the hierarchy of local governments. To be effective, the credit rating should be undertaken by an independent agency, preferably from outside the national government. The scope would be nationwide. Such an agency could be owned by a consortium of banks and other financial institutions.

**Ensure predictability and stability of central transfers and maximize local revenue potential**
Local governments cannot realistically project their borrowing limits unless they are sure of their revenue sources. The high dependence on central transfers and the periodic unpredictability of the amounts released are problematic. National or provincial government should ensure the stability of central or provincial transfers through a firm guarantee to honor and enforce commitments made under current legislation. However, long-term commitments are more difficult when such transfers are to be disbursed on an incentive or performance basis. Local governments need more discretion over their own-source revenues so that they have maximum control over key local taxes and the determination of the tax base and rates levied for all taxes and charges.

**Municipal budget and debt ratios**

**Operating budget**

Current revenues (own sources, shared taxes, operating transfers)
Less: Operating expenditures
Equals Operating surplus
Less: Debt service
Capital investment
Plus: Capital receipts
(asset sales, capital grants)
Equals Total (deficit) surplus
(Borrowing requirement if deficit)

**Measures of default**

Ratio of the principal value of loans in default to the principal value of all outstanding loans.

Or

Ratio of the value of debt service in default to annual debt service due.


**Measures of credit risk**

Debt service/recurring revenues
Debt service/operating surplus
Debt service/total revenue
Debt outstanding/local tax base
Outstanding debt/population

Developing a Municipal Credit Rating System in India

The city of Ahmedabad received India’s first municipal credit rating in February 1996 and by 2006, more than 30 cities had followed its example. The ratings are now recognized as important indicators of urban competitiveness. The Financial Institution Reform and Expansion Project—Debt/Infrastructure Component (FIRE [D]) Project is facilitating the development of a municipal credit rating system in India, supporting both cities and rating agencies. A rating methodology was developed under the project by Credit Rating Information Services of India, Ltd. (CRISIL).

In 1995, the Ahmedabad Municipal Corporation (AMC) requested a credit rating, and CRISIL, with the support of the FIRE (D) project, developed a methodology based on the study of urban local bodies in India and international experience in rating municipal bonds. Credit rating has evolved and it examines the municipality’s profile and existing operations, its financial and managerial performance, and the specific project for financing. The National Institute of Urban Affairs, a FIRE (D) project partner, contracted with Investment Information and Credit Rating Agency (ICRA) to develop a credit-rating methodology. Over 30 cities have now asked for credit ratings from CRISIL, ICRA, and Credit Analysis and Research Limited (CARE), India’s other leading rating agency. In addition, the states of Andhra Pradesh and Kerala are considering plans to have all their major cities rated.


Rationalizing security demands

Credit risk is reduced if it can be shown that investment can be easily recovered should a local government default. National governments must have legal rules that govern default procedures and are enforceable by the courts, if necessary. National government can also ensure that there are automatic procedures for intercepting revenues should a local government default on debt repayments. Many countries have such intercepts but these generally do not...
cover private sector credit. Here debt service payments would be collected from higher levels of government when local government obligations are not met. The intercept would be offset by reducing the level of central transfers.

Property owned by a local government can be used as collateral for credit. For instance, in many central Asian countries and in the People’s Republic of China (PRC), cities have a tradition of property ownership or have had other property transferred from the national government as their economies were liberalized. Such property has been used as security in the past but lenders are becoming more selective. They consider only property that can be easily transferred to private ownership and is relatively liquid as appropriate security. This is often local government-owned land and commercial buildings in good locations. Collateral can take other forms. The borrowing local government can maintain its accounts with the lender and/or an automatic debit for debt repayments can be established. Predated payment instruments are also possible.

Finally, a national government guarantee is often considered an appropriate way to reduce credit risk for local governments. They are costly, however, and they can remove the incentive for both borrower and lender to properly assess the viability of the project for which the proceeds will be used or to evaluate the appropriate corporate risks. Government guarantees, if widely used, can also hinder the development of a municipal credit market.

**Conforming to financial reporting, disclosure, and audit requirements**

Asian national governments seldom impose strict time limits on the production and submittal of annual reports from local governments. Where reports are produced, the data is seldom in the form required to assess their creditworthiness. Many contain figures based on a mixture of cash and accrual accounting principles. Identifying capital investment expenditures is often difficult and many misclassify borrowing. National governments should ensure that all local governments produce annual financial reports and that the reporting format is uniform and designed to make them easily understood and to conform with data requirements of potential lenders. Over time, all local governments should be mandated to adopt national accounting standards that are consistent with international practice. This would mean adopting commercial accounting principles—including full accrual—the proper valuation of assets, and provisions for doubtful debts. Quite clearly, this cannot happen everywhere overnight and experience has shown that too rapid change can set back outcomes rather than accelerate them. The initial focus should be on the larger cities.

A better approach is to create special-purpose authorities to guarantee municipal credit. The Netherlands has a pooled guarantee fund for local governments. Financial guarantee insurance is also common in developed countries—in the US, for example, where municipal bonds often have third-party guarantees of principal and interest payments from insurers. But credit insurance in developing countries is risky, expensive, and requires high skill levels to determine premiums and remedies for default. The attractiveness of such an approach will depend on the cost of insurance. If the premium cost is high, then this could offset any interest rate savings from more secure borrowing.

**Ensure appropriate funding for community service obligations**

Community service obligations (CSOs) occur when government requires a public enterprise to undertake activities that it would not normally do commercially, and that the government does not require other businesses in the public or private sector to undertake, or that it would only do commercially at higher prices. CSOs are crucial to ensure that the poor have appropriate access to utilities and services, including water, electricity, and public transport at costs they can afford.

Such obligations are funded through cross subsidies, budgetary appropriations, accepting lower rates of return from public providers, vouchers, or direct cash payments to users to pay for services.

Cross subsidies between different users mean that higher prices are charged to other users to recover the losses incurred in providing the CSO. Examples are common in Asia through stepped tariffs for water supply and electricity, where lower levels of consumption are priced below cost. This distorts prices, however, and can lead to production and consumption inefficiencies. Cross subsidies also may require market restrictions to prevent competitors from entering the high-margin markets and undercutting the provider. A better approach is by direct funding from general government.

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Local Government Unit Guarantee Corporation, Philippines

The Local Government Unit Guarantee Corporation (LGUGC) is a private financial credit guarantee institution owned by the Bankers Association of the Philippines (38% share), the Development Bank of the Philippines (37%), and the Asian Development Bank (25%). It was incorporated on 2 March 1998. LGUGC sees itself as the lead private financial guarantee institution in local development. It is committed to advocating reforms that will mobilize resources of the private sector to finance local development projects, promote local government unit (LGU) bond flotations, and enhance LGU enterprise management and creditworthiness. Its primary goal is to make private financial resources available to creditworthy LGUs through its credit enhancement system. LGUGC’s guarantee coverage includes 100% of LGU bond principal and interest, subject to a cap, and for LGU loans, a guarantee of up to 85% of principal and interest, subject to a cap.

LGUGC’s guarantee fees are based on the weighted average of the LGU credit rating, the project risk, and the term-risk evaluation, charged as a percentage of the bond float or loan amount covered. Fees are paid up-front for the term of bond or loan or staggered with the front-end portion covering construction phase and apportioned annually thereafter. The LGUGC bond flotation process flow is shown below:

Key Actions
At the local government level

- Improve city financial management and performance to bolster creditworthiness:
  - Revenue generation—know and collect what is due; effective valuation, billing, and collection systems; efficient financial management and reporting systems; property tax improvements
  - Operations and maintenance—develop an asset management system
  - Coordination—facilitate the creation of sectoral or all embracing special purpose vehicles (SPVs) to mobilize resources and implement investments
  - Develop least cost approaches for provision of public goods.
- Encourage and engage in the establishment of special investment organizations (SIOs) and SPVs.

At the national government level

- Enable and encourage superannuation and life insurance companies to invest a significant part of their portfolio in infrastructure finance.
- Civil service incentives for developing skills in designing and structuring SPVs and for proactive participation in coordination structures and for building their capacity.
- Investment grants for projects prepared in line with a defined road map process and for effective implementation structures.
- Intergovernmental transfers contingent on efficient performance in implementation—both investment and operations; and in support of local governments in poorer or depressed regions.
- Sponsor necessary enabling legislation and administrative arrangements for the above.

Better financing: a summary
Key actions needed to promote effective financing responses to urban development by national and provincial governments and by the local governments are summarized below.
The priorities for action for the different types of communities, the nation or the province, self-reliant and dependent cities and smaller towns and villages, are set out below.

### Matrix of Priorities for Action: Effective Financing

<table>
<thead>
<tr>
<th>Classification</th>
<th>Institutions</th>
<th>Capital Market Access</th>
<th>Local Government Financing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nation or Province</strong></td>
<td>Enable legislation, guidelines, and regulatory framework for special investment organizations. Enable framework for private sector participation and public-private partnerships.</td>
<td>Repeal legislation that hinders local government borrowing. Encourage investment of public funds in infrastructure. Regulation and oversight of local government borrowing. Enabling frameworks to identify structures for pooled financing.</td>
<td>Enact legislation and guidelines for matching resources and functions to levels of government. Design an incentive-based transfer system to promote efficiency and ensure transfers go to local governments in poor regions. Legislate community service obligations.</td>
</tr>
<tr>
<td><strong>Self Reliant Urban Areas</strong></td>
<td>Establish cross-jurisdictional strategic development company. Encourage establishment of special investment organizations and financing vehicles. Encourage public-private partnerships.</td>
<td>Main funding source for new infrastructure and megaprojects. Obtain credit rating. Use assets to lever additional resources. Mechanisms to maximize liquidity, including securitization structures (covered bonds).</td>
<td>Provide measures to improve own-source revenues (tariffs and land tax). Decide priorities for community service obligations. Prepare commercially viable projects.</td>
</tr>
<tr>
<td><strong>Dependent Urban Areas</strong></td>
<td>Establish special purpose vehicles where possible. Strengthen existing systems. Improve efficiency of operations.</td>
<td>Pool financing vehicles. Design and implement measures to improve creditworthiness. Use credit guarantees.</td>
<td>As above. Focus on ensuring efficient use is made of transfers. Encourage community resources for local improvements.</td>
</tr>
<tr>
<td><strong>Towns and Villages</strong></td>
<td>Strengthen local government delivery systems. Cluster provision where possible or link to urban area to gain scale economies.</td>
<td>Limit access.</td>
<td>As above.</td>
</tr>
</tbody>
</table>
### Capital Markets and Infrastructure Finance

<table>
<thead>
<tr>
<th>PRC</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Demand</strong></td>
<td>Infrastructure responsibilities have been substantially decentralized to provincial and municipal levels. Local projects accounted for about 85% of fixed asset investment in 2004. Subnational governments are barred from borrowing from banks by law but may issue bonds through the Ministry of Finance. Borrowing is undertaken through special state-owned companies, banks, and municipal enterprises (operating under enterprise law) for items such as infrastructure projects, often with a letter of comfort (or guarantee). The status of these at the local government level is uncertain. Local government and state-owned enterprises (SOEs) have access to on-lending from central government (and from international financial institutions).</td>
</tr>
<tr>
<td><strong>Supply</strong></td>
<td>China Development Bank (CDB) is a key infrastructure financier with a total loan portfolio of $172 billion. CDB provides about 50% of PRC’s infrastructure lending requirements. Local government special purpose vehicles (SPVs) issue bonds. Bonds must be issued with the guarantee of a third party asset-owning company or financial enterprise. SPV bonds must not exceed 30% of project costs. Cumulative outstanding bonds must not exceed 40% of the issuing institutions assets. In the area of transportation, funds have been raised from an array of private and public sources including the stock markets and foreign investors. Joint ventures and asset-based financings are seen as models for self-liquidating projects. Pension funds and insurance companies are not yet very active, lacking appropriate investment channels.</td>
</tr>
</tbody>
</table>

**The infrastructure needs of the People’s Republic of China (PRC) are estimated at $83.6 billion per annum from 2006 to 2010.**

<table>
<thead>
<tr>
<th>India</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Demand</strong></td>
<td>India has a three-tier government structure comprising the center, 28 states, and about 3,700 urban local bodies (ULBs); an estimated 50 ULBs are considered creditworthy enough to access domestic capital markets. Tax shares, grants, and loans are primarily formula-based, reflecting either the recommendations of the State Finance Commission or decisions of the Planning Commission. There is considerable degree of fiscal decentralization to states, but not to local bodies. States raise about one third of their own revenues. States and ULBs have little flexibility in spending special-purpose transfers. ULBs may borrow under conditions presented by respective municipal acts with authorization from respective state governments. Expenditures on core services (roads, sanitation, water supply, and street lighting) by ULBs account for approximately 12% of gross domestic product (GDP), of which only 62% are covered from ULB own-resources. While state governments have the constitutional authority to borrow, the central government exercised control over their borrowing until recently. Local governments, except municipal corporations, are not vested with borrowing powers by the constitution. Local governments have historically been solely dependent on state governments (or increasingly municipal development funds) for capital investment loans. The Local Authorities Act (1914) allows municipal corporations to borrow. Nevertheless, municipal corporations must ask permission from state governments. Municipal utilities and ULBs may borrow from commercial lenders. Commercial lenders require credit ratings from such organizations as Credit Rating Information Services of India, Ltd. (CRISIL) or Moody/Fitch of India. There are about 140 national level SOEs, of which 100 have credit ratings.</td>
</tr>
<tr>
<td><strong>Supply</strong></td>
<td>There are 41 national and state-level development finance institutions (DFIs), of which 13 have credit ratings. Two DFIs specialize in infrastructure lending: Infrastructure Development Finance Corporation (IDFC) and Infrastructure Leasing and Financial Services (IL&amp;FS). Commercial banks actively pursue opportunities to lend to local governments. For example, Thane Municipal Corporation has borrowed 500 million rupees (Rs) from ICICI Bank in 2001. Most bank loans to municipalities have been used to fund short- to medium-term liquidity gaps rather than fund infrastructure growth. Longer-term borrowing has typically required credit support from the state government or a pledge of state transfers to municipalities. Twelve creditworthy ULBs issued $156 million in bonds at an average tenor of 7 years at 8.5% (through 2005). Longest maturity is the Tamil Nadu Urban Development Fund (pooled finance bond). Upper-end parastatals have bond tenor of 7–16 years with 7.5–14.5% interest rate. Restrictions stipulated to DFIs’ bond issues include: maturity more than 5 years with interest rate below 200 basis points (bps) over the yield on Government of India securities of equal residual maturity along with prior approval. In 2001, India announced guidelines for ULBs tax-free municipal bonds. Pension funds and insurance companies are not yet very active, lacking appropriate investment channels.</td>
</tr>
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</table>

**India’s infrastructure needs remain substantial and are estimated at $21.1 billion per annum over the medium term.**
<table>
<thead>
<tr>
<th>Indonesia</th>
<th>Description</th>
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<tbody>
<tr>
<td>Demand</td>
<td>In Indonesia, meaningful political and fiscal decentralization is just beginning. Despite some earlier efforts by local governments to enter private credit markets, almost all funds that subnational entities have borrowed over the past 20 years have passed through central government mechanisms (e.g., regional development account, subsidiary loan agreements). SOEs pervade across all sectors, particularly sea, air, general transportation, railways, and electricity. While devolving considerable authority and autonomy to local governments, decentralization—as it relates to infrastructure development—is very complex. There is still a lack of clarity in the roles (expenditure assignments) of government in providing services. Local governments have not been provided with offsetting revenue-generation assignments to compensate them for devolved expenditures. An additional constraint is the lack of clarity in the role of local government-owned enterprises. Local government borrowing is subject to regulatory rules and central government approval. Domestic credit agency has rated 12 subnational bonds.</td>
</tr>
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| Supply | Indonesia infrastructure needs are estimated at $7.3 billion per annum for roads, sanitation, water supply, and streetlighting. |

<table>
<thead>
<tr>
<th>Kazakhstan</th>
<th>Description</th>
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<tbody>
<tr>
<td>Demand</td>
<td>The central government establishes the rules for subnational government borrowing. The delegation of expenditure assignments—as laid out by the Law on the Budget System—distributes duties, programs, and subprograms between the national and local budgets, but does not specify the distribution of functions between the oblast and rayon budgets. Instead, the Law on the Budget System outlines general approaches to the distribution of expenditure assignment that lack clarity. Local government revenues are highly dependent on intergovernmental transfers. These transfers are highly restricted with respect to use. Over the past decade, many SOEs have been established by local ministries to provide services at a fee. As of early 2006, there were over 1,700 SOEs. Only the local administration of oblasts can borrow money (including Almaty and Astana). Local administrations can borrow from the Republican budget (short- and long-term borrowing) for implementing local investment programs. Local governments may not borrow in the international market place or in a foreign currency. Borrowed funds may only be used to finance regional investment programs or the budget deficit. The Ministry of Finance calculates the borrowing quota for local administrations and recommends a permissible amount of debt.</td>
</tr>
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</table>

| Supply | The infrastructure needs are estimated at around $0.8 billion per annum over the medium term for roads, sanitation, water supply, etc. |

<table>
<thead>
<tr>
<th>Malaysia</th>
<th>Description</th>
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<tbody>
<tr>
<td>Demand</td>
<td>The extent of financial autonomy of subnational government is determined by the Local Government Act. While federal grants to states are constitutionally determined, grants to local governments are not guaranteed and are at federal and state discretion. A subnational government receives small grants averaging less than 10% of total revenues. Local governments receive five types of grants: two from the state government and three from the federal government. Local governments borrow almost exclusively from government financial institutions. State governments can issue guarantees on local government loans only with permission of federal government. State government–guarantee restriction is part of the Constitution’s Article 111. The federal government has the absolute power to determine the aggregate guarantees provided by the state government. The federal government prescribes the terms and conditions that apply to all loans raised by the state government and</td>
</tr>
</tbody>
</table>

| Supply | Commercial bank lending is restricted. Local government units (LGUs) can borrow from state-owned banks. To date, banks have no real experience of direct lending to municipalities. National policy prohibits municipalities from incurring debt from commercial sources. Municipal bonds can be issued, with permission of the central government. However, opportunities to issue bonds are limited. As of 2004, 15 bonds have been issued with maturities between 1 and 4 years; bond yield varies, 9.8–14.7%. Prospects for enhancing bond market remain limited. |
Managing Asian Cities

State-guaranteed loans. The state government can borrow only from the federal government or from a bank or other financial sources approved for that purpose by the federal government for no more than 5 years. Local Government Act 1976 allows local governments to obtain loans to cover special expenditures from any financial institution. Every loan needs approval from the state government. Total local government borrowing should not be more than five times the current balance sheet value of the local government and repayment period restricted to 6 years. Before any borrowing can take place, local governments required to submit annual audited financial statements to the state government. Full information disclosure as required by rating agencies may be difficult to fulfill.

Infrastructure needs are estimated at $1.5 billion per annum over the medium term. Expenditures on core services (roads, sanitation, water supply, etc.).

| Supply | State-owned banks are the primary financers to subnational infrastructure project development. In addition, the Malaysian ringgit bond market has developed significantly since 2000. Fixed-term government bonds and Islamic private debt securities (PDS) are the most popular forms of funding within the local debt market. Thirty-five percent of PDS are medium term (5–7 years) bonds, 65% are long-term bonds (7 years). Privatized water and power projects have been financed by Islamic PDS. The issuance of bonds with warrants and convertible bonds is small. Utilities and infrastructure companies are among the largest issuers of debt securities; they account for more than 30% of all bonds issued. Much of the debt is purchased by the national pension fund, the Employees Provident Fund. Debt restructuring of a few large and strategic corporations is reflected in higher new bond issues earlier in the decade. Bond issues made by SPVs as part of the federal government’s commitment to accelerate corporate restructuring. Of the total debt securities issued over the past 5 years, 40% were for new issues, 38% for refinancing, and 22% for restructuring. |

Pakistan Description

Demand | Pakistan has a total of 92 districts, 4 city districts, 307 tehsils, and 30 city towns/councils. Subnational governments now provide a wide range of public services, including primary education, health, sanitation, drinking water, law and order, agricultural extension, and district roads. Local governments are also expected to perform regulatory functions. Along with devolved functions, funds expended by provincial governments to provide services have been transferred to district governments. District governments are responsible for primary and secondary education, dispensaries and local hospitals, district roads, and water and sanitation agencies. The Constitution allows provincial governments to borrow against the provincial consolidated fund. However, this is constrained by the local government ordinance and a local government’s ability to carry additional debt is limited unless fiscal space can be created within the budget. Financing of infrastructure is confined to budgetary support and funds from funding agencies. Domestic credit ratings are just starting to emerge. Only Karachi, Lahore, and perhaps Faisalabad have any sort of rating attached to them or could issue any kind of security. |

Pakistan infrastructure needs remain substantial and are estimated at $1.9 billion per annum over the medium term.

Supply | Domestic banks have not been allowed to lend to LGUs. Public utility agencies have floated bonds to raise funds for infrastructure investments. Initially bonds were backed by government guarantees. Many of these infrastructure bonds have been replaced with term finance certificates (TFCs) first issued in 1995. Lack of market-makers for corporate debt and bonds has constrained growth of a secondary market. Subnational government financial capacity is highly dependent on intergovernmental transfers. The Government of Pakistan is actively pursuing a decentralization strategy, enabling subnational governments to expand their revenue base. Neither pension fund nor life insurance industries are currently in a position to finance infrastructure. |

Philippines Description

Demand | Subnational governments (LGUs) in the Philippines comprise four levels: 80 provinces; 114 cities; 1,496 municipalities; and about 42,000 barangays. The 1991 Local Government Code reassigned infrastructure responsibilities to LGUs, which include roads, bridges, fishing ports, water supply, and sanitation. The local government code allows LGUs to issue taxable, revenue-based bonds, and other securities to finance infrastructure investments. There are eight infrastructure-related government-owned and operated corporations of which only National Power Corporation (NPC) has an international credit rating and access to domestic and financial markets. NPC’s debt is approximately 10% of GDP. Other SOEs include the Light Rail Transit Authority, Local Water Utilities Administration, Metropolitan Waterworks and Sewerage
System, Philippine National Railways, and Philippine Ports Authority. The 1991 Local Government Code allows LGUs to borrow from banks for capital projects without prior approval from the national government. LGUs have not fully exercised their borrowing power. LGU bank loans account for less than 5% of revenues. The Philippines has a domestic rating agency, but it does not rate LGUs. The Local Government Unit Guarantee Corporation (LGUGC) has established a rating system for LGUs. Of the 1,680 LGUs, 435 have preliminary credit ratings, 19 have final ratings.

The infrastructure needs of the Philippines remain substantial and are estimated at $3.5 billion per annum over the medium term.

<table>
<thead>
<tr>
<th>Supply</th>
<th>Although commercial banks engage in direct lending to LGUs, the Land Bank of the Philippines (LBP) and Development Bank of Philippines (DBP) are the major infrastructure financiers. Both DFIs have international credit ratings with local currency (BB) and foreign currency (BB+) ratings. The LBP has the largest exposure to LGUs, accounting for 70% of total Philippine LGU lending. The domestic bond market is largely dominated by national government securities. LGU bonds are still relatively uncommon. LGU average bond tenors include 7 years with an average issue size of about $3.5 million. LGU bond pricing is based on a benchmark of either 182-day T-bill rate or Money Market Association of the Philippines (6-month) rate. LBP plans to issue $100 million–$150 million 3–5 year bonds over the near term. The LGUGC was established in 1998 to add liquidity and credibility to the domestic LGU bond market. All LGU bonds to date have been guaranteed by LGUGC. The availability of concessionary loans through the municipal development fund of various concessionary loan programs hinders the development of a private sector market for subnational entities. In the mid-1990s, the Philippine government foresaw government financial institutions limiting their lending to short-term financing and small projects that did not qualify for municipal bonds or private commercial financing. However, various DFIs have found local government loans, backed by the assignment of intergovernmental transfers, to be profitable.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thailand</td>
<td>Description</td>
</tr>
<tr>
<td>Demand</td>
<td>Thailand is a unitary state with a highly centralized fiscal system. The public administration structure has three levels: central, provincial, and local governments. Municipalities are the most important local governments and have the greatest degree of autonomy. Many services have been devolved to subnational government entities, but tight controls remain. For example, every local borrowing must be approved by the Ministry of Interior (MOI). All local governments are required by local budget regulations to set their expenditure at not more than 97% of the 3-year average of previous total revenue. Total amount of surplus is accumulated under the trust fund, which the local government can use for contingency purposes. The criteria for allocating intergovernmental grants are not standardized, but work is underway to establish a formula-based equalization grant. MOI monitors subnational borrowing from local development funds and public revolving funds. Local governments may legally borrow to finance their investment expenditures but are prohibited from borrowing from private financial institutions, except from trust funds. Domestic bond rating agency has rated the Financial Institution Development Fund and Property Loan Management Fund debt. SOE debt has also been rated by a domestic rating agency. Thailand has two such credit agencies—Thai Rating and Information Services, and Fitch Ratings.</td>
</tr>
</tbody>
</table>
| Supply | Municipalities borrow mostly from the Municipal Development Fund sourced from a portion of the annual budget surplus of local governments. The formula used by the MOI requires that 10% of excess budget be transferred to the fund. The fund may be used to invest in public utilities or other municipal public services with a payback period of 15 years. Local governments cannot go directly to capital markets. Bond financing has been limited to revenue bonds (self-liquidating projects) only. Regulatory and institutional frameworks for any local government bond market exist, preventing local governments from accessing private institutions for funds. Wholesale institutions such as pension funds and life insurance companies have no 

Chapter 4

A New Focus for Capacity Development and Institutional Strengthening
The aim: planned and developed cities
Local communities need to improve their skill levels so that local governments, strategic investment companies, and special purpose vehicles (SPVs) can support city planning and development in a competitive national and global economy and adopt management and governance techniques appropriate to today's electronic age.

The Strategy: A New Model for Capacity Development
Capacity development was shown in part one of this book to be one of the crucial weak points of city development in Asia. Too often poorly trained staff are unable to cope with the demands of rapid change and modern city planning and management. Capacity is lacking in almost all disciplines and at all levels of government. This chapter recommends a new paradigm to respond to this great need for capacity development in Asia's national and city region governments.

The chapter begins by setting out key parameters for capacity development and then proposes six basic elements for future programs.

It also presents an outlined, sequential process for a capacity-development road map. Various types of support for capacity development are discussed and examples of research and training institutes and networks are provided within a framework of strengthening city management. The core competencies required in city management and capacity development system (CDS) are then set out in terms of expected performance objectives, together with recommended training and education systems, and management instruments and research areas, for each. The chapter ends with an outline of key actions for national and local governments to pursue in capacity development and, from these, identifies action priorities for different actors.

There is a need to structure capacity development for a consistent and systematic approach to delivery across all institutions to build the core competencies identified in part one. A more enlightened approach to capacity development requires that new technologies and techniques be embraced without losing the knowledge of the old ones.

Parameters for capacity development
Since the Paris High-Level Forum on Aid Effectiveness in 2005, local ownership, alignment of capacity building approaches with national systems, results orientation, and mutual accountability are established as key parameters for capacity development.\(^{173}\) Recommendations for each are discussed below.

Ownership and Leadership. Capacity development requires ownership and local leadership. It can only become a sustainable process if government commits to prioritize capacity development investments regularly, either as part of routine budgets or under its investment programs, or both.

Comprehensive Assessments. Comprehensive assessments must be made of organizational and institutional roles and capacities when planning and preparing for capacity development, and of the network of stakeholders in urban management, and of existing and any new core competencies required. Governance studies and sector assessments should be undertaken in a participatory manner and lead to capacity-

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development action plans. These action plans should be oriented toward performance benchmarks for key public agencies and a city region’s service and infrastructure sectors. Any capacity development that focuses on training alone will be unable to address organizational and institutional weaknesses or problems in the relationships between key stakeholders. It needs to be much broader and more comprehensive.

**Managing for Development Results.** Capacity development activities and interventions must be made accountable. Supporting action plans need to be translated into properly funded operations and defined through measurable results and outcomes. While the establishment of a sound and well-anchored process is relevant for the sustainability of the capacity agenda, the ultimate emphasis should be on performance. For example, measurable performance indicators can reflect the delivery of certain services, the behavior and responsiveness of organizations to clients, or the application of new urban management tools.

The United Nations Development Programme (UNDP) has identified key principles of capacity building (see box). Translating these guidelines into action will remain a major challenge, with budget-constrained cities needing to rapidly increase management capacities to cope with change and foster innovation. This should be accomplished by adopting a systemic approach that covers basic principles, processes, and a stratified set of actions at the national and local levels.

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**UNDP’s Principles for Capacity-Development Success**

- **Do not rush.** Capacity development is a long-term process. It is not amenable to delivery pressures, quick fixes, or attempts to get short-term results.

- **Respect the value systems and foster self-esteem.** The imposition of alien values can undermine confidence. Capacity development builds upon respect and self-esteem.

- **Scan locally and globally; reinvent locally.** There are no blueprints. Capacity development draws on voluntary learning, with genuine commitment and interest.

- **Knowledge cannot be transferred.** It needs to be acquired.

- **Challenge mind-sets and power differentials.** Capacity development is not power neutral, and challenging mind-sets and vested interests is difficult.

- **Think and act in terms of sustainable capacity outcomes.** Capacity, or ability, is at the core of development; any course of action needs to promote development.

- **Establish positive incentives.** Motives and incentives need to be aligned with the objective of capacity development—especially through governance systems that respect fundamental rights.

- **Integrate external inputs into national priorities, processes, and systems.** External inputs need to correspond to real demand and need to be flexible to respond effectively to national requirements. Where national systems are not strong enough, they should be reformed and strengthened, not bypassed.

- **Build on existing capacities rather than creating new ones.** This implies the use of national expertise as a prime option and protecting social and cultural capital.

- **Stay engaged under difficult circumstances.** The weaker the capacity, the greater is the need. Weak capacities are not an argument for withdrawal or for driving external agenda.

- **Remain accountable to ultimate beneficiaries.** Where governance is unsatisfactory, it is even more important to anchor development firmly on stakeholder participation and to maintain pressure points for an inclusive accountability system.

Basic Elements of Capacity Development in the Urban Sector

The six elements of capacity development in the urban sector are:

1. **Adopt an integrated approach:** Capacity development programs should ensure improvement on three levels: individual, organizational or systemic, and the institutional environment. Urban management problems in Asia usually have roots not only in the competency problems of human resources but also in the inadequacy of organizational tools, institutional structures, and the perceptions and attitudes of decision makers. Hence, capacity development should embrace all these aspects and will require an integrated approach.

2. **Focus on “why” change is needed:** Programs should concentrate on change—changing perceptions, attitudes, skills, practices, organizational tools, and institutional structures. The need for change varies and a profound diagnosis or problem analysis should first define the need for change and its implications. Mapping out strategies for future development will provide the scenario for capacity development requirements.

3. **Have an appropriate design; consider on-the-job training and classroom-type education as complementary elements; and make use of modern learning/teaching methodologies which are used in business schools:** Capacity building programs should not be stand-alone initiatives but complementary to the curricula of universities and other undergraduate/postgraduate training institutes. In designing these programs, a clear distinction should be made between academic, short-term education programs and long-term, practical, on-the-job training. Each targets different groups with different learning objectives. On-the-job training programs should be tailor-made, long-term, and developed for a particular context.

4. **Target all relevant levels: national, provincial and local governments, private sector, and community organizations:** The emergence of megacities and their urban challenges throughout Asia is a complex development that governments cannot manage and control on their own. Increasingly, the private sector and the community help define urban development. Governments need to mobilize the support of the private sector, the nongovernment organizations and civil society. Urban managers need skills in mobilizing such support.

5. **Be interdisciplinary in nature:** Asian city management needs to address the economy, environment, and social well-being. These three very different but interrelated focus areas call for a multidisciplinary approach to capacity development.

6. **Embrace new techniques and technologies:** Capacity development programs, particularly those aimed at improving skills, are more successful when they combine training methods that enhance communication and facilitate the practice of skills, and embrace new teaching technologies.


### Follow a sequential process for your road map

To prepare a capacity development road map that includes activities and action plans, a seven-stage sequential process should be followed, as shown in the box. Each stage is described in more detail below:

**Diagnosis.** Stage one is an assessment of current circumstances and baseline that covers the diagnosis of stakeholder capacities, existing competencies and shortcomings, and organizational and institutional capacities that need to be streamlined and improved.

**Awareness.** Stage two raises awareness about the need for change, particularly in response to the challenges of urban development. Participants must understand why their attitudes, practices, and processes have to change. This is essential for encouraging commitment to any capacity development program and becomes the basis for changes in behavior, work processes, and organizational and institutional structures. It enables individuals, organizations, and communities to respond effectively to development trends and needs.
Strategic Planning. Stage three involves problem analysis, vision formulation, strategy development, and action planning for the integrated management of service delivery and infrastructure across all relevant subsectors.

Organizational Structures. Stage four covers the tools and instruments of organizations and their technical operations, all of which can either enhance or impede the implementation of a development strategy and the efficient delivery of services and development outcomes. How do the existing coordination structures enhance or impede these activities and what changes are needed in management and financing to repair or strengthen this performance?

Institutional Structures. Stage five involves the governance structure—i.e., among other things, the laws and regulatory structures, and the relationship between different institutional entities that are crucial factors in performance. What institutional structures can enhance or impede the implementation of development strategy and coordination models? And how could the institutional arrangements be strengthened?

Implementation, Monitoring, and Evaluation. In stage six, the focus becomes the implementation of a capacity-development strategy and supporting action plan, the development of indicators for monitoring progress, and the evaluation of impacts on the performance of institutions.

Evaluation of Outcomes and Consolidation. The impacts of the capacity development program should be evaluated against clearly defined benchmarks in the seventh and final stage. Revisions and improvements to the program would be recommended based on this evaluation. Consolidation requires that all information, tools, methods, and references be documented and a refresher program organized to ensure the retention of knowledge and skills.

New directions and actions

At the national level, central agencies should establish a national support mechanism and sustain capacity enhancement with resources to foster linkages among local governments. They should also help establish international networks of mutual exchange. National governments need to ensure that local governments have sufficient resources for implementing their capacity-development action plans and road maps. Incentives in the civil service must be reviewed and changed to promote better performance and improve efficiency in responding to the new role of cities. The box on the next page provides an example of this concept applied in India.

In line with the general process outlined above, city governments and their agencies need to plan training activities that will ensure the supply of sufficient skills to implement change. They must also fill the skills requirement for implementing a city strategic plan and its capital investment program. Before cities and their agencies do this, they must first assess training needs. This assessment should cover the needs of
proposed strategic development companies (SDCs), of each of the special investment organizations (SIOs) and SPVs, and of associated regulatory agencies, local communities, and private sector stakeholders.

**Applying capacity development from the bottom up**

Capacity development activities need to adhere to clearly defined priorities and be supported with funding available locally and internationally. City governments must also actively encourage staff to improve knowledge and skills relevant to their jobs. Links should be established with local academic and professional bodies to provide a mechanism for independent sector advice. Cities themselves should participate in peer-to-peer activities to share experiences and projects with other local governments. Finally, city governments need to introduce systems that increase efficiency and transparency, including e-governance.

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<tr>
<th>Levels of Capacity Building in India</th>
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<tr>
<td><strong>Central</strong></td>
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<tr>
<td>- Overall policy development, direction, and financial management</td>
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<tr>
<td>- Program management and support at national level</td>
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<tr>
<td>- Management and implementation of projects</td>
</tr>
<tr>
<td><strong>State</strong></td>
</tr>
<tr>
<td>- Providing direction at state level to urban development initiatives</td>
</tr>
<tr>
<td>- Providing full-time knowledge support to policy makers and implementation agencies</td>
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<tr>
<td>- Individual project management</td>
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<tr>
<td>- Creation/strengthening of state training institutions</td>
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<tr>
<td><strong>Local Bodies</strong></td>
</tr>
<tr>
<td>- In-house capabilities to manage urban development initiatives</td>
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<tr>
<td>- Training programs</td>
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<tr>
<td><strong>Citizens</strong></td>
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<tr>
<td>- Awareness programs</td>
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<tr>
<td>- Right to information</td>
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<tr>
<td>- Civil society organizations</td>
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City governments should take a strategic approach to planning capacity development. This demands an orientation toward improved leadership, managerial competence, and technical skill development. In addition, the capacity development process itself must be made sustainable and open to innovation and change. The peer-to-peer activities in which cities should become involved will allow them to share good practices and project experience with other local governments and to enroll civil society in their municipal agendas through increased transparency and public participation campaigns.

**Where support for capacity development can be found**

National and local governments can draw on both in-country and international training and education institutes, networks of cities and local governments, peer networks, and research institutes. Examples of each and how they relate to improved capacity for city management are shown in boxes on the next two pages.

**How government can help**

One way national governments can support capacity development is by establishing a national urban institute and providing it with the resources necessary to link effectively with local governments and international organizations and networks. If an institute already exists, it should be strengthened. Although some countries already have many organizations studying urban development, there is little capacity to synthesize their activities. One alternative is to establish a consortium of these organizations, along the same lines as the Australian Housing and Urban Research Institute, which links a number of research institutions in a number of states. National governments must also ensure that local authorities have access to training for skills that are necessary for implementing their road maps. Civil service incentives
UCLG and UCLG-ASPAC (former IULA and IULA-ASPAC), International Local Government Network

The International Union of Local Authorities (IULA) is a worldwide organization of local governments founded in 1913. Its principal aims are to: (i) promote local government as a cornerstone of democracy; (ii) represent and defend the interests of local government at the national and international levels; (iii) foster improvement in the quality of local decision making, administration, and service provision; and (iv) strengthen local government. In 1989, IULA regionalized and IULA Asia and Pacific (IULA-ASPAC) was set up as a nonprofit organization governed by its own statute. IULA-ASPAC operates out of Jakarta, Indonesia. In 2004, IULA merged with United Towns Organization and was named United Cities and Local Governments (UCLG). IULA-ASPAC was renamed UCLG-ASPAC. Currently UCLG has members in 127 countries, including 16 in the Asia and Pacific region. UCLG has a number of thematic committees within which working groups have been formed. Through meetings and organized events, representatives of local governments share knowledge and experiences. A special working group was established on capacity development for local governments. National and local government networks that are members of UCLG-ASPAC are the Australian Local Government Association, Australian State and Territory Local Government Associations, Chinese People's Association for Friendship with Foreign Countries, Korean Local Authorities Foundation for International Relations, Municipal Association of Nepal, Local Government New Zealand, League of Municipalities of the Philippines, League of Provinces of the Philippines, and Union of Russian Cities.

Urban and Regional Development Institute (URDI), Indonesia, Research Institute

Established in 1995, URDI is an independent, nonprofit organization aimed at promoting sustainable urban and regional development in Indonesia through capacity building, training, consultancy, and research activities. It offers short courses and tailor-made training, including urban management and urban environmental training (original modules of which were supported by the United States Agency for International Development (USAID), and the training on local employment in the informal economy (an Indonesian adaptation of the International Labour Organization/Sustainability, Education, and Ecological Design [SEED] training modules). URDI also has tried one innovative approach to local capacity building. URDI, working with the German Technical Corporation Agency (GTZ)-Urban Quality and Kabupaten Klaten, developed a user-friendly manual for local government staff on the consequences of decentralization laws. The product was produced using a participatory, multistakeholder process. More recently, URDI has conducted a training program on strategic planning for infrastructure development funded by the Government of the Netherlands.

Mayor’s Asia-Pacific Environmental Summit (MAPES), International, Political, and Local Governments

MAPES is a knowledge forum for city mayors and managers from across Asia and the Pacific established to promote sustainable development of cities, share information and best practices, and build partnerships with businesses, donor organizations, and nongovernment organizations (NGOs). Urban managers have convened every 2 years at a MAPES meeting since 1999. The MAPES program focuses on promoting leadership and action through extensive mayor-to-mayor dialogue and “mayors’ commitments,” which are specific pledges that address a wide range of problem areas. The Asia-Pacific Urban Institute (APUI) was inaugurated at the first seminar in a convention of mayors committed to achieving certain goals. MAPES considers traditional training and capacity building a necessary, but not sufficient, condition for improving the urban environment. It recognizes that leadership is often missing in cities. MAPES meetings are not traditional conferences but emphasize dialogue among mayors and other senior local officials, facilitated by experts. MAPES is a partnership of city leaders, municipal associations, international experts, donor organizations, and NGOs that leverage support for cities committed to sustainable development. Capacity development through the MAPES network consists of exchange of knowledge and experience among local government leaders, business, donor organizations, and NGOs.
Chapter 4 - A New Focus for Capacity Development and Institutional Strengthening

League of Cities of the Philippines (LCP), Local Government Network

The League of Cities of the Philippines (LCP) is an organization of 117 cities institutionalized under the Local Government Code of 1991. The LCP has a national executive board headed by a president. It also has a secretariat jointly supervised by the president and a secretary-general. It has four main programs, characterized by peer-to-peer learning. The city development strategy initiative steers urban governance toward poverty reduction, using participatory approaches. This is in partnership with Local Government Development Foundation (LOGODEF), with the support of World Bank. The LCP’s transparent, accountable governance project is aimed at building consensus on an agenda to counter corruption. This is supported by the Asia Foundation and USAID. The Federation of Canadian Municipalities and the Union of British Columbian Municipalities provide assistance to LCP to strengthen and institutionalize its capacity for policy development and advocacy, and for project and program development, management, and implementation. UN-Habitat program provides assistance in promoting shelter, improving urban governance, reducing urban poverty, improving the living environment, and managing disaster mitigation and post-conflict rehabilitation. LCP activities help governments create policies and strategies aimed at strengthening a self-reliant management capacity at both national and local levels.

Human Settlement Management Institute (HSMI) within the Housing and Urban Development Corporation, India

HSMI concentrates on the development of conceptual and practical knowledge in housing, housing finance, urban infrastructure, planning and management, urban finance, transport, and other urban issues relating to utility, social, and commercial infrastructure. It offers tailor-made training to professionals of central and local governments, the private sector, NGOs, and community organizations. The training duration varies from 3 days to 1 week. Longer programs for overseas professionals are conducted over 6–8 weeks. HSMI is also involved in research and consultancy on housing and infrastructure and urban poverty, urban environment, urban governance, and urban finance. HSMI has developed an institutional capacity development program through regular training programs at state level training institutes in India.

China Association of Mayors, National Network

The rapid development of cities of the People’s Republic of China has encouraged mayors to exchange experiences of urban administration and enhance intercity cooperation. In August 1988, 54 mayors jointly proposed the establishment of the China Association of Mayors (CAM), a standing body for organizing the study of urban issues, exchanges, and seminars for mayors and international mayors’ contacts. In 1988, the State Council of China approved its establishment and the first Mayors’ Congress was held in Beijing in August 1991, when CAM was formally established. CAM has more than 5,000 members. Its functions include organizing research on urban issues and providing reference material for urban development; organizing training for mayors; organizing seminars and discussions and providing consulting services for cities and mayors; international exchange to strengthen cooperation with foreign cities, mayors, and international organizations; and reporting to the state council and governmental departments regarding recommendations of cities and mayors. A mayor’s congress is the highest authority of CAM and its honorary president, president, executive president, vice president, secretary-general, and vice secretary-general are elected by the congress, which is held every 5 years. CAM holds annual consultative meetings.

National Government: Promotion of Decentralization
Adjusting to Decentralization: General Guidelines for Country-Specific Strategies

A priority in any reform must be the creation of a strong legal framework to address issues related to financing and reporting, to determine the type of control mechanisms that are necessary and who is accountable for them, to evaluate hiring practices and compensation schemes, and to regulate matters related to the procurement of public works. The legal framework should clearly define responsibilities and standards.

Consistency and transparency gain support. In staffing, compensation or oversight of local administration, and in the delivery of services, it is important to ensure that there is transparency and that changes in the administration, and therefore the civil service, are not seen to disenfranchise some groups or favor another.

Reporting mechanisms need to be clear and precise. Clear reporting procedures are needed for higher levels of government—the central government, in the case of regional administrations, for example—and horizontally between government agencies at the same level. In the medium and long terms, audit courts can be a useful regulatory mechanism. Transitions from the existing system to new systems have to be carefully planned to avoid conflict between new reporting arrangements and enduring mechanisms.

Channels for citizen–civil servant communication need to be created. Decentralization creates more opportunities for friction between civil servants and citizens by including more citizens in the process of monitoring civil service performance. Harassment by private interest groups can prevent honest and dedicated civil servants from performing their duties, while civil servants can use their positions to threaten citizens. These tensions can be avoided by relatively quick and inexpensive methods and structures for redressing grievances, whether from civil servants or from citizens.

Training should contribute to the formation of new working relationships. In addition to building local capacity, training can be a tool for creating personal networks among various levels of government, regions, or types of government workers. One example is to train career civil servants and local politicians together to ensure that they better understand what is expected of them and what they can expect from each other.

All levels of government should be encouraged to define the types of workers they will need to carry out new responsibilities and to plan how to marshal them. In the short term, these sorts of rough plans substitute for the computerized management capacity and human resource management staff that so many countries lack, and can help eliminate duplication, unnecessary hiring, and other mistakes. At the very least, they can be an exercise in longer-term planning and role definition.


need to be reviewed and used effectively to acquire skills. Government must make sure that national capacity building organizations and their local counterparts have a substantial role in formulating national and local capacity development strategies and in the design of sustainable programs.

Core competencies and capacity development support

Know what core competencies are best for a city
Cities need to be clear on what capacity needs developing if they are to utilize the institutions involved in capacity development effectively. The core functions or competencies for city planning and management have been described in Part One. Performance objectives have been established for each, and the training and educational support, systems, and management instruments and research needed have been identified. Detailed capacity development support activities are set out in the Annex to this chapter. Cities must prioritize from among these competencies when they develop their plans for capacity development.

Capacity development: a summary
Summarized on the following page are the priority activities needed to encourage a new focus for capacity development and institutional strengthening for improved urban management by national and provincial governments, and local governments.
Key Actions

At the local government level

- Enhance human resources
  - Introduce skill development program based on training needs assessment of special investment organizations (SIOs), for the special purpose vehicles (SPVs) and for their key regulatory agencies, local communities, and private sector stakeholders
  - Develop performance-oriented career development scheme
  - Foster attitudinal changes through incentives that link skill formation with performance rewards
  - Alleviate management blockages through stakeholder dialogue
  - Plan training to address competence shortcomings.

- Foster organizational development
  - Reform systems and procedures
  - Create transparency and accountability through e-governance.

- Improve institutional capacity
  - Establish more effective municipal structures
  - Streamline work flow and establish performance targets.

- Budget capacity development as part of routine budget, and make provisions for project-specific knowledge programs.

- Undertake a training needs assessment for each of the SIOs, for the SPVs and for their key regulatory agencies, local communities, and private sector stakeholders.

- Participate in “peer-to-peer” activities to share experiences and projects with other local governments, and introduce a junior professional training program for new graduates.

- Establish links with local academic and professional bodies to establish a mechanism for independent sector advice.

- Focus on financial goals through strengthened management of finance and assets by enhancing technical capacity and through the introduction of modern management systems of financial and asset management.

- Enhance revenue efforts and public compliance by installing management systems, and training staff in the use of associated hardware and software.

- Improve budgeting, control, and cost-efficiency through the introduction of modern technology of performance budgeting.

- Set targets for service delivery and partnerships with other development partners
  - Establish minimum standards for municipal services
  - Maintain and monitor performance controls.

- Improve planning and environmental management
  - Use technology of geographical information systems and participatory planning tools
  - Apply environmental sciences to urban planning and apply environmental standards consistently.

- Implementing partnerships with private sector and community organizations
  - Build on assets of partners
  - Establish legal and financial parameters of partnership arrangements
  - Formulate operational dimensions of partnerships
  - Strengthen interface with community organizations.

At the national government level

- Establish a national support mechanism, such as that through a local government academy or urban development institute, and provide resources to network effectively with local governments and international agencies.

- Ensure that local government staff have access to relevant skill training
  - Assure access to high-quality knowledge in project appraisal methods, strategic planning, change management, e-governance, utility management, etc.
  - Assist with funding for institutional reforms and modernization or organizational governance.

- Introduce civil service reform and generate incentives for higher performance and clean governance, with disincentives for corruption.
The priorities for action for the different types of communities, the nation, or the province, self-reliant and dependent cities, and smaller towns and villages, are set out below.

In general, self-reliant areas with more resources can, and should, be more proactive in capacity development. The matrix below sets out the key areas of focus.

### Matrix of Priorities for Action: A New Focus for Capacity Development and Institutional Strengthening

<table>
<thead>
<tr>
<th>Classification</th>
<th>Planning and Policy</th>
<th>Program and Project Formulation and Structuring</th>
<th>Management of Service Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nation or Province</td>
<td></td>
<td></td>
<td>Establish or strengthen a national urban institute</td>
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<td></td>
<td></td>
<td></td>
<td>Prepare guidelines for training curricula</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Design and adopt national accreditation systems</td>
</tr>
<tr>
<td>Self-Reliant Urban Areas</td>
<td>Develop capacity for strategic and regional planning, participatory involvement of stakeholders</td>
<td>Develop capacity for cross jurisdictional/project coordination, program formulation and project preparation, feasibility and financing</td>
<td>Develop capacity for project implementation, financial management and auditing, asset management, information and communication, organization and human resource development, monitoring and evaluation and administration at the regional scale</td>
</tr>
<tr>
<td></td>
<td>Support national research efforts</td>
<td>Support national/peer-to-peer training</td>
<td></td>
</tr>
<tr>
<td>Dependent Urban Areas</td>
<td>Develop capacity for urban planning, participatory involvement of stakeholders</td>
<td>Build capacity for program and project preparation</td>
<td>Support national/peer-to-peer training</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Build capacity in the areas noted above for the urban area</td>
</tr>
<tr>
<td>Towns and Villages</td>
<td>Develop capacity for local planning, participatory involvement of stakeholders</td>
<td>As above</td>
<td>Build local capacity in financial management, asset management, information and communication, monitoring and evaluation, and administration</td>
</tr>
</tbody>
</table>
## Core Competencies and Capacity Development Support

<table>
<thead>
<tr>
<th>Core functions</th>
<th>Performance objectives</th>
<th>In-service training</th>
<th>On-the-job, hands-on training, peer learning</th>
<th>Post graduate education</th>
<th>Systems and management instruments</th>
<th>Research</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I. Planning and policy</strong></td>
<td></td>
<td>Courses on: strategic planning; analysis of sectoral, economic, environmental developments; spatial planning; environmental management; and appropriate engineering standards.</td>
<td>In-house advisory services.</td>
<td>Practice of management instruments.</td>
<td>Peer-to-peer exchange.</td>
<td>Geographical information systems.</td>
</tr>
<tr>
<td>Project identification and development planning</td>
<td>Capacity to react to sector trends by formulating sectoral road maps and investment strategies. Participatory involvement of stakeholders in development planning are facilitated by local governments. Development planning is multisectoral, multiyear and strategic in nature.</td>
<td>Courses on: strategic planning; analysis of sectoral, economic, environmental developments; spatial planning; environmental management; and appropriate engineering standards.</td>
<td>In-house advisory services.</td>
<td>Practice of management instruments.</td>
<td>Peer-to-peer exchange.</td>
<td>Geographical information systems.</td>
</tr>
<tr>
<td><strong>II. Program and project formulation and structuring</strong></td>
<td>Formulation of investment projects/programs</td>
<td>Capacity to direct preparation work, detailed engineering and financial planning and scheduling of works. Involvement of stakeholders in planning. Management of consensus and approval processes. Appropriate funding sourced.</td>
<td>Courses on: project formulation; planning framework (&quot;logframe&quot;), and participatory planning; project appraisal, including financial and economic analysis; project financing; and private sector participation.</td>
<td>As above</td>
<td>As above</td>
<td>Templates for planning of sectoral projects, investment programming, project budgets. Financial instruments.</td>
</tr>
</tbody>
</table>
### Training and educational support

<table>
<thead>
<tr>
<th>Core functions</th>
<th>Performance objectives</th>
<th>In-service training</th>
<th>On-the-job, hands-on training, peer learning</th>
<th>Post graduate education</th>
<th>Systems and management instruments</th>
<th>Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audit</td>
<td>Audits are performed regularly. Audits are undertaken by independent auditors. Auditor’s recommendations are implemented and monitored by local councils.</td>
<td>Courses on auditing.</td>
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</tr>
<tr>
<td>Implementation of investment schemes</td>
<td>Capacity to manage the project cycle without external inputs. Capacity to implement projects efficiently in respect of resources and time. Transparent and clean procurement procedures adopted and in practice. Time- and cost-efficient procedures in place. Routine and periodic maintenance institutionalized.</td>
<td>Courses on: detailed engineering design; construction management; procurement; and O&amp;M techniques.</td>
<td>In-house advisory services.</td>
<td>Practice of management instruments.</td>
<td>Peer-to-peer exchange.</td>
<td>Selected specialized topics.</td>
</tr>
<tr>
<td>Procurement and supervision of works</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Operation and maintenance (O&amp;M)</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Administrative services</td>
<td>Rationalization of administrative procedures to ensure efficiency in utilization of staff and resources. Administrative services can be provided within prescribed time frame. Administration is clean, transparent, and accountable.</td>
<td>Public administration courses.</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Core functions</td>
<td>Performance objectives</td>
<td>Training and educational support</td>
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<tr>
<td></td>
<td></td>
<td>In-service training</td>
<td>On-the-job, hands-on training, peer learning</td>
<td>Post graduate education</td>
<td>Systems and management instruments</td>
<td>Research</td>
</tr>
<tr>
<td>III. Management of service delivery (continued)</td>
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</tr>
</tbody>
</table>

**Information and communication**

Modern information-communication systems to support planning and decision making. Citizens’ and customer services supported. Support to participatory budgeting, community-driven development activities, and other community outreach activities.

Courses on: management of public relations and public information campaigns, management of participation of civil society and other stakeholders.

In-house advisory services.

Practice of Internet and e-governance tools.

Peer-to-peer exchange.

Internet and e-governance tools.

Good practice case studies of public relations and public information campaigns.

**Organizational development and human resource management**

Organizational structure is in accordance with efficiency requirements and local government functions (including downsizing or upscaling plans). Institutional job descriptions for each position are in place. Individual job descriptions are according to organizational efficiency. Laws and bylaws are adjusted to suit new management requirements. Modern human resource development tools are being applied.

Courses on: human resource management, and legal drafting.

In-house advisory services.

Practice of management instruments.

Peer-to-peer exchange.

Selected specialized topics.

Career advancement training.

Training of trainers.

Software for human resource management, and human resource tracker systems.

Good practice case studies of human resource management.

**Monitoring and evaluation of results**

Regular progress monitoring undertaken by local government. Citizens and beneficiaries involved in evaluation. Adjustments and corrections introduced as necessary.

Courses on: techniques of monitoring and evaluation.

Software for data management.

Baseline and sectoral performance studies.
Chapter 5
Promoting Sustainable Economic Growth
The city and its region: a spatial approach to local economic development

Road maps plan for growth and economic development while not forgetting the poor

The nature of city economies in Asia—with a formal export-driven sector producing economic growth alongside an extensive, mostly informal, service sector—leaves them vulnerable to risks of sharply reduced demand for the products they make if developed countries reduce consumption levels. Asia’s cities need locally generated, or endogenous, growth and better support for the informal economy to reduce these risks.

Economic growth is essential to achieving the principles of sustainable development in a city, and so too is an inclusive and innovative economy. National and city governments need to help develop enabling environments so that business is competitive and environment-friendly, society is inclusive and characterized by vibrant communities, innovation and creativity are encouraged, and the role of small business and the informal sector is recognized. Pro-poor city growth and bolstering the role of cities in alleviating rural poverty are crucial goals. This chapter explains how they can be accomplished.

First, know your city’s economic needs

Economic development is about improving the competitiveness of cities. To start, there is a need to establish and analyze the economic structure of a city region, identify past trends, and project into the future. Internal strengths and weaknesses and external opportunities and threats to competitiveness need to be identified. The key drivers of the city’s competitiveness should be recognized and a city economic development strategy prepared based on a collective vision of the future economy. This chapter describes how to do this.

The need to link rural and urban areas of a city region within one embracing strategy is discussed. Also explained are the specific activities for supporting implementation, including enabling environments, infrastructure investments, labor market development, and necessary credit and support services. Approaches are outlined to establish an agency to implement the plan, and the need to support the informal sector—so important in Asia’s cities—and how this is best done are then reviewed. The chapter ends by presenting directions for future, catalytic activities needed to implement a sustainable economic development strategy.
**The basic approach: finding the appropriate tools**

The first step toward achieving real growth is to analyze a city region’s economic structure and identify the local economy’s key drivers. As discussed in Part One, the revival of urban economic analysis and planning has brought with it greater use of economic analysis tools. In contrast to the overconcentration on general systems models seen in the 1960s and 1970s, the current approach uses methods and tools to facilitate a better understanding of the region through profiling and identifying areas and/or sectors that require further investigation for the planning process. Detailed analysis and projections can then be focused on critical issues and sectors. Perhaps one important lesson learned from the revival of city region planning is that decisions should be based on information provided by these methods and tools rather than on a desire to follow some general model of the urban system as a whole.

Some key tools to emerge from this approach have been:

- Area profiling using techniques such as strengths, weaknesses, opportunities, and threats (SWOT) analysis and location quotients.
- Sector-based forecasting at the city region or local level using shift-share analysis or econometric models, usually developed at the national level and disaggregated spatially.
- Sector productivity and linkage analysis such as cluster analysis.
- Labor market analysis, including skills profiling and analysis of travel to work patterns.
- Risk assessment analysis, including disaster preparedness.

Generally these approaches, if undertaken in a transparent manner, can be used to provide useful information to decision makers or to focus in on particular drivers for, and constraints to, regional productivity and performance.

**The key is in the clusters**

The priority investment needs of a city must relate to those of a growing regional economy. A city needs to analyze its economic structure and trends by sector, identify key clusters or economic drivers, assess competitive advantage, and identify the constraints to further develop its high-potential sectors. This would include an assessment of groups of related firms or clusters rather than individual companies, along with their supporting infrastructure. Turner (2001)\(^\text{174}\) shows that cluster analysis can be used to determine competitive advantage within a city region and to devise economic development strategies that build on the strengths of specific clusters.

As an extension of this work, an analysis can be done of how the poor contribute to economic activity. Given the high growth potential of existing and developing economic clusters, and the beneficial impact that growth of particular clusters can have on the poor, the cost of overcoming constraints to this growth and the approach that enables the most appropriate interventions and infrastructure both need to be identified. In-depth case studies are often necessary to examine cluster behavior among firms and the importance of regional labor pools, supplier firms, and research and development institutions in the competitive advantage of the cluster. Regions should prepare a cluster map showing the sources of its competitiveness and vitality and identifying roles for key stakeholders. A special purpose vehicle can be set up to encourage consultation among participants and to develop a collective vision of the cluster’s key challenges. Public development assistance should be organized around these clusters of firms rather than individual firms to take advantage of economies of scale and avoid the risk of “picking winners.”

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**UNIDO Methodology for Analysis of Industrial Clusters and Poverty Reduction**

Simplified value chain mapping of industrial clusters and institutions

- **National government**
- **Government / municipality**
- **Trade organizations**
- **Business development services**
- **Nongovernment organizations**
- **Traders**
- **Producers/traders**
- **Large producers**
- **Small producers**
- **Subcontractors**
- **Homeworkers**

**Key to poverty nodes**
- Vulnerable to poverty
- Likelihood of poverty


Basing strategy on informed decisions and principles

Knowledge and data systems must be developed to provide information for investment decisions and the evaluation and monitoring of economic performance. An understanding of a city’s competitiveness is critical in designing an effective development strategy, as illustrated in the box above. Successful economic development strategies are guided by the following principles:

- A market-led approach that responds to market signals and creates an enabling environment for the operation of business. This means a city should abandon the use of norms and standards for planning at a strategic level and undertake market demand assessments.
- A focus on economic management rather than economic development, which is achieved by creating the enabling environment that supports private sector investment and new industry development.
- Greater autonomy at the local level over decision making that concerns local economic development.
- Integration of economic development with spatial planning, particularly the matching of the hardware of roads, water supply, energy, sewerage, with software needs, including the legal framework, the labor market, and business development.
- A sustainable balance of population and jobs to ensure that the economy neither overheats with job vacancies nor suffers substantial unemployment.
Managing Asian Cities

A city economic development strategy, which is expressed in macroeconomic planning terms for the city economy and in microeconomic planning terms for infrastructure and services, is required. The strategy must recognize the contribution made by the informal sector. Sustainable economic development requires action across four key pillars coordinated at the city level: sector development; labor market development; business development, particularly small and medium-sized firms; and infrastructure and property development.

Preparing a city economic development strategy

City economic development is about improving competitiveness, with the focus on local economic development (LED). This, in turn, is about creating an enabling environment for business and alleviating local market failure. LED relates to the promotion of business, including small- and medium-sized enterprises (SMEs), entrepreneurship, investment, and informal sector activities, as well as the promotion of employment through skills development, retraining, and labor market information systems. LED initiatives are designed to enable—not substitute for—private business. To start, a citywide strategy must be prepared within the context of a city development strategy or as part of it. Specific local economic development strategies would then be prepared for smaller opportunity areas that have problems identified in the overall city economic analysis and strategy.

Economic and financial pricing of communal and municipal services—meaning that external benefits and costs should be included in pricing systems. For example, heavier polluters pay more, and “‘lifeline” tariffs apply to the poor to assure a basic level of consumption at affordable rates.

The approach should follow a clear sequence:

- Organize the work through a management team and a partnership of the public sector, business, and nongovernment organizations (NGOs) that include representation from the major stakeholders in the area.
- Analyze the local economy and prepare a competitive assessment that covers current economic activities and trends, risk assessments, inventory of businesses, business culture, population trends, physical infrastructure, local development and management capacity, local leadership, human resources and skills, availability of finance, local training facilities and programs, and natural resources.
- Prepare a LED strategy that sets the vision, goals, and objectives; defines the programs; and details projects and action plans.
- Formulate a plan to implement the strategy, including an investment program and sources of funds, human resource requirements, and institutional arrangements for execution.
- Set up the system for monitoring and evaluation of the strategy.

Identifying and building on a city’s strengths

LED is the search for competitive advantage at the city level. Global cities must compete with their counterparts worldwide to attract economic activity and to seek markets for goods and services they produce. Even endogenous growth depends on fostering competitiveness. As seen in Part One, this involves enhancing productivity and expanding efficient local forward and backward linkages in the competitive areas of the economy. Smaller cities compete with other urban centers in the regional or national economy.

Much of a city’s competitive advantage lies in its assets—human capital, natural resources, land, location, and infrastructure. The most appropriate economic development strategies involve the identification of assets and the other advantages of a city. They identify opportunities for building on strengths and devise a framework that encourages the private sector to implement an established vision of economic growth while allowing flexibility to exploit new opportunities. For example, by maintaining and improving infrastructure, cities ensure an asset base for the development of business. By providing education, they help supply human capital. By recognizing and maintaining property rights, they can stimulate private investment. And by enforcing laws and regulations, cities help create
City Economic Development Strategy
Sets the Context for Action

A city economic development strategy establishes a clear analytical framework for economic development that would help mainstream the process; build the capacity of key stakeholders to engage in strategy formulation; and generate consensus around a set of objectives, priorities, and funding options that are reflected in medium-term plans, annual budgets, and activities. This framework follows a structured process covering situation or status analysis, deficiency or disparity analysis, opportunity review, resource analysis and funding options, and institutional assessment.

At the core of the process is the economic analysis of the city. Globalization and increasing liberalization of trade and investment are reshaping the world in which cities function. At the same time, decentralization policies have presented city managers with new tasks, roles, and responsibilities. One is to improve the social and economic welfare of urban regions—the creation of productive and inclusive cities. The prime focus is city competitiveness, which, in effect, requires improving the productivity of cities through increased investment and the expanding income and employment opportunities that such investment will bring. Key competitiveness drivers of the city economy are: (i) economic structure—the composition of output, employment structure, trade and investment, industrial structure, firm size, productivity, and value added; (ii) territorial endowment—the city’s natural resources, infrastructure, location, and accessibility; (iii) human resources—the demographic structure, education and skills, entrepreneurship, and labor market dynamics; and (iv) institutional framework—governance, legal systems, political frameworks, networks, and championing institutions.

The description and analysis of the key drivers should be combined into a strategic framework to make informed judgments about the relative competitiveness, economic vitality, and change drivers for the city. The economic analysis and competitiveness assessment is normally developed through a participatory and partnership approach.


Encourage competitiveness

Many powerful global and consumer forces that shape the development of Asian cities are beyond the ability of governments to control. These forces have given rise to cities whose economic structures and functions differ greatly even when they are in the same country. The primatial cities will continue to dominate the urban hierarchies of Asia. Many have per capita GDP rates five or more times greater than subregional cities and towns. Those regional cities, unable to compete for global trade and development, are increasingly focused on consumption- and population-driven development, much of it funded by remittances and low-level service industry development. This kind of regional city economic development is not sustainable in the long term, particularly because these cities will increasingly be the destination of rural migration in many countries. Yet the urban megaregions are not sustainable either. Their faulty logistics and governance systems and failures to manage urban development efficiently and effectively are choking their people and economies and threatening their future.

Asian countries and cities, with few exceptions, have embraced the benefits of globalization but lagging institutional and governance reform is holding back their

175 Local Economic Development, USAID.
economic development. This has created problems for the public institutions that are expected to deliver the infrastructure and services necessary to engage more fully with the global economy and to stimulate the development of domestic economies. Improving enabling environments is a critical first step toward enhancing the economic development and performance of all Asian cities. This will involve further development and deepening of financial, land, and property markets.

It is essential that decentralization and devolution are made to work. There are many skeptics. Central governments are often doubtful of local government capacity. Local governments fear changing the status quo. Putting the concept of a decentralized nation state into practice is harder than the theory would have us believe. But central governments have neither the resources nor the local knowledge that is needed to effectively or efficiently provide local infrastructure and services in support of economic development. Local governments must therefore be given the clear, unencumbered responsibilities to provide citywide infrastructure and services and be provided with the necessary resources. To date, decentralization has had only mixed success, held back by problems in the enabling environment and with the limited capacities of local governments and institutions to deliver these essential services.

There is a need to fast-track the provision to local governments of sustained programs of technical assistance and training for improving urban governance and management. Their focus should be on improving the competitiveness of cities and the management of cities based on performance and results discussed in the previous chapter. Major investments are required in leadership development and human resource development programs for local authority politicians, management, and staff. Institutional strengthening through the development and implementation of performance-based systems of management and control is critical in improving urban governance and enabling environments.

Help the hinterland: urban-rural linkages

The spatial focus of the planning process often lacks proper consideration of the economy of the city’s hinterland. The urban economy relies on the hinterland for agricultural produce and markets for nonagricultural goods, while the hinterland depends on the town for its market and services. Coordinated growth in both the urban and hinterland economies, with strengthened economic linkages between the city and the surrounding rural areas, is likely to foster improved opportunities for both the urban and the rural poor. Both derive employment and income from the local economic system. Development prospects, therefore, depend on dual, interlinked strategies for enhancing rural and urban economic performance. People living and working in rural areas must have better access to urban markets, services, and knowledge. Building on and improving linkages, including transport and communications infrastructure, is a priority.

For cities to develop, accumulate, and retain the skills necessary to support their economic development, rural development strategies should concentrate on education programs that will equip those migrating to cities with the

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Measurement of Competitiveness

The competitiveness of cities in Asia can be measured in several ways. In terms of economic transactions, input/output (I/O) analysis offers a useful means for examining intermediary transaction costs and comparing these with cities of similar size within a country or in the rest of Asia. Such analysis, if conducted based on time series, enables the identification of the economic performance of capital investments by sectors. Time series I/O data can also be used to measure changes in the balance of trade and value added, and not wealth creation.

The most common approach for measuring competitiveness globally is polling based on interviews and the collection of qualitative data from company and government officials. Polls provide a retrospective view of the competitiveness of the existing economic structure of cities and nations. The Institute for Management Development (IMD) World Competitiveness Yearbook is a widely recognized and comprehensive annual report on the competitiveness of nations, ranking and analyzing how a nation creates and sustains the competitiveness of enterprises. Its competitiveness index is derived from a survey of over 4,000 people in 61 countries to measure over 300 variables related to economic performance, government and business efficiency, and infrastructure. The survey sample is too small to be used in measuring the competitiveness of cities but the IMD methodology has been used in developing tools for measuring the competitiveness of cities in many parts of the world.

basic skills, competencies, and knowledge of technologies needed to make a stronger contribution to city economic development. With 55% or more of the workforce in many Asian cities employed in the informal sector, the problems of the rural poor are merely being transferred to cities and are often made worse because the urban poor are more vulnerable if, on average, richer in terms of income. The lack of a strong regional skills and technology base is one of the most important factors inhibiting competitive and sustainable cities in Asia. The experiences of Thailand, the People’s Republic of China, Viet Nam, and India suggest that investment in skills and technology is the most important factor contributing to the enhancement of economic performance.

New Urban-rural Linkages in Indonesia

In Indonesia, the partnership for local economic development in Kemitraan untuk Pembangunan Ekonomi Lokal (KPEL) program aims to integrate rural areas into the economic mainstream through investments in infrastructure and human resources that support rural-urban trade. The project identified market opportunities for rural products and linked producers with opportunities in urban and international markets. KPEL broadened the traditional rural-urban linkage approach to include the building of partnerships that mobilize and link associations of producers with suppliers through participatory planning and management. The project helped Indonesian institutions at the local and regional levels form partnerships in local economic development. National-level support sustains and connects the local-regional partnerships to national and international opportunities. KPEL supports a market-driven approach to local economic development through research to assess the viability of clusters of economic activity and technical assistance. It also helps rural producers and traders identify market opportunities and works out ways to improve the quality of their produce.

Supporting the informal sector

The informal sector consists of unregulated, unsupported small-scale activities that are often harassed. This so-called hidden or unrecognized part of the economy often provides a source of employment for 60% of the urban population, and serves the needs of an even greater proportion of citizens by providing goods and services. Numerous studies have established that the informal sector is more integrated with the formal sector than its title would suggest, and plays a pivotal role in employing an increasing urban labor force. Because of its small-scale operations and low level of capitalization, it not only provides employment at a far lower cost per job but also requires fewer skills and/or less training, enabling easier access by the poor. When local economies are affected by structural adjustment, or global shifts in demand, it is the informal sector in particular that provides a safety net for those made redundant or unemployed. The relative growth of the informal sector during the Asian financial crisis is a case in point.

The informal sector is diverse. Production units vary in terms of size, equipment, capital, employment, and cover many economic sectors—from petty trading and domestic services to manufacturing, transport, construction, and urban agriculture. Informal employment provides a source of income for social groups excluded from formal sectors and for women seeking to supplement their family incomes or provide a livelihood. Such activities underpin economic development because they mobilize otherwise unutilized human capital.

The informal sector’s downside

The informal sector has its limitations. It has low productivity. The average wage and output per worker are often less than in the formal sector. Earnings are irregular and erratic. Its unregulated nature makes it difficult, and sometimes impossible, to obtain access to credit or other facilities,


Major Institutional Issues within the Informal Sector

Limited Access to the Financial Sector. The formal financial sector is poorly prepared to assume the perceived costs and risks of credit designed for the informal sector. In many countries, banks are also constrained from financing the informal sector by the regulatory framework, which was not designed to cover such operations. Informal entrepreneurs often must deal with high-cost moneylending services for short-term credit. A minority have access to credit schemes of nongovernment organizations or cooperatives. Informal enterprises often have no access at all to leasing and long-term credit to purchase equipment and property.

Market Constraints. A lack of linkages between informal and formal enterprises constrains markets for the informal sector and increases costs for formal sector enterprises. Likewise, informal entrepreneurs often lack the capacity to analyze and develop their market niche. They also face administrative and legal constraints—in obtaining licenses, for example—and this prevents entry into some markets. Space is often inadequate for informal businesses and many occupy pavements. Knowledge of technological improvements in production, services, and marketing is also limited.

Structural Limits of the Informal Sector. The informal sector comprises individuals who live on a day-to-day basis. They are involved in trading with low start-up capital investment and payback that is faster than in the manufacturing and service sectors. The limited cooperation among microentrepreneurs can affect their pricing power. Workers have no trade unions and lack social security. In cases of illness within the family or in a family economic crisis, goods or equipment are sold or savings are used.

The Expansion of Microfinance Promotes Pro-Poor City Growth and Rural Poverty Alleviation

The last 20 years has seen the evolution of microfinance institutions (MFIs) that have created significant income and employment opportunities for the poor in Asian countries. Microfinance is a system for providing small loans to poor entrepreneurs, typically self-employed and running a home-based business. Although most MFIs started with public or philanthropic money, many have now become self-sustaining, profit-making enterprises. The performance of the Bank Rakyat Indonesia’s Unit Desa program in Indonesia and the Grameen Bank in Bangladesh shows that it is possible for MFIs to make small loans to large numbers of poor people in a sustainable manner. However, the focus of such activity has been on people living in villages rather than in urban areas.

The trends in microfinance is toward a more professional, inclusive financial system that reaches into both rural and urban areas. At the same time, microfinance is moving beyond its small-business base to offer the poor a wide range of financial services, including savings, insurance, money transfers, and a broad array of loan options. Now that microfinance entrepreneurs have proved that the poor are bankable, an enabling environment must be created to encourage microfinance in urban areas. Business should be encouraged in urban slums through the provision of risk capital and technical expertise to work with local microfinance entrepreneurs, commercial banks, and nongovernment organizations. A feature of microfinance is the goal of self-sufficiency for both microentrepreneurs and MFIs. By combining access to private market financing with more efficient management and technology, MFIs can move from reliance on philanthropy to self-sufficiency. Unlike other loan programs, microfinance does not require borrowers to have collateral. There is a need to build the capacity of microfinance practitioners, prepare a new legal framework with the central bank to facilitate the development of microfinance, and pilot the increasing operations of those commercial banks and financial institutions entering the microfinance market. A focus on savings is particularly beneficial for the development of microfinance in urban areas. Microfinance is not the total solution and will not defeat urban poverty on its own but it can play an important part.

to meet current expenses. The lack of formal skills or educational qualifications prevents the movement of labor to other more productive activities. This also means that entrepreneurs are poorly equipped to manage their operations. But the informal sector is a training place for many young people.

Negative Perception of the Informal Sector. In some countries and cities, the perception of the informal sector is negative. It is considered a transitional state that either should be eliminated or will disappear with economic growth. This bias often contributes to its marginalization and encourages restrictive action by local authorities.


necessary for increasing earnings or moving out of the sector. Its nature also makes it difficult to protect those involved in its activities, including nonpaid family members. Child labor is one result of this lack of protection. Children’s rights often conflict with the income needs of a family. The continuing migration from rural areas into the informal economy is also reducing earning capacity and increasing underemployment. But the growth of informal sector enterprises is a key component of urban economic growth. Any strategy to alleviate poverty should thus emphasize strengthening such enterprises by removing key barriers and the bias toward the formal sector and addressing the lack of technical knowledge within microenterprise operations.

City governments and other local agencies can play an active role in raising productivity and wages in the informal sector by encouraging training and technical support for informal entrepreneurs and by building a supportive environment for them. This includes:

- Establishing general support structures such as microentrepreneur “houses” or “incubators” as work premises or centers of information exchange.
- Modifying rules and regulations to reduce or eliminate restrictions on informal enterprises.
- Adopting flexible land use and building zoning policies and developing support institutions, such as a small-scale credit organization and infrastructure. 179

Supporting the creation of community-based financial institutions by providing logistic support and security, and facilitating linkages with the formal financial sector—by providing guarantees, for example. 180
- Coordinating NGO activities in credit or training support to ensure that overlaps are avoided and to promote such initiatives in areas where no such support exists.
- Providing basic health safety nets and basic education to employers and workers.

Components of the strategy

Encouraging sector and cluster development
Sustainable city economic development should be underpinned by the diversification of the economy, which in turn underpins endogenous growth. The approach is to identify and promote the sectors and clusters of new activity that build on the strengths and opportunities of the city and productivity of those sectors, rather than trying to divert

Modern microfinance

The modern origins of microfinance date back to the mid-1970s. Among the key innovators was Professor Muhammad Yunus of Bangladesh who started by making loans to the very poor, especially women in villages. He started the Grameen Bank Project in 1976, and in 1983 transformed it into a bank that now has nearly 6 million borrowers, 96% of them women, and some 2,000 branches in about 64,000 villages. The repayment rate for loans is 98%, and the bank is profitable.

Microcredit and microfinance

Microcredit covers loans and credit needs of clients, while microfinance provides a broader range of financial services that includes savings, insurance, housing loans, and remittance transfers. A microfinance institution might also offer microfinance, and entrepreneurial and life skills training; and provide advice on health and nutrition, sanitation, improving living conditions, and the importance of education.


179 Where SMEs operate at the interface of rural and urban economic activities, such zoning would also enhance rural-urban linkages.
180 Municipalities should not assume a direct role in the management of credit; this is a task of specialized institutions, for which municipalities are not well placed.
investment from competing cities. This can be achieved by: creating an enabling climate for entrepreneurs and innovation; improving competitiveness through the provision of efficient infrastructure and by investing in human resources appropriate to the region’s competitive industries; and fostering business development through support in finance and reducing transaction costs.

**Creating an enabling climate for business**

Promoting an active private sector should be a key goal in national and local development plans but to do this city governments need to be more business-friendly. Governments must address the main concerns of businesses by removing the regulatory and bureaucratic obstacles they impose and reforming often complicated licensing and permit procedures and processes. This reform may include:

- Assessment of the consistency, necessity, effectiveness, and efficiency of local rules and regulations, followed by streamlining based on the findings.
- Efforts to make local and national rules and regulations more transparent and easy to understand, and public agencies more aware of the needs and demands of private business.
- The creation of one-stop processing agencies for permits and approvals.
- The provision of effective real estate and property information.

**Investment in infrastructure promoting pro-poor growth**

Infrastructure is critical for generating growth, alleviating poverty, mitigating disasters, and increasing competitiveness. Infrastructure investment has been fundamental to the development of the economies of the region, particularly those of East Asia, and has undoubtedly contributed to the region’s high growth and poverty reduction. But concerns have been raised about the impact of infrastructure development on the environment and local communities, about waste through corruption in public spending and private contracts, and about the appropriate roles of the public and private sectors in infrastructure financing, ownership, and management. Nevertheless, major investments in physical and social infrastructure preceded, and later reinforced, economic growth within the newly industrialized countries of Asia. New and well-functioning infrastructure promotes better access to markets, lowers transaction costs, and provides communities with improved access to education and health care. Efficient infrastructure networks are the backbone of sustainable economic growth.

**Reduction of Administrative Burdens on Enterprises: The One-stop Shop Experience in Italy**

The Italian one-stop shop (OSS) policy has been a central part of a far-reaching reform package—the so-called Bassinini reforms—that, from a cornerstone law in 1997, has produced a cascade of national and local laws and regulations that continues today. The objective of the OSS policy is twofold: (i) bureaucratic simplification of administrative procedures for potential and actual entrepreneurs, and (ii) territorial marketing for less-developed regions. Intense efforts have been devoted to introducing the OSS concept throughout the country. The OSS policy is implemented with the support of the Ministry for Public Administration, which liaises closely with regional government and public and private actors—municipalities, chambers of commerce, entrepreneurial associations, and other so-called third-party entities.

Under the basic principles of the OSS policy:

- **Municipalities take responsibility for the final decision** on applications to form new companies or restructure businesses.
- **A single authorization** is issued based on a single administrative procedure, replacing the large number of different procedures previously carried out by the administrations concerned, the third-party entities.
- Municipalities will set up a **dedicated structure** whose head will be responsible for the whole procedure.
- This structure’s **interface** with the applications from potential and existing entrepreneurs is the one-stop shop.

Italy’s pioneering approach to one-stop shops is unique in the European Union since it is used as a key tool for decentralization, bureaucratic simplification, and territorial marketing.

Source: Ministry for Public Administration, Italy. 2000. Executive Summary, Reduction of Administrative Burdens for Enterprises: The One Stop Shop Experience in Italy. November.

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development. The provision of sustainable infrastructure involves implementing appropriate maintenance programs and the development of new facilities; the development of appropriate support to industry clusters, including innovation centers, science and technology parks, and business starter units; and urban regeneration and rehabilitation of run-down areas and neighborhoods.

The national government can help by providing or facilitating the strategic and trunk infrastructure that supports the implementation of the national urban spatial strategy formulated as part of the national urban road map. It must prioritize key investments needed in road and rail networks, especially in motorways and other national roads and high-speed or improved rail networks for goods and passengers. It should also invest in the national electricity and gas grids, telecommunications networks, and bulk water supply.

Although many of these networks are now privately owned, the national urban spatial strategy should be developed in agreement with private companies or concessionaires to prioritize investments that support national growth. Such infrastructure investment improves national competitiveness and stimulates local economic growth within connected cities. Cities must maximize the benefits of such investment by ensuring that their infrastructure programs and plans integrate with national priorities by facilitating the provision of connecting and secondary infrastructure. Priorities would be decided based on the city's spatial strategy, linked with the national road map.

Labor market development through education, skills training, and upgrading
To meet the requirements of a new economy, training and education facilities and courses should expand in size and coverage and meet the needs of industry clusters. This would ensure a better match between skills in demand and those available and encourage the development of a skilled labor force that can be accessed by existing, new, and international business.
This means aiming for a balance between population and jobs growth and between supply and demand in skills. Achieving this balance requires dependable estimates of future labor demand, more higher education to drive the knowledge and high-tech economy, more training for management for both public and private sectors, and growing entrepreneurship.

**Develop business through credit, support services, and incentives, including tax breaks**

The future of any city is dependent on the success of its businesses, from small firms to multinational enterprises. To support and enhance their performance and profitability, city governments need to pursue policies that are supportive of business. These include regulation, which supports innovation and improved efficiency, reasonable taxes to enhance competitive advantage, development of supply chains and networks within business clusters of strategic importance, and the provision of business support.

This also requires better access to and integration of finance by national, regional, and local programs; international marketing of a city as an attractive destination for business and people; and inward investment promotion, including high-value added functions, such as research and development and corporate headquarters.

New businesses must be encouraged to start and existing ones to expand. Cities need to adopt a broader enabling strategy that encourages and supports new entrepreneurs at all stages of business development. Such services should be accessible throughout the city and for all types of businesses,

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**What is the City of Austin Doing to Develop the Workforce?**

The city of Austin is involved, along with other workforce, educational and economic development organizations, in implementing various initiatives to address the needs of employers and current, emerging, and transitional workers.

Through the Health and Human Services Department (HHSD), the city contracts with various community-based organizations (CBOs) to provide workforce development services to adults and youth who are fully employed, underemployed, unemployed, and to those needing special assistance.

- Funded services include adult basic education, general education development, literacy, English as a second language, assistance in preparing for college entrance exams, occupation-specific training, life skills training, job search assistance, internship and job placement, job coaching, job retention, case management, and support services (professional clothing, child care, etc.).
- Funded programs include American YouthWorks, Austin Academy, Austin Area Urban League, Capital Area Training Foundation, Capital IDEA, Crime Prevention Institute, Easter Seals, First Workers’ Day Labor Program, Goodwill Industries, LifeWorks, Literacy Austin, and Vaughn House.

The city has been an integral partner of the following efforts:

- Greater Austin@Work initiatives to develop industry-led solutions to address workforce and economic development challenges in the 10-county region. Greater Austin@Work is a partnership of the WorkSource-Greater Austin Area Workforce Board, Rural Capital Area Workforce Development Board, City of Austin, Travis County, and the Greater Austin Chamber of Commerce.
- The city of Austin cosponsored and cofacilitated the 1999 and 2001 Greater Austin@Work Summits which provided a forum for examining workforce issues from the perspective of employers in distinct industries throughout the region.
- The city of Austin initiated the creation of the public service industry cluster, which consists of local, state, and federal government employers working together to heighten awareness regarding careers in the public sector and to enhance recruiting and retention of workers in the public sector.
- As a leader of the Public Service Industry Cluster, HHSD staff assisted in hosting a University of Texas and government agency job fair in January 2002.
- In collaboration with Greater Austin@Work partners, the city was instrumental in securing state and federal funding for industry-led efforts in the region.

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Source: City of Austin, Health and Human Services Department (HHSD). Available: www.cityofaustin.org/health/ms_workfc.htm

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182 Cities should however collect all taxes they levy.
Business Development Fund

The City of Melbourne Business Development Fund is the council's major program of direct support to the economic and business development of Melbourne as a thriving and sustainable knowledge city.

The Fund contributes to the following strategic directions:

- Ensuring that information and communication infrastructure and capacity meet world standards, are competitive, and serve community and city needs.
- Enhancing connections at the local through to the international levels to achieve the city vision.
- Growing Melbourne's competencies as a globally recognized, entrepreneurial, and competitive "knowledge city."
- Fostering a civic and business culture that encourages and supports innovation in the pursuit of opportunity.
- Promoting and extending the city's role as Victoria's principal center for commerce, professional, business, and financial services.
- Developing and sustaining a world-class retail experience within the city core.
- Enhancing the city's reputation as a "start-up city" by supporting the establishment and growth of small and medium-sized businesses.
- Developing sustainable industrial clusters in advanced manufacturing and logistics.

Source: City of Melbourne, Business Support and Training, Business Development Fund.

Build implementation organizations

Even in high-income countries, good examples of institutions effectively managing city-region development in a globalized economy are few. The task is made more complex by national decentralization policies, which often result in unfunded mandates for cities. The most advanced city-region institutions are usually physical (land use) planning and infrastructure service providers (water boards, transport networks) established to solve problems of investment economies of scale and cross-jurisdictional coordination. Becoming more common are organizations designed to foster efficient market institutions for regional economic growth, although they do exist and the Silicon Valley Joint Venture Network and the Cairns Region Economic Development Corporation provide nongovernment examples. These agencies typically directly provide a range of services to the institutions need to undertake a planning and implementation process that promotes a competitive local economy and links it into the global economy. The process is based on accurate information about the local and regional economies, although this is not always easily accessible. It must enable local institutions and stakeholders to assimilate this information and to foster agreement on a LED strategy. This, in the often intensely political environment of major cities, is a difficult job. The process needs institutions to put in place the appropriate incentives for both public and private sectors to implement the strategy. Agreement on these incentives is also difficult to achieve, especially if redistribution of government resources is required and vested interests are challenged. This is most likely to be the case if the strategy is pro-poor. Establishing public-private linkages also require a clear understanding of the needs of entrepreneurs and of the community.

All the more necessary where government budgets are severely constrained.
community, or coordinate their provision, or cause them to be provided.

They often act as a one-stop shop for business development assistance, research on economic development issues, marketing for the city, assistance for establishing businesses, links to financing, and business networking and lobbying. Establishing an entity to implement the plan is essential. It can come in many forms and experience shows that there is no best model. In some cities there is a dedicated LED agency, while in others existing organizations undertake LED activities, albeit in an uncoordinated way. In the latter case, city governments need to focus on coordinating the activities of existing agencies. This can be achieved by establishing or strengthening an existing SIO for citywide economic development and smaller opportunity area-based SIOs for local economic development. However, care needs to be taken to ensure that city governments do not hinder the work of other stakeholders, including chambers, business associations, training organizations and tertiary education offering capacity development, and others who can contribute.

**In summary: directions for the future**
Cities must do more than simply provide jobs. Economic success needs to be sustainable for cities to become more competitive in regional and world markets. To be sustainable, policies for economic development must ensure:

- The maintenance of high and consistent levels of economic growth and employment, within diverse economies, where inflation is under control at both the national and local levels.
- Improving productivity and competitiveness through: skills development for the labor force; investment in people, research and development, land and buildings, capital equipment and infrastructure; innovation, including sustainable technology, new products and processes; enterprise, including new starts and the growth of existing small business; and
Chapter 5 - Promoting Sustainable Economic Growth

Competitiveness, through a more business-friendly environment that minimizes regulation and taxation and encourages innovation and efficiency.

- In support of such innovation, the local financial sector needs to be encouraged to expand services to the range of entrepreneur groups and of consumers in the city-region economy. For example, incentives could be provided for expansion of bank branches or banking services through telecommunications to fringe areas.

- Effective protection of and investment in the environment, including the introduction of appropriate economic-based pricing policies for communal and municipal services.

- Providing greater opportunities for microenterprise and support for the informal sector.

- Modernization of public administration so that it is transparent, efficient, and effective.

**Catalyst activities and actions**

Catalyst activities should be undertaken to improve economic management using the approach discussed above. These activities must be set within the institutional and financing frameworks determined strategically to manage growth-oriented, pro-poor economic development. They would involve the establishment of a number of SIOs. These would include, for example, an SIO that includes representatives of all key logistics infrastructure such as ports, railways, and expressways of the local and state provincial governments and of the client enterprises to implement the priority investments identified in the city road map. There could be an SIO for cultural heritage, or urban renewal and regeneration, which would coordinate the renewal of selected historic or blighted and run-down areas. At the apex would be a regional economic development SIO that includes representatives from core industry clusters, financiers, and concerned government agencies to undertake regular monitoring of economic activity and risk assessments.

This SIO would prepare a business development plan that would obtain financing for human capital development, and for investment in core industries and promising ventures, and would facilitate investment in infrastructure and property assets.

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**About Us: Joint Venture**

**Building the next Silicon Valley, together.**

Our community has significant challenges to address if we want to preserve our standing as the world’s best platform for innovation and entrepreneurship.

In 1992 a group of visionary people decided the best way to solve problems was to create a neutral forum, bringing together leaders from business, labor, government, the universities, and the non-profit sector to think outside the box and build creative solutions.

Now more than ever, Silicon Valley needs this kind of innovative leadership. Joint Venture is still providing it. You and your organization can join with hundreds of leaders working in teams on our current initiatives:

- **California Competes** - California Competes is a state-wide coalition of technology, business and education leaders promoting a new innovation agenda for the Golden State.

- **Cell Phone Coverage** - Joint Venture’s Cell Phone Coverage Project is a collaboration between carriers, cities, and residents, working to eliminate dead spots.

- **Climate Protection** - Joint Venture: Silicon Valley Network is convening a public – private partnership to help local government agencies identify greenhouse gas reducing technologies and provide leadership in their communities.

- **Disaster Preparedness** - In the event of a regional emergency, business as usual won’t be good enough for Silicon Valley. Getting our economy firing again, quickly, will require unprecedented levels of planning and cross-sector collaboration. Joint Venture is working to provide it.

- **Grand Boulevard** - Making El Camino Real a grand boulevard, one that meets our needs and reflects our regions dynamic profile.

- **New California Network** - The New California Network develops nonpartisan and broadly supported reforms that will rebuild the fiscal foundation and improve the performance and accountability of state government for the purpose of making California prosperous, safe, and healthy for all of its residents.

- **Silicon Valley Economic Development Alliance** - Silicon Valley cities work together to create a healthy economic environment, share best practices with each other and build relationships with Silicon Valley’s economic engine. They get the word out there: our region is the world’s best place to build a company.

- **Smart Health** - Smart Health’s mission is to create new models of healthcare delivery through the well-coordinated use of information systems.

- **Smart Valley** - Silicon Valley is the world center for information technology, but we are not using it effectively for our own community, and our communications infrastructure is lagging behind that of many other major urban centers.

- **Wireless Silicon Valley** - Smart Valley has partnered with city and county IT managers, and economic development staff to form the Wireless Silicon Valley Task Force.

Source: www.jointventure.org
Key actions needed to promote sustainable economic growth of cities and other settlements by national and provincial governments and the local governments of self-reliant and dependent cities and smaller towns and villages are summarized in the matrix below.

<table>
<thead>
<tr>
<th><strong>Key Actions</strong></th>
<th><strong>At the local government level</strong></th>
</tr>
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<tbody>
<tr>
<td>Prepare a strategic city region economic development plan that is linked to wider initiatives of city regional development and competitiveness, maximizes productivity, and encourages sector and cluster development based on the existing economic structure and opportunities.</td>
<td></td>
</tr>
<tr>
<td>Establish the most appropriate organization arrangement for the financing and implementation of the local economic development strategy (citywide economic development agency → area-specific urban regeneration or development companies → objective-oriented partnerships → new city area development corporations).</td>
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<tr>
<td>Improve business climate and support to include the informal sector through credit, support services, tax breaks, and less bureaucracy. This involves improving the interface with business by making it easier for them to operate efficiently.</td>
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<tr>
<td>Invest in appropriate infrastructure and property development for economic growth, including transport linking producers to markets, and business starter units and innovation centers.</td>
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</tbody>
</table>

| | **Encourage labor market development through education, and skills training and upgrading.** |

| | **At the national government level** |
| | Develop a national spatial growth strategy for urban centers linked to economic functions of regions. |
| | Finance and facilitate the funding of trunk infrastructure necessary to support the implementation of the national spatial strategy. |
| | Adopt financial-enabling strategies to encourage innovative lending (insurance and guaranty mechanisms) and persuade the banking sector to become more flexible in providing business credit, especially for micro, small, and medium-sized industries that supports the development of city regions. |
| | Sponsor necessary enabling legislation and administrative arrangements for the above. |
The priorities for action for the different types of communities, the nation, or the province, self-reliant and dependent cities, and smaller towns and villages are also set out below.

**Matrix of Priorities for Action: Promoting Sustainable Economic Growth**

<table>
<thead>
<tr>
<th>Classification</th>
<th>Road Maps/Strategies</th>
<th>Components</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nation or Province</strong></td>
<td>Maintain economic stability and national competitiveness</td>
<td>National enabling climate for entrepreneurship and innovation, business, and economic growth</td>
</tr>
<tr>
<td></td>
<td>Encourage city-region development based on comparative advantage/competitiveness</td>
<td>Incentives and tax breaks for credit and support services</td>
</tr>
<tr>
<td><strong>Self-Reliant Urban Areas</strong></td>
<td>Prepare city-region economic development strategy that focuses on improving competitiveness and comparative advantage through business clusters.</td>
<td>Facilitate improved education, skills, and training of residents</td>
</tr>
<tr>
<td></td>
<td>Facilitate growth by identifying and investing to overcome constraints to cluster expansion</td>
<td>Facilitate infrastructure and property investment</td>
</tr>
<tr>
<td></td>
<td>Set up an economic development agency</td>
<td>Promote labor market development.</td>
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<td><strong>Dependent Urban Areas</strong></td>
<td>Prepare local “problem area” economic development strategies</td>
<td>Enable business support services</td>
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<td></td>
<td>Prepare local economic development (LED) strategy based on the area’s comparative advantage</td>
<td>Encourage cluster development and improve competitiveness</td>
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<td></td>
<td>Facilitate growth in key industries, as above</td>
<td>Link to informal sector</td>
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<tr>
<td><strong>Towns and Villages</strong></td>
<td>Prepare LED strategy that promotes better links to nearest urban areas</td>
<td>Improve local enabling climate for business promotion</td>
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<td></td>
<td>Identify relocating and subcontracting industries</td>
<td>Encourage and support informal sector development</td>
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<td></td>
<td>Invest in physical and human development to address constraints</td>
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Chapter 6
Working Toward a Sustainable Environment
Road maps for promoting a sustainable environment

To have the kind of cities that people want to live and work in, governments and citizens must recognize the interrelationship between land use and transport needs. Cities must make sustainable policy choices that identify a realistic development path and tackle complex movement issues. And they need effective management both to mobilize the necessary funds and to carry out all the many diverse tasks involved in making their strategy work.

Achieving a sustainable environment requires commitment to change and a long-term view. A sustainable city must be set within a sustainable region because exporting problems elsewhere is not a solution. The problems of pollution, contamination, and waste have to be overcome and natural resources must be used as efficiently as possible. A sustainable environment demands maximizing the use of renewable resources. It will also require an appropriate institutional framework and a supporting enabling environment.

Start with a plan, target sustainability

This chapter begins by recognizing that cities must anticipate and plan for their expansion and this preparation must be set out clearly in a plan or road map that reflects a consensus for creating a sustainable environment. It must cover the city-region area as a whole and not only the core city. Proposals for both urban transport and environmental infrastructure are then discussed in turn. Transport focuses on the need for new thinking and the outline of a core strategy to reach the desired goal of a transit city as described in Part One. The chapter continues by offering cautionary advice and providing the context for megaprojects and metro systems. It outlines typical transport agenda for four types of city based on current characteristics. The environmental infrastructure subsection describes how to provide more sustainable services. It recommends that city governments and utility agencies concentrate their efforts’ focus on service provision and create an institutional framework within which technical innovation prospers. It suggests involving the private sector to make use of its innovations and efficiencies. Appropriate pricing policies, including the use of economic instruments and the role of subsidies, follow. The chapter includes briefs on how to improve municipal service delivery for the key sectors of water supply, sanitation, drainage, solid waste, and energy. It discusses effective building codes to encourage sustainable environments, as well as environment-friendly buildings. Some catalyst activities for environmental management are outlined at the chapter’s end.

Unplanned urban form...

- Haphazard land use and transport
- Infrastructure frequently plays catch up
- Private vehicle-dominated cities
- Poorly managed transport and traffic systems
- Insufficient funding for public transport

...and fragmented approach

- Informal areas underserved by infrastructure
- Inadequate wastewater disposal and treatment
- Poor air quality
- Inefficient solid, hazardous, and construction waste disposal
- Energy inefficient and nonpeople-friendly buildings

Sustainable urban form

- Sustainable policies and road maps relating to land use and transport
- Managed movement: public transport and pedestrian focus
- Improved management to make strategies happen
- Raising appropriate amounts of long-term investment capital on the market

Sustainable environment

- Basic infrastructure affordable to the poor
- High water quality and treatment of waste water
- Improved air quality and limits on greenhouse gases
- Managed and recycled waste and industrial symbiosis
- Sustainable buildings and neighborhoods
A city should anticipate and plan for its expansion

All cities, even those with stable populations, expand as suburbanization takes place. Growing cities expand rapidly. Too little attention, however, is paid to a strategically important question: how and where should this expansion take place? Today’s expansion areas become tomorrow’s suburbs and, later, part of the inner city. Governments often focus on the existing city and its center, where the problems are seen to be most pressing. But as cities expand in a largely unplanned way larger problems gestate and grow on the periphery.

The city development and transport strategy must anticipate and plan for future spatial growth. This can be accomplished by planning the development of major roads and infrastructure, along with complementary secondary roads and utility networks, in advance of other development. Often, obstacles to this approach exist. One problem is that the areas where such planning and provision is needed often lie outside the jurisdiction of the core city. As a result, development “follows” major roads or, conversely, where no major roads have been built, development takes place much more slowly. Ribbon development results where major roads are built without a complementary network of secondary roads, which is needed for a healthier area development to occur. Busways should be integrated with major development roads after they are built. They provide access for residents without cars and allow a different form of development to take place, transit-oriented development. Metros can be built to catalyze development in their catchments but this can be risky, creating large financing liabilities for government.

Clearly, formulating an integrated land use, infrastructure, and transport strategy is an essential prerequisite for city development. Earlier chapters have shown that city management requires strategic planning, which is a project development process covering a sequence of tasks and key decisions through which a project progresses from concept to operations on the ground. This needs to be linked to the budgeting function, effective procurement and financing, and monitoring and regulation of operations. But often this does not happen. Good strategic planning is rare. Instead, detail rapidly loses focus. As discussed in earlier chapters, most traditional plans are unrealistic, not budget constrained, and many cannot be implemented for other reasons. There is little relationship between the planning and what eventually occurs in real-world implementation which, in turn, is often ill-suited to addressing current problems. This only generates further problems for the future. In short, a vacuum often exists where the effective planning for good city management should be.

Thinking through an effective and realistic strategy while developing consensus

The core challenge for cities is to include city infrastructure and transport together in one strategic plan. To do this, a city development plan must chart a vision and locate future spatial growth, estimate the availability of public resources to ensure that the proposals are realistic, and design an integrated infrastructure and transport strategy. The strategy should comprise policies, a core investment plan that matches a low estimate of available financing, and a core-plus investment plan that incorporates other projects and programs for financing should additional resources be attracted. This would manage a city’s development toward that envisioned by the city plan and rationalize investment decisions for transport and environmental infrastructure.

Dongtan Eco-City, Shanghai

Dongtan is located on Chongming Island, off the coast of Shanghai. It is a rural area undergoing rapid transformation into an eco-city, facilitated by the construction of a tunnel bridge linking it to Shanghai. Dongtan eco-city has an area of 86 km² and is to be transformed into a sustainable community with a population of 20,000 by the time the first phase is completed in 2010. The population will increase to 80,000 by 2020 and to several hundred thousands thereafter. The city is being designed in a compact, interlinked way, supported by mixed patterns of land use, and a network of pedestrian and cycle routes to reduce the demand for private motorized transport and the associated infrastructure costs. Dongtan will have highly energy-efficient buildings powered by renewable energy sources.

To accomplish all of these requires establishing an interagency planning process that involves city and relevant national oversight or line agencies. City planning and management should be city-led and this necessitates an appropriate institutional arrangement. For example, planning transport investments that focus on reducing emissions would normally feature:

- A metropolitan government or authority that is responsible for city and transport planning, preferably for a city’s commuter catchment geographical area.
- A transport authority to determine, control, and monitor implementation of the city transport strategy, probably with separate traffic and public transport authorities under it.
- An interagency body at the city level with national government representation, which will allow decision making that affects all participants.
- National economic and finance oversight agencies to define a level playing field and provide a process for approving plans, developing major projects, and securing central government funding.
- A process to benchmark city performance—focusing attention on outcomes relevant to people’s lives and the city’s sustainable development—and leading to continuous improvement.

Similar institutional arrangements would be needed for each sector identified as important in addressing the key environmental issues of the city—solid waste, industrial pollution, wastewater treatment, hazardous wastes, for example. And there needs to be a mechanism to set priorities and make choices, when necessary, among the many options planning will present—metros and busways, landfills and incinerators, eco-industrial estates, sewerage and septic wastewater systems, water harvesting and water recycling, to name a few.

Improving and maintaining the quality of the urban environment is a systemic problem. To clean up the environment requires work not only on plans and programs for specific actions but also on building awareness among beneficiaries that will help align them with the citywide initiatives. This chapter will now examine the key types of intervention required in Asian cities—starting with transport.

**Toward a new agenda for coordinating urban transport and land use**

**New thinking is required**

An understanding of the importance of transport to towns and cities has been growing and developing for a quarter of a century. There is now a greater consensus about what to do and about the urgency of getting it done. Cities, however, have been slow to put these new ideas into action. They need to set new directions and adopt new modes of strategic thinking. This demands clarity about the type of cities people want to live in and on how to create them. It also requires that many professionals and city managers change their mind-sets.

**Formal risk analysis must be at the heart of a city transport strategy**

There is a preferred transport development path for Asia’s cities. Timing is critical because land-use changes in rapidly developing cities are, to a great extent, irreversible. Major projects are being identified and developed all the time. Not all these projects are good and the bad ones can lead a city down a less sustainable development path. The important management decisions this situation presents are made more difficult by the turbulent environment of rapid urbanization and short political terms. But this challenge can be overcome through the preparation of a city strategy that first analyzes and then manages the main strategic risks. These relate to three interconnected questions: what needs to be done, which must be influenced and supported by stakeholders; what financing is available, which demands a realistic assessment and should constrain what is planned; and how to make the strategy happen—in short, capacity.

While financing is a constraint, a whole range of options for financing are available and should be considered. Chapter 3 detailed many financing strategies. Two aspects of existing systems in Asia should be given particular attention:

- Increasing the efficiency and market-responsiveness of public transport—mainly bus operations, secured by competitively let contracts between operators and the public transport authority.
- An overhaul of the major project, or megaproject, development process—particularly for rail projects—to bring realism to forecasting and avoid the high financial liabilities that governments, as opposed to private concessionaires, sometimes incur.
**Managing Asian Cities**

**A sustainable transport strategy**

The starting point of a sustainable transport strategy involves two questions: what kind of city is wanted, and which transport development path will bring it about? No city has the luxury of starting afresh but a clear idea of the desired outcome is necessary, together with an objective assessment of the options available and of the transport development path to be followed to achieve it.

**The core transport strategy**

Accessibility is the basic goal and congestion is its enemy. Accessibility requires that all modes of transport such as walking, cycling, public transport, private cars, and trucks for freight be considered. Worldwide evidence shows that to control congestion, the use of cars must be restrained at times or places where congestion is severe—together with the provision of an acceptable transport alternative. For most

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**Singapore Transport Approach**

By the 1970s, the Singapore government had invested a lot of effort into devising a long-term land-use and transport strategy. A quality public transport system and road pricing were essential elements in ensuring efficiency and personal accessibility.

The Government increased vehicle import duties, registration fees, and road tax in 1972 as the first steps toward greater control of vehicle ownership and, hence, use. When the policy shifted toward road pricing as a more effective lever on use, these charges were reduced slightly but in 1989 still amounted to 10,000 pounds (£) ($18,000) on a typical 1,500 cc car with a market value of £7,000, plus £300 per annum road tax.

In 1975, the area licensing scheme (ALS) was introduced. It was a simple, manually enforced cordon pricing program with licenses displayed on windscreens. This was a considerable success. Traffic congestion was eliminated within the restricted zone. The approach was subsequently extended to the major expressways under the road pricing scheme. In 1998, electronic road pricing (ERP) replaced the manual, paper system, and in 1999 this was extended to arterial roads beyond the restricted zone. All vehicles are required to have an electronic in-vehicle unit that accepts credit in the form of a smart card. Tolls are automatically paid when a vehicle passes under a gantry and a display indicates the current balance. Tolls do not fluctuate in relation to traffic volumes but are adjusted quarterly to ensure optimum traffic speeds.

The system cost 200 million Singapore dollars ($$) ($125 million) to implement, one-half of which was for free fitting the in-vehicle units. Annual revenues are about $80 million, with operating costs at 20% of this, or $16 million. The system was not designed to increase government revenues. ERP charges are generally less than the corresponding ALS fees, although the ERP per-pass charging principle means that those motorists who use the priced roads now pay more. Overall revenue is 40% less than previously collected from the ALS, but electronic charging gives greater flexibility to set charges that are just sufficient to keep the roads free of congestion. Once new traffic patterns have stabilized, weekday traffic volumes entering the restricted zone dropped by 20–24% and average speeds in the zone increased from 30–35 kilometers per hour (kph) to 40–45 kph. Improvements are less clear on the expressways and these charges are being reviewed.

The charges and quota system have been effective in constraining the growth of vehicle ownership. The total fleet was projected to reach 1 million in 1990 but had only grown to 711,000 (including 380,000 cars) in 2003. However, after paying so much for vehicles, owners tend to use them more. The annual average car use is 20,200 km per car, compared with 11,500 km in London.

Source: [www.cfit.gov.uk/factsheets](http://www.cfit.gov.uk/factsheets)

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**Outsourcing**

Public sector functions are outsourced to specialist private sector service providers under competitively bid contracts with the city government. This has become a fast-growing new industry. Examples are the operation and/or maintenance of traffic signals, parking enforcement, and roads, maintenance and operations. The benefits are lower cost and better performance, and as such releases of more public financing for other uses. As the public sector becomes more experienced in contracting, and when more private companies become aware of this large potential market, outsourcing is such a change that is likely to become more beneficial in terms of cost efficiency and performance grounds.


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Introducing traffic restraint measures early—which is when they will be most easily accepted. Giving buses preferential status in traffic and, where possible, developing busways along radial corridors. Procuring bus services through competitive bidding. Securing and enhancing provisions for pedestrians and cyclists. Focusing road investment on circumferential roads that support decentralized employment nodes, completing the road hierarchy with secondary roads, and removing bottlenecks.  

Much has been learned in the last 15 years of when and where transport concession projects should be pursued. These are particularly critical to future strategy, since not all such projects contribute to sustainable policy. Concession projects can distort strategy, and starve public financing from more worthwhile investments—virtually all megaprojects require large public support of one form or another, particularly for rail. The evidence is compelling that private sector entrepreneurs and financing can be beneficial and provide needed infrastructure in the public interest, even or particularly when government capacity itself is not strong. Private financing provides needed infrastructure today that would not otherwise be possible. Providing the economy is expected to grow robustly such that repayment tomorrow remains affordable, this approach is strongly supported.

For many developing cities, the priorities should be:

- Introducing traffic restraint measures early—which is when they will be most easily accepted.
- Giving buses preferential status in traffic and, where possible, developing busways along radial corridors.
- Procuring bus services through competitive bidding.
- Securing and enhancing provisions for pedestrians and cyclists.
- Focusing road investment on circumferential roads that support decentralized employment nodes, completing the road hierarchy with secondary roads, and removing bottlenecks.  

[185] While some major road improvements are necessary—particularly to overcome bottlenecks—to serve ports/airports and develop secondary road networks, major new radial capacity catalyzes motorization and sets the city on an unsustainable path.

Setting fiscal incentives and standards for vehicles, technologies, and fuels at the national government level and progressively increasing them to reduce vehicle emissions of greenhouse gases, especially through carbon-based energy consumption.

As cities develop and demand increases with growing incomes, and as capacity improves, strategies can evolve by:

- Extending and deepening traffic restraint through technological developments and management change.
- Upgrading busways, where possible, to bus rapid transit (BRT) systems.
- In exceptional cases, rail transit may be justified but this requires special assessment.
- Seeking and procuring private sector skills and financing.
- Ensuring that land-use zoning reinforces efficient transport networks by decentralizing employment nodes and zoning high densities around transport stations, for example.

### Hydrogen for Transport

Hydrogen potentially could offer complete diversification from oil fuels, providing transport power with very low carbon emissions. Hydrogen fuel would be best suited to road vehicles. The main ways to generate hydrogen for fuel are through the electrolysis of water and reforming of hydrocarbons. Once produced, hydrogen can be stored as a liquid, a compressed gas, or chemically. Hydrogen could release energy for use in powering road vehicles by combustion in a hydrogen internal combustion engine or in a fuel cell. Fuel cells convert hydrogen and oxygen into water in a process that generates electricity. They are almost silent in operation, highly efficient, and their only by-product is water. Hydrogen can result in as little as 5% of the emissions of conventional fuel when consumed through low-emission technologies.

Several projects around the world are exploring this option. They include trials of hydrogen buses in the European Community, the program of the People’s Republic of China to use hydrogen buses at the 2008 Olympics, Iceland’s plan to achieve a hydrogen fuel economy by 2030 after introducing the first hydrogen filling station in 2003, and California’s scheme to introduce hydrogen to 21 interstate highway filling stations.

Managing Asian Cities

Megaprojects should be undertaken with great care

Expressways and rail systems are costly and risky. This is particularly the case for rail projects. For these reasons, they are exceptional projects that should be undertaken only with great care. Approval should require a sequence of decisions from strategic pre-feasibility to final financing. Assessment must focus on the compatibility of these kinds of projects with the city development and transport strategies and outcomes, and the risks that influence these. International experience and benchmarking are essential parts of the process of reaching a final decision.

Tailoring cities to their traffic needs

No one transport agenda suits all cities. Asia’s cities are simply too diverse. What determines an agenda are a city’s current circumstances, its prospects and ambitions, and its means to effect change. The table on page 232 shows four types of cities and their transport-related prospects and ambitions, and outlines the most appropriate transport agenda for each.

City size and transport

All cities start as towns and grow in size. When small, the transport system is necessarily modest. As the city grows, trip lengths require the bus system to take on the added strain and traffic restraint must be applied progressively to control traffic congestion. As bus demands grow, busways become desirable. Once public transport has use of part of the roadway, it becomes possible and desirable that it be improved progressively by grade separation to overcome bottlenecks and/or the introduction of a higher-quality BRT system.

Reducing Emissions from Tricycles in Puerto Princesa

The United States Agency for International Development’s (USAID) Asia Environmental Partnership included a clean air program that focused on reducing emissions from the increasing number of tricycles in Puerto Princesa, the capital of Palawan, in the Philippines. At the core of the program was the introduction of a 50–50 scheme that aimed to reduce the volume of tricycles on city streets each day by 50%. Tricycles were divided into two groups, identified by stickers. The first group was allowed to operate only on Mondays, Wednesdays, Fridays, and Sundays, while the second group could operate on Tuesdays, Thursdays, Saturdays, and Sundays. A 2-week trial was suggested to counter resistance by tricycle drivers and operators, and most found that daily incomes doubled. The plan was complemented by public awareness campaigns, roadside inspections, and the promotion of proper vehicular maintenance among drivers to reduce harmful emissions.

Beijing North–South Corridor

Bus Rapid Transit System

The bus rapid transit (BRT) system was developed in a partnership between the Energy Foundation and the city. It extends southward from the center of Beijing, sharing road space for the first 2 km before the start of a fully segregated right-of-way. The busway comprises two single lanes in the road median with center and left-opening bus doors. There are no overtaking lanes at stops. Buses are frequent and average a speed of 24 km per hour. The fares of 2 renminbi, or about 25 US cents, are bought before boarding at stops, and smart cards that offer a small discount are available. The bus stops are functionally designed, with passenger gaining access via bridges or signalized pedestrian crossings and boarding at the same level as the articulated, single-deck buses, which are said to have a capacity of 200 passengers. The busway appears to have a capacity of about 8,000 passengers per hour per direction (pphd). The future of BRT in Beijing is uncertain since not many corridors are sufficiently wide to accommodate it.


Megaprojects should be undertaken with great care

Beijing North–South Corridor

Bus Rapid Transit System

The local government promised to explore alternative livelihood opportunities to lessen economic dependence on tricycles. Commuters who faced longer waiting times were appeased when the city raised the franchise cap to 4,000 by giving franchises to 1,000 unregistered tricycles. The program was found to be extremely effective. It reduced congestion significantly and lowered hydrocarbon and carbon dioxide emissions by as much as 40% and 30%, respectively. The League of Cities of the Philippines is now exploring the potential for replicating the scheme in at least 10% of cities nationwide. So far, three cities have begun implementing components of the program. The lessons highlighted a participatory, consensus-based approach that sought the support and engagement not only of the tricycle drivers and operators but also the city’s political leadership and civil society groups.

Urban Transport Benchmarking: An Initiative in Europe

The concept of benchmarking has been used widely by many different types of organizations seeking to learn more about their operational shortcomings. The process of benchmarking involves comparing operational performance in similar institutions, organizations, or enterprises to gain some understanding of the best practices employed within a given industry. Once performance differences across an industry are understood, then each participating organization has the potential to integrate best practices within the scope of its own operations to attain measurable performance improvements. The benchmarking process is usually centered on performance indicators, which operate by means of self-analysis and help identify key differences between participating organizations. Once the benchmarks have been established, it is up to individual participants to implement the process changes that should improve performance levels.

An urban transport benchmarking initiative is now going on in Europe and is described in www.transportbenchmarks.org. It develops and compares the common and thematic data indicators among participating cities. The indicators provide a common data set of the general features of each participating city’s transport system. The thematic indicators are grouped: behavioral and social issues in public transport; city logistics; cycling; demand management; and public transport organization and policy. The themes are chosen by individual participating cities so that the benchmarking reflects their interests.

The conditions are:

- Large existing bus passenger corridor flows of 10,000–15,000 passengers per hour per direction.
- City incomes that are not low—usually at least $1,800 per person per year.
- Good prospects for future sustained growth of the city economy.
- City center growth, because a metro’s viability is inextricably linked to the expansion of a dynamic central business district.

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<th>City Typology and the Transport Agenda</th>
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<tr>
<td><strong>Existing condition</strong></td>
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<td>Nonmotorized vehicular (bicycle) city—low income; modest resource base</td>
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<tr>
<td>Bus city—modest income; modest resource base</td>
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<td>Traffic saturated bus city—the Bangkok syndrome</td>
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<td>Transit city—moderate/high income</td>
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Planning infrastructure to cut down pollution and waste

*Have a clear vision, aim for better quality information, and focus on service provision*

Whether addressing the infrastructure and service backlog or planning the servicing of areas earmarked for new development, cities need to plan strategically through citywide, flexible development frameworks and spatial development and infrastructure plans. They must also act at a local level through community-driven and community-supported service provision. Plans should be flexible to respond to changing circumstances and incorporate feedback and learning from implementation. Plans and sector road maps must provide clear guidance on what to do and how to do it, and identify the means for measuring progress and responding to the unanticipated.

The availability of and access to good quality and accurate information is essential for informed decision making. But such information is frequently unavailable. In the interim, when carefully and intelligently used, a combination of reasonable on-the-ground information, local professional experience, and critical information and support from local beneficiary communities can ensure that sound investment decisions are made. Increased emphasis is needed on providing services rather than infrastructure. Often this means maximizing the efficiency and utility of existing infrastructure in preference to building more. Policy and legislative frameworks need to strike a balance between the demands of long-term sustainability and equitable access to services for all. The keys to achieving these service delivery goals are separating regulatory and policy-making functions from those of operation and service delivery, and creating opportunities for developing innovative service delivery approaches.

*Improving water supply services*

In many Asian cities, water services are characterized by intermittent, low-quality supplies and high rates of unaccounted-for-water (UFW), often because of inadequate, dilapidated, and poorly maintained networks. In some cases the availability of adequate water sources is an immediate constraint. In most, however, there is a need to focus on operation—reducing UFW through system rationalization and rehabilitation, improving management, and cost recovery—to move toward system sustainability. In general, given a clear assessment of the water resources available to the city and a focus on reducing UFW, there can be a move away from quantity rationing, dictated by demand exceeding supply, to a volumetric tariff and allocation through pricing. This involves institutional reform of water utilities, such as the unbundling of functions in large cities, and the introduction of commercial disciplines, as well as an investment focus on work required to improve efficiency of existing water use. This should be undertaken before increasing sources of supply into an otherwise inefficiently functioning system.

Crucial to sustainable use of water is the provision for harvesting and reuse. Traditional city buildings have discharged water into storm drains. In many water-scarce cities, there is considerable potential for retaining water from roofs for non-potable water usage. New systems of wastewater recycling are being introduced. Singapore, leading the way, is capable of recycling 100% of the water it uses. As in all

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**Manila Water: Getting Water to the Poor**

The Manila Water Company’s (MWC) “Tubig para sa Barangay” (“Water for Depressed Communities”) program has a menu of three different schemes. Under the first, each household or family pays for an individual metered connection using nonconventional materials and supplies through small-diameter pipes laid along the ground and along walls. Under the second, one metered connection serves four or five households that are responsible as a group for paying the connection charge and monthly bills. Under the third, an entire community is served with one metered connection. As part of this approach, “alternative providers” have been purchasing bulk water and using plastic hoses and small pipes to provide services to households at a unit price significantly higher than the lifeline tariff levied by MWC. In 2000, one provider was serving more than 20,000 households through this system. By allowing another firm to serve this market, MWC overcomes the pricing constraint placed on it by the official tariff structure and helps achieve its service coverage targets.

What is it about the transactions that have led to this outcome? First, targets are disaggregated by municipality, requiring progress not only in high-demand, high-paying areas but also across the entire metropolitan area. Second, input standards are absent, or at least ambiguous, so that targets can be met in innovative and cost-saving ways. Third, targets can be met directly by the concessionaires or indirectly when a third party provides a piped service.

Managing Asian Cities

Growing cities. City governments must identify such courses and act to prevent encroachment. Future development planning and infrastructure design must incorporate provisions for more frequent and intense flooding.

**Sewerage is for high-density urban areas that can afford it**

Although conditions vary significantly between cities, sewerage is the preferred sanitation system for densely developed urban areas. In general, sewerage should be constructed where densities are over 100 persons per hectare and it can be afforded. Where this is not the case, other systems can be sanitized by ensuring that waste is collected on time without endangering the environment or public health. This might involve septic tank systems or the upgrading of existing storm water or combined drainage systems to function as a combined storm water and wastewater sewerage network. The high cost of conventional sewerage and sewage treatment will mean that innovative cheaper interim measures that achieve the service objectives will often be required before sanitary sewerage networks can be introduced.

Many cities that do have sewerage systems fail to use them fully. Incentives are needed to encourage existing households to connect. New developments should be made to connect through legislation. Urban households are often prepared to contribute to the improvement of their immediate environment. This public acceptance of the need to pay for good sanitary conditions should be harnessed in encouraging communities to connect to systems and to pay for the service. With pressure mounting on sources of raw potable water for drinking and other uses, wastewater management systems need to take account of the potential to reuse wastewater—for industrial use, urban agricultural use, or groundwater recharge. Sewage sludge that is not heavily contaminated with hazardous industrial by-products should be reused as fertilizer or soil conditioner for urban planting.

**Deforestation and climate change mean more flood control and drainage**

In many Asian cities, the combined impact of deforestation, heavier rainfall due to climate change, more extreme weather events, rising sea levels, and increased storm surge levels will place further pressures on urban drainage and flood control systems. Without countermeasures, flooding will become both more frequent and more extreme. It is essential that natural watercourses are retained in rapidly growing cities. City governments must identify such courses and act to prevent encroachment. Future development planning and infrastructure design must incorporate provisions for more frequent and intense flooding.

**Surface water drainage: Problems and opportunities**

Sustainable drainage concepts must be adopted and factored into investment decisions and the assessment of long-term environmental and social impacts. Planning should take into account the quantity and quality of runoff, and the amenity value of surface water in the urban environment. The future inadequacy of existing urban underground or surface drainage systems, designed to remove only a limited quantity of surface water, will increasingly cause problems of flooding, pollution, or damage to the environment as their capacity is exceeded. Surface water–drainage methods that take account of quantity, quality, and amenity issues are more sustainable than conventional drainage methods. They deal with runoff close to where the rain falls, manage potential pollution at its source, protect water resources from point, and diffuse pollution sources. Such systems manage runoff flow rates, reducing the impact of urbanization on flooding; protect or enhance water quality; are sympathetic to environmental settings and the needs of local communities; can provide a habitat for wildlife in urban watercourses; and encourage natural groundwater recharge. The impacts of water harvesting and recycling are strongly related to this.

**Cash for trash helps ease waste threat**

Increasing levels of solid waste, higher disposal costs, and more resource use will lead to significant economic and environmental problems for those countries that do not introduce comprehensive waste management and recycling mechanisms. Many Asian cities lack proper recycling and disposal capacity, legal frameworks, enforcement capacity, political will, and financial resources to manage waste properly. The result is improper recycling and illegal dumping of waste.

Solid waste management (SWM) improvements need to focus on the 3Rs—reducing, or waste minimization, recycling, and reuse. Raising awareness among households is an important part of the approach. Household-level waste segregation must be encouraged to make use of and bolster the extensive informal recycling and recovery industries that thrive in most Asian cities. The involvement of the private sector can bring significant operational efficiencies to waste management.
Jakarta, the capital of Indonesia, is located on the alluvial lowland of the north coast of West Java. It suffers flooding every year but in February 2007 at least 80 people died and more than 430,000 people—mainly the poor who live in low-lying areas—were driven from their homes when heavy monsoonal rains inundated the city and surrounding areas. At one point, 60% of Jakarta was under water, with depths reaching 4 meters. Whole suburbs were accessible only by boat; and schools, markets, and businesses closed. Telecommunications were disrupted. The national Government estimated the economic cost of the flooding at $453 million. While the Government blamed climate change for the extreme weather, many residents saw other contributing factors, including failure to enforce regulations in the construction industry and the real estate sector, which has little concern for the environment, as well as poor public discipline, littering, and urbanization. Massive real estate developments now surround Jakarta and have replaced irrigated rice fields, small lakes, and other natural habitats. Many housing estates are located on water catchment areas and much of the city's greenbelt has been built on.

The photographs show residents carrying their belongings as they walk on a flooded street in central Jakarta on 3 February 2007 and an aerial view of a flooded residential area in east Jakarta on 4 February 2007. (Photos: Reuters/Supri (INDONESIA), courtesy of www.alertnet.org.)


operations, provided clear targets and performance criteria are set and the operations are carefully monitored. Both community-based collections at the neighborhood level and the contracting out of collection and transport services have proven effective in many cities. The cost of disposal can be incorporated into products from the outset, with producers encouraged to assume full responsibility for a product throughout its life. Such practices are fast becoming the norm. Provided there are effective mechanisms of accessing finance from such schemes, local governments will benefit from proper disposal of wastes.

The disposal itself remains a major problem in most Asian cities. Disposal facilities in some cities are nonexistent; in others, there are open dumpsites. To improve, cities need to pass through stages shown in the diagram on page 237 with the eventual target a city-region integrated SWM program.

Land fills and incineration are the two main disposal options. Both are viable. The common deciding factors include social impact and affordability, geographical conditions, waste characteristics, and regulatory policies. Some countries, like the Philippines, have laws against incineration. Whatever the choice, the major problems usually involved location. Many communities oppose the construction of disposal facilities near their settlements. The proper response is to adopt well-engineered facilities and demonstrate to the affected communities that there will be little environmental impact. They should also be compensated for having the facility
**Approaches to the Disposal of Municipal Solid Waste**

Cities have a choice of two types of municipal solid waste disposal: landfills and combustion or incineration. Modern landfills are needed to replace the poorly engineered dumpsites that are common in most Asian cities. They should be designed to protect the environment from waste contaminants. A landfill siting plan and on-site environmental monitoring system provide additional safeguards. Many new landfills collect gas emissions and convert them into energy. Municipal solid waste landfills receive household waste, nonhazardous sludge, industrial solid waste, and construction and demolition debris. To protect the environment and the public, national or regional regulations are required with provisions on: location, to ensure construction only in appropriate geological areas; liners, to protect groundwater and soil; leachate collection and removal; operating practices, including waste compacting and covering; groundwater monitoring; site closure and the care of closed sites; corrective actions, to control and clean up landfill releases and provide groundwater protection; and assuring that funds are available for environmental protection even after closure.

New approaches include bioreactor landfills that are designed to transform and degrade organic waste through the addition of liquid and, in some cases, air to enhance microbial processes.

To reduce the waste volume, cities can adopt a controlled burning process of combustion or incineration, which can also be used to convert water into steam for heating systems or generate electricity. Incineration facilities can also remove materials for recycling. A variety of pollution control technologies reduce the gases emitted, including scrubbers and filters. Burning waste at very high temperatures destroys chemical compounds and bacteria but regular testing is needed to ensure that the residual ash is not hazardous before it is dumped in the landfill. Some of the ash can also be used productively. For example, in the United States, about 10% is used as cover for landfills or road construction.


<table>
<thead>
<tr>
<th>The Philippines Promotes the 3Rs —Reduce, Reuse, and Recycle</th>
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</thead>
<tbody>
<tr>
<td>The following initiatives have enabled recycling in Metro Manila to increase from 6% in 1997 to 28% in 2006.</td>
</tr>
<tr>
<td><strong>Material recovery facilities/systems:</strong> established in every barangay or cluster of barangays. From 144 in 2000, there were 1,723 by the end of 2006.</td>
</tr>
<tr>
<td><strong>Recyclables collection events (RCEs):</strong> This started as a once-a-year Earth Day Celebration activity to increase awareness and promote the 3Rs. The public was encouraged to bring recyclables for sale to recyclers. In 2006, the Department of Environment and Natural Resources (DENR), Earth Day Network (EDN), and the Philippine Business for the Environment (PBE) brought the initiative to Davao City, La Trinidad, Benguet, Cebu City, and Quezon City. Some provinces are now requesting assistance to organize and undertake similar events.</td>
</tr>
<tr>
<td><strong>Waste markets:</strong> As an offshoot of the 2006 modifications to the RCE, the DENR, EDN, and PBE in partnership with the Ayala Foundation Inc., launched the “Waste Markets” which involves mini-RCEs every month at the Ayala Malls (prime shopping malls in the Philippines).</td>
</tr>
<tr>
<td><strong>SM initiative:</strong> On 24 February 2007, SM Supermalls—the largest network of shopping malls in the Philippines—hosted its first waste market for replication in all other malls. SM will also be setting up mall-selling spaces where goods from recycled waste can be sold to support initiatives toward 3Rs.</td>
</tr>
<tr>
<td><strong>Ecolabelling program:</strong> The National Solid Waste Management Commission (NSWMC) has prepared ecolabelling guidelines for packaging materials and products to facilitate waste recycling and reuse, including synthetic laundry detergents, tissue paper products, batteries, polyethylene and polypropylene packaging materials, engine oil, and printing and writing paper.</td>
</tr>
<tr>
<td><strong>Implementation of ISO 14001 Environmental Management System (EMS):</strong> The program encourages EMS in government agencies and business establishments. Paperless communication, reuse of one-sided used paper for internal communications, waste segregation, and selling or returning recyclables to recyclers and junkshops. In Metro Manila, 160 buildings are implementing waste segregation with six also undertaking composting. An average of 34,600 kg of recyclables is recovered monthly.</td>
</tr>
<tr>
<td><strong>Industrial Waste Exchange Program (IWEP):</strong> This establishes links between industries where waste becomes raw material.</td>
</tr>
</tbody>
</table>

located nearby. Compensation could come in the form of lower land taxes or increased investment in the communities’ health, education, and other services, and in their priority infrastructure. The affected communities must be involved throughout the decision-making process. Cities should accept that siting a new facility will take time and money, and they must prepare plans, including consultation programs, well in advance of construction.

**Energy savings are crucial for sustainability**

Cities are major users of power and can achieve savings by introducing technical innovations such as automatic switching for streetlighting and the use of energy-saving lights and through improved management and operation arrangements, including contracting out of maintenance services. Measures to optimize pumping operations in water and sewerage systems, frequently large power users, can also result in significant power savings. So can system improvements that reduce leakage. Energy saving will become increasingly important. The incentives for more energy efficient housing and behavior will need to come mainly from national government policies, with legislative and financial instruments introduced at the city-region level of government. Cities can act to reduce individual energy use by planning to cut energy consumption, encouraging alternative energy generation such as wind and solar power, supporting the development of efficient urban transport systems, and encouraging the adoption of energy-efficient development, housing, and construction materials. Much of the agenda can be accomplished or at least encouraged through the formulation and enforcement of appropriate planning and building regulations, utility pricing, and land tax.

**Matching up building codes sustainable environments…**

Most cities can adopt bylaws to regulate the construction of buildings through design and construction requirements and administrative provisions for approvals, inspection, and enforcement. The practice of developing, approving, and enforcing building codes varies widely from country to country. Some codes include structural safety, fire safety, and health requirements, while others include noise mitigation and accessibility requirements. Traditionally, building codes have been long, complex sets of rules requiring a great deal of specialization to interpret. These codes have often been inappropriate for Asian cities and, in enforcing minimum standards, governments have increased development costs and often made it difficult for low-income families to afford housing built to legal standards.

Asia’s building codes—often based on those of the developed and industrialized countries that have different physical, climate, and social environments—should change to become more appropriate to the needs of dense, mixed-use, rapidly growing, largely tropical or subtropical cities. Lately, many Asian countries have begun relaxing building standards by reducing lot sizes and allowing mixed use. This flexibility can be expanded. For example, several countries, beginning with Australia, have moved to much shorter, objective-based buildings codes in recent years. Rather than prescribing specific details, these codes list a series of objectives that all buildings must meet but leave the question of methods open. When they apply for a building permit, the designers must demonstrate how they meet each objective. From the environmental perspective, building codes should aim at maintaining densities, encouraging the use of natural light and the harvesting of water, utilizing alternative energy, and dealing adequately with wastewater.

**Encouraging builders to build sustainable buildings**

An example of how innovation can be encouraged in the quest for more sustainable buildings is the Leadership in Energy and Environmental Design (LEED) Green Building Rating System™ of the United States Green Building Council (USGBC). This voluntary rating system encourages builders.
The way cities Could Be

Energy. Solar energy is becoming cheaper. Japanese solar-electric roof tiles could make buildings in cities around the world largely self-sufficient. Another option is to simply use less power: electricity consumption could be cut by over 60% by adopting existing eco-friendly devices and practices. Stockholm, Stuttgart, and Helsinki generate some of their own electricity locally, with hot water as a by-product, by using combined town-center heat and power stations.a

Food. Cities could grow more of their food. Shanghai is almost self-sufficient in vegetables and grain. Urban vegetable growing on wasteland and rooftops is popular in New York and Berlin.a

Trees. They absorb carbon and sulfur emissions, filter dust, and cool the urban environment. One tree can transpire 380 liters of water a day. They give off oxygen and help reduce carbon monoxide and dioxide levels.a

Sewage. Traditionally, many towns and cities kept their farmlands productive by recycling human wastes. In Asia, using “nightsoil” to compost agricultural land helped ensure the ecological viability of cities. Human waste was collected by bucket and cart but now special vacuum trucks are used. Pipelines could transport urban sewage back to fertilize agricultural land and forests.a

Transport. Efficient public transport reduces pollution. Zero-emission vehicles using hydrogen fuel cells or solar power are in use. Cycling is the cleanest and most energy-efficient option. Keeping private cars out of city centers improves environments.

Recycling. Cities with effective recycling schemes can recycle up to 75% of household waste. Today, some cities in Japan and the Netherlands recycle 50% of their paper, and 95% of Swedish cities recycle 80% of aluminum cans. In Cairo, over 500 small factories recycle plastics. New garbage management and recycling programs create employment.a

Sources:


Leadership in Energy and Environmental Design (LEED) Green Building Rating System™

LEED is a voluntary, consensus-based national rating system under the US Green Building Council (USGBC) that promotes a “whole-building approach” to sustainability. The rating system was created to transform the built environment to sustainability. The system is developed and continuously refined via an open, consensus-based process that has made LEED the green-building standard for federal agencies and state and local governments nationwide. The first step to LEED certification is to register a project. To earn certification, a building project must meet certain prerequisites and performance benchmarks (“credits”) within each category. Projects are awarded silver, gold, or platinum certification, depending on the number of credits they achieve. LEED certification provides independent, third-party verification that a building project meets the highest performance standards. LEED-certified buildings are leading the transformation of the built environment, have lower operating costs and increased asset value, reduce waste sent to landfills, conserve energy and water, and reduce greenhouse gas emissions. Often they qualify for tax rebates, zoning allowances, and other incentives.

Source: USGBC.
rate their existing buildings with a view to improving them later. Major private developers should be encouraged to do likewise. When they fail, local government should undertake the evaluation themselves to, so to speak, praise some and shame others.

Aiming for cities with sustainable services
There are two linked but distinct elements in the sustainable provision of infrastructure and services for Asian Cities: what needs to be provided, and how this should be done. The previous sections have discussed the “what” with respect to each sector, and part of the “how.” This section sets out the key approaches that need to be applied across sectors to make them sustainable.

Focus on service provision, not just infrastructure
Most countries need more investment in all urban service subsectors to address the infrastructure and service backlog and keep up with rapidly growing urban populations. But the solution to inadequate urban services does not lie in infrastructure hardware alone. Greater attention needs to be paid to the required outcomes, in terms of more sustainable, cost-effective, and appropriate services in the context of available natural, human, and financial resources, and the actions required to achieve these outcomes. The “what” needs to be driven by, and provided within, a framework that articulates a clear understanding of the long-term goals and objectives of infrastructure and service provision.

Potential “outcome performance measures” need to be developed through a strategic planning process—preferably at a city, but also at a subsector level—and treated as targets toward which sector strategies, programs, and projects.

Outcome Performance Measures

**Water supply:** water management and catchment conservation targets (increased protection, river basin-based conservation, targets for rehabilitation of water harvesting, etc.); system optimization through targets for improved supply efficiency (reduced percent unaccounted-for-water) and demand management; improved water access for the poor (liters per capita per day), targets for improved operating ratios; targets for enhanced water quality, etc.

**Wastewater management:** proportion of wastewater generated that which is collected and treated to international discharge standards; increased proportion of treated wastewater reused for irrigation or industrial purposes; increased proportion of sludge reused; energy saving targets, etc.

**Storm water management and flood protection:** reduced days of flooding and damage due to flood, (including investments to respond to increasingly intensive rainfall and thus stormwater events as a result of global warming), etc.

**Solid waste management:** percent reduction in solid waste generated; percent segregated at source; percent recycled, reused, or recovered; percent of solid waste collected which is disposed to sanitary landfills; cost per ton of collection, treatment, and disposal to customer.

**Power:** increased efficiency of production, transmission, and distribution (reduced percent transmission and distribution losses); percentage of power generated from renewable resources; use of clean coal technology; and percent reduction in consumption per capita.

**Urban transport:** mode split, in-public transport percent (bus percent, rail percent); private vehicle percent; nonmotorized transport percent; average travel speed; percent vehicles using higher-standard fuels; target pollution levels (sulfur, particulates, greenhouse gases, among others); vehicle inspections to EURO standards; vehicle fleet age; safety and accident targets, etc.

need to be directed. Such performance measures should be developed through a broad consultative process involving all major stakeholders, and in the major urban service sectors. Specific program and project interventions should be formulated to contribute to a move toward achieving the subsector road map performance targets.

A focus on service provision suggests the need to introduce incentive structures which emphasize better management and provide for demand-based rather than supply-driven investment. Objectives such as cost recovery, sustainable operation and maintenance, and pricing structures which reflect environmental externalities need to be applied.

Greater integration of interventions in energy, water sector, and waste management policy, together with urban development policy, is also needed and pricing and other policies across these sectors should not conflict.

**Moving Toward Environment-friendly Fuel Transport System for Urban India**

The first centralized effort to improve fuel quality in India was initiated by judicial activism. It began in 1994 with the phasing out of lead in petrol in the four metropolitan cities—Chennai, Delhi, Kolkata, and Mumbai. The Ministry of Environment and Forests set out fuel specifications in 1996. A similar program to reduce the sulfur content in diesel has been in effect since 1996. Compressed natural gas (CNG) is used extensively in a few cities including Delhi, Mumbai, and Surat. In an April 2002 directive, the Supreme Court imposed fines on diesel buses, issued orders for phasing out diesel buses, and accorded priority to the transport sector for CNG allocation. The court also ordered that a schedule be drawn up to supply CNG to other polluted cities, including Agra, Faridabad, Jharia, Jodhpur, Kanpur, Lucknow, Patna, Pune, and Varanasi. Delhi today has the largest CNG bus fleet in the world, with about 7,200 buses and 4,000 mini-buses. The auto rickshaw and taxi fleet of the city have also been converted to CNG. A number of oil companies are actively promoting liquefied petroleum gas (LPG) for automobiles in the major cities. In Bangalore, a transport department directive has made it mandatory since 2005 for all auto rickshaws to be fitted with authorized fixed cylinder kits that run on LPG. Alternate fuels like dimethyl ether, biodiesel, hydrogen, electricity, and fuel cells are in various stages of experimentation.

**Encourage new ideas, innovation, change—from all levels**

Creating sustainable solutions is about setting up an institutional framework within which technical innovation can thrive. This can mean enabling appropriate technology such as eco-industrial parks. But often it involves making sometimes small, incremental changes to the institutional framework. This encourages solutions to be locally determined, thereby enhancing sustainability, and suggests a rebalancing of Cities must levy appropriate tariffs to ensure financial sustainability. Access by the poor to infrastructure and services must be improved by dealing with the bottlenecks to poverty reduction through better information, participatory processes, and targeting measures, such as adapted service standards, and use of low-cost products. One example is the use of nonstandard house water supply connections, as has been demonstrated in Manila, to reduce connection and operational costs. Others include Karachi’s utilization of existing drainage networks or shallow sewers to provide tertiary-level sewage connectors, and the kind of community-organized neighborhood collection of solid wastes that Bangalore has implemented. There is a scope for aligning prices closer to economic costs, thereby creating incentives for lower intensity of usage. Where decision making is at the supercity level—province, region, state, or nation—policy frameworks are needed. Strategies and programs for improved service sustainability must give more attention to how cities engage at these levels to create frameworks within which they can respond in the ways necessary to support sustainable service provision.
strategic priorities by local and higher-level government in favor of resource mobilization and functioning as an agent of change rather than a deviser and implementer of technical solutions. Most examples of innovation to enhance sustainability of urban systems and better practice in cities come from local initiatives.

**Effective city services? Think customer needs and private sector**

The key to sustainable service provision in cities is an institutional framework that is service- or demand-focused. The service provider must be capable technically and managerially, as well as accountable and responsive to customer needs and driven by performance, with incentives to provide a cost-efficient service that is both affordable to customers and financially sustainable. Innovations should add savings and other efficiencies to the service. Phasing and sequencing of works can produce incremental improvements that might provide opportunities to increase tariffs. The requirements of more efficient, effective, and sustainable service delivery are resources, professionalism, competition, and contractual discipline, accountability, and responsiveness. This often means the involvement of the private sector but it should also include local contractors and service providers, and particularly communities and cooperatives, which are often better suited to extending services to poor areas. Private sector participation must be supported by effective, independent regulation that ensures competitive markets, fair pricing, social protection for the vulnerable, and sustainable service provision. This oversight resolves the risks associated with a pure private sector, laissez-faire approach to basic goods such as water and energy where distributional objectives are at least as important as efficiency objectives. The regulatory regime must contain provisions for a fair service price, sustainable service provision, and protection of distributional objectives. Contracts should clearly specify that funding for any public service obligations of the provider, such as lower prices for the poor, is guaranteed by the government.

There is also the need to explore ways in which private sector activities can be incrementally introduced and sequenced to demonstrate both to government or partly government-owned, parastate service providers and to customers that gains can be realized in terms of system effectiveness and cost-efficiency. The unbundling of infrastructure offers some potential for such arrangements, for instance. Water treatment plants, output-based aid, and performance contracting need to be investigated. National mechanisms should be developed to foster cross-learning based on experience of more innovative public-private partnership models to accelerate adoption of successful models.

Public representatives, beneficiary communities, civil society, and the media must be encouraged to become involved. This not only serves a consensus-building objective but also provides indications of the extent to which the market will bear charges, the scope for differential pricing, and the level and quality of service that customers expect.

**Improved service delivery in cities**

The infrastructure needs and demands of Asia’s cities differ greatly, depending on the condition and coverage of existing facilities and networks, local capacity to operate and maintain, income levels and socioeconomic conditions, and the city’s economic base and structure. Clearly, priorities for municipal service investments will also vary. But the following paragraphs provide general observations on the most appropriate ways to improve municipal services in a sustainable manner.

**Making polluters, producers, users, and others pay for infrastructure**

Apply economic instruments to promote sustainable infrastructure

National and city governments should encourage the application of economic instruments to promote efficient use of resources. A number of economic instruments can be applied:

- **User Charges.** They should be set so that utility resources like water and electricity are charged for at the full cost of usage, which includes the cost of providing supply, the cost imposed on the system by externalities caused by usage, and the opportunity cost of taking the resource from other potential users, including the ecosystem.
- **Emission (Effluent) Charges.** These are charges for maintaining the environment itself and are in addition to user charges for the public service provided by government or industry. They can be based on the quality or quantity of waste, usually wastewater, processed to an agreed level.
- **Product Charges.** These charges on products that pollute the ground or surface water during or after consumption are best set at a level that reflects the actual value of external damages caused by their use.
- ** Tradable Rights.** The establishment of markets for the rights to use a quantity of a resource—usually water—helps achieve efficient allocation between users, but
there needs to be strong government, administrative, and legal structures to protect third-party and public interests.

- **Marketable Permits.** These are tradable rights applicable to pollution sources. For example, government can define a total level of pollution and sell or grant emission rights to all actors involved. Each actor is then entitled to treat its wastes and sell the permit, or not treat the wastes and purchase more permits.

- **Deposit Refund Systems.** For commodities packaged in nonreturnable containers to ensure that they are returned for proper disposal or reuse.

National government needs to set up the enabling environments before such instruments can be used. Two in particular—polluter pays and economic pricing of utilities—can be prioritized.

**Adopt the polluter-pays concept for pricing**

Adopting a polluter-pays principle is the key to sustainable development. Historically, in the developed world, the principle focused on retrospective liability for pollution. For example, industry-causing pollution would have to pay for the cleanup costs arising from it.

More recently, the focus has changed toward avoiding pollution and addressing wider environmental impacts by encouraging producers to be more responsible. This places responsibility for the environmental impact associated with a product onto its producers. It aims to address the environmental problems of the production process, by encouraging minimization of resource use, through extended product life span, to recovery and recycling of products once they become waste. Such producer responsibility is increasingly used throughout the world as a means of addressing environmental impacts. For example, the European Union has applied the principle through directives on packaging, waste electronic and electrical equipment, and end-of-life vehicles. Of particular concern to cities is wastewater collection and treatment and SWM. Adopting a polluter pays policy to these services should be prioritized.

**Carbon tax**

A carbon tax is a tax on energy sources that emit carbon dioxide into the atmosphere. It is an example of a pollution tax, which has been proposed by economists as preferable because it taxes a “bad” rather than a “good” such as income. Because of the link with global warming, a carbon tax is often associated with an internationally administered scheme; however, this is not intrinsic to the principle.


**Extended producer responsibility**

Extended producer responsibility (EPR) as an environmental policy approach where the producers’ responsibility, physical and/or financial, for a product is extended to the post-consumer stage of a product’s life cycle. It is particularly applicable to waste electrical and electronic equipment. EPR-based policy transfers responsibility and cost for waste management and recycling from local governments, which are downstream in the product life cycle, to producers further upstream. It is intended to give producers incentives to consider environmental protection factors at product design and in raw material selection. EPR promotes prevention and minimization by internalizing the environmental and economic costs of recycling and disposal. Efforts to improve disposal of waste should proceed with measures that deter disposable packaging and products, pushing for extended guarantees, consumer education, and eco-labeling schemes.

Encourage the introduction of economic pricing and related taxes

Utility charges are normally based on full or partial financial costs. Economic and financial costs are complementary but they are different. Financial prices are market prices of goods and services that include the effect of government intervention (taxes and subsidies), and market distortions.

Economic prices reflect the true cost and value to the economy of goods and services after adjustment for the effects of government intervention and market distortions through shadow pricing of the financial prices. Taxes and subsidies included in the price of goods and services are part of financial prices but they are excluded from the computation of economic prices. External effects such as health benefits to the whole community often are not accounted for in market transactions and hence would not be included as a financial cost. Economic pricing is that which reflects the true costs of providing a utility service to the national economy. Examples are the environmental impact of a project and the depletion of resources.
of water resources, particularly where raw water sources are scarce or there is overexploitation of groundwater. The value of water is not only the cost of extraction but also the present value of the next best source, given that the existing one is not being used sustainably. Hence, the economic price of water is the financial price, including the cost of all facilities and operations to provide, collect, treat, and distribute water, adjusted to economic costs using conversion factors. The economic price of water is mirrored by its economic cost.

Similar arguments can be presented for the generation of power, where the externalities include the cost to the economy of the increasing carbon dioxide (CO₂) emissions associated with coal- and oil-fired power stations. But CO₂ emissions are produced by many sectors, by power plants and other industrial concerns, and by people as they cool and light houses, drive cars, or use public transport. A practical approach to emissions would be for national governments to adopt a carbon tax that is paid whenever CO₂ is emitted to the atmosphere by burning fossil fuels. Utilities would pay it based on their emissions and pass the cost on to consumers in their bills. People would pay it when they buy petrol, based on the content of carbon in the fuel. Such a tax would provide incentives to improve the efficiency of fossil fuel use. It would also maximize the potential for important cross-sector transfers; for example, more efficient ways to reduce CO₂ emissions from electric power plants would reduce the utilities’ carbon tax and the savings could be passed to consumers. Under the same principle, it might be cheaper to operate an electric car than a gasoline or diesel vehicle. A carbon tax should not mean a net increase to the cost of living, and its revenues should be directed to general government expenditures so that income or other taxes could be reduced. A tax on carbon, which would show up in higher costs for energy or fuel, would provide an incentive to use energy more efficiently.

**Subsidy and appropriate utility pricing**

Economic and environmental sustainability clearly depends on economic pricing of externalities but well-targeted direct subsidies may have to be provided to the poor. Innovative pricing mechanisms and appropriate tariff structures are important for helping the poor gain greater access to services. Easy payment systems, for example, and more flexible service provision at lower standards or in smaller amounts help the poor reduce their spending on such services. Subsidies can be targeted to increase access and recognize the limited amount that the poor can pay—that is, by providing a minimum level of consumption at a basic cost, for instance. But cross-subsidies should be minimized and differential pricing eliminated once economic pricing is introduced, when there is a strong case for uniform rates for all but the basic level of consumption. Other options will be needed to increase access, including community grants or loans to develop infrastructure and finance connections in poor
areas. Tariff increases should be accompanied by visible improvements in service quality, quantity, or both to increase the willingness to pay.

How special investment organizations can help
Services can be improved through the establishment of sector special investment organization (SIOs) that implement the above recommendations. They should include representatives of all levels of government and all concerned local authorities and public entities that can provide incentives for appropriate design to foster demand, and those organizations potentially involved in building, managing, and financing the prioritized sector investments. For example, SIOs could be created in SWM to develop incentives for reducing, recycling, transporting, and disposing of waste; or in energy conservation to provide incentives for adopting appropriate technologies to conserve energy in cities; or in sanitation to provide incentives for appropriate technologies in that sector. SIOs can also provide the project structuring of special purpose vehicles (SPVs), which maximizes their financial viability through such mechanisms as the Clean Development Mechanism (CDM).

Confirming the role of central administration
National governments need to identify and address the key considerations involved in developing road maps for cities. These are the investment and financing implications of sustainable resource planning, especially for water, the planning for basic urban services, and achieving the Millennium Development Goals (MDGs). They also need to set national standards for water and air quality, CO₂ emissions, the use of renewable energy sources, wastewater treatment, and SWM coverage.

Activities and key actions to inspire environmental management
Improvements in environmental management should be implemented within the context of clearly articulated and prioritized investment programs through the creation of a number of SIOs in key sectors identified under the city development road map and strategic plan. In most cities, major SIOs will be for:

- **Public transport**, which will involve representatives of all levels of government, including concerned local and national government entities that can provide incentives for appropriate densities to foster demand, as well as organizations potentially involved in building, managing, and financing prioritized public transport investments.

- **Solid waste**, which will include representatives of both generating and receiving local governments, government entities that can provide incentives for reduction and recycling, organizations potentially involved in transport of waste, those running a waste management enterprise, and financiers.

- **Energy conservation through the fostering of an energy-efficient city**, which will include representatives of the local government, government entities that can provide incentives for adopting appropriate technologies to conserve energy, community and business leaders, and organizations potentially involved in building, managing, and financing the prioritized investments.

- **Sanitation**, which will include representatives of all levels of government, all local governments concerned, government entities that can provide incentives for the adopting appropriate sanitation technologies, communities affected by wastewater treatment investments, and organizations potentially involved in building, managing, and financing investments.
Key Actions

At the local government level

- Plan for strategic transport and trunk infrastructure in advance of development.
- Plan to infill “leapfrog” development.
- Plan and zone for higher densities.
- Plan and build road, water, and drainage infrastructure to reinforce the above—move polluting industries to serviced industrial estates.
- Build public transport to reinforce the above.
- Discourage car usage—road pricing/manage parking.
- Plan and build waste water/sanitation systems (include recycling options).
- Plan and build solid waste reduction, recycling, and disposal systems.
- Work with communities to identify needed green spaces, provide new areas, and protect existing ones.
- Incorporate incentives for energy and water saving into building codes and pricing policies.

At the national government level

- Identify and address the key considerations for cities in developing road maps—investment and financing implications of sustainable resource planning (especially water); planning for basic urban services (Millennium Development Goals); heritage planning and incentives, including transferable development rights, increased densities, reduced car usage; fostering public transport for work-related trips; and encouraging industrial ecology approaches.
- Set national standards for water and air quality, carbon dioxide emissions, for use of renewable energy sources, for wastewater treatment and solid waste management coverage.
- Redirect taxation toward activities that damage the environment, through carbon taxes, emissions trading, and other polluter pays instruments. Tax reductions elsewhere should occur when such measures are adopted.
- Ensure appropriate regulatory regimes for utilities and services in city regions.
- Sponsor necessary enabling legislation and administrative arrangements for the above.
The priorities for action for the different types of communities, the nation, or the province, self-reliant and dependent cities, and smaller towns and villages are set out below.

### Matrix of Priorities for Action Toward a Sustainable Environment

<table>
<thead>
<tr>
<th>Classification</th>
<th>City structure</th>
<th>Urban transport</th>
<th>Environmental infrastructure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nation or Province</td>
<td>Future national urban spatial pattern</td>
<td>Enabling environment for private sector participation</td>
<td>Fiscal incentives and standards to encourage environmental protection and efficient and sustainable use of resources, including land</td>
</tr>
<tr>
<td></td>
<td>Strategic national transport networks and trunk infrastructure provision in accordance with plan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Reliant Urban Areas</td>
<td>Plan for densification and the future spatial growth of city regions</td>
<td>Strive toward a transit (managed movement) city</td>
<td>Focus on service provision and technical innovation</td>
</tr>
<tr>
<td></td>
<td>Improve the interagency planning process through special purpose vehicles (SPVs)</td>
<td>Establish or strengthen special investment organizations (SIOs) for transport</td>
<td>Establish an SIO for waste management, covering receiving local governments, and for sanitation/sewerage</td>
</tr>
<tr>
<td></td>
<td>Design strategic regional road and rail networks and trunk infrastructure in accordance with the spatial plan</td>
<td>Adopt measures for traffic restraint and encourage development of busways and light-rail systems</td>
<td>Adopt appropriate utility pricing that has principles for economic pricing</td>
</tr>
<tr>
<td></td>
<td>Enforce zoning, subdivision, and building regulations</td>
<td>Design and build circumferential roads and complete road networks</td>
<td>Involve private sector</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Strive to lead land development with adequate infrastructure provision provided in coordination with transport network development</td>
<td>Improve municipal service delivery: water for all, sewerage for high density areas, and flood control and drainage improvements, especially for coastal settlements</td>
</tr>
<tr>
<td>Dependent Urban Areas</td>
<td>Plan for future spatial growth, then as above</td>
<td>Adopt mechanisms for transit city, as above</td>
<td>Adopt energy savings measures</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Adopt measures for traffic restraint and bus priorities</td>
<td>Minimize waste and recycle</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Establish specific SPVs and SIOs if possible</td>
<td>Adopt building codes that encourage sustainable buildings</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Improve accessibility to markets</td>
<td></td>
</tr>
<tr>
<td>Towns and Villages</td>
<td>Improve institutional linkages with towns and cities</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Identify external and local pollution sources and work within source jurisdictions to counter generation.</td>
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<tr>
<td></td>
<td></td>
<td>Ensure basic services reaching small towns and rural areas</td>
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</table>
Chapter 7
Ensuring a Sustainable Society
Road maps for inclusive social development

Cities should become sustainable societies, places where people want to live in safe, secure, and affordable houses and neighborhoods, appropriately serviced and with adequate access to social services.

This chapter provides some guidance on how to foster sustainable urban societies. Focusing on inclusive social development and service delivery, community-driven development, building an inclusive financial sector, and housing and urban renewal. How cities plan for inclusive development that includes every citizen in any country is explained through road maps and specific recommendations on inclusive education which seeks to address the learning needs of all—particularly the vulnerable—and health services within urban areas that focus primarily on the needs of the poor. The use of social funds in enabling pro-poor infrastructure and services follows, together with some ideas on how governments should build an inclusive financial sector, which provides access to all sections of the community. Adopting an enabling approach to housing and urban comes next with recommendations for designing and implementing an integrated housing and urban renewal strategy. The major components of and actions needed to achieving a city without slums are then discussed. The requirements for effective participation, particularly participatory budgeting, follow. The chapter ends with a brief overview and key activities needed to improve social development in city planning and management.

Sustainable society: one that cares and thrives

A sustainable society meets the needs of all its citizens and does not leave the vulnerable and disadvantaged behind. The aim is to create cities where people want to live. It includes the promotion of prosperity for all, high-quality service delivery, and giving people the ability to shape the places they live in and change what matters to them. For local improvements, such as clean streets, local schools, health clinics or parks, people identify more with their street or block or neighborhood. For others, such as work or transport, people think about a wider area.

Poverty in cities is generally falling as a share of the population though, unsurprisingly, aggregate numbers may be rising. Poverty is closely tied to unemployment, as demonstrated by the Asian financial crisis. Income disparities within cities and regional variations in income inequality within and between cities are increasing. These trends raise important political, governance, and social issues. But there are no easy policy prescriptions for them and city governments are only one of the players, and often a relatively minor player, in any policy response. The cities’ role in broader equity and social welfare policy has to be placed in this perspective.

Road maps for comprehensive social development

At the local level, cities must plan strategically for inclusive development including access and equity issues, and involve communities in deciding economic and environmental investments. This can be accomplished by involving communities in the planning, design, implementation,
and even financing of local infrastructure projects, and introducing participatory budgeting, whereby communities are involved in spending decisions and priorities of city governments as they affect their locality.

City governments also need to help the poor by ensuring access and equity in asset distribution. This can be expressed in two ways. First, by designing and implementing systems for local communities to make decisions on facilities, especially in health and education. Second, through the preparation and implementation of housing and urban renewal strategies to deliver basic needs and shelter provision in an affordable way. This includes slum upgrading and the rigorous enforcement of laws against illegal construction and land occupation, with the help of concerned communities.

National governments can assist in this process by:

- Ensuring the effective operation of land administration and management systems: tenure rights, valuation and taxation and transferable development rights, especially in city regions.
- Providing incentives to encourage banks and other financial institutions to supply long-term mortgage finance for house purchase by low-income groups in urban areas, including guarantees.
- Fostering appropriate livelihood development schemes, such as small and medium enterprise development, through appropriate enabling frameworks; for example, amending usury laws to enable micro-credit.

- Promoting the securitization of assets including mortgages and infrastructure revenues, to increase finance availability for city regions.
- Setting levels for social safety nets in city regions and consider sustainable subsidies for local governments who cannot provide services to these levels.

Adding the people factor to development

Social dimensions need to be included in projects and programs which can be structured with bilateral grant assistance for formulation and/or implementation. For example, public transport projects that involve the construction of new transit routes can be broadened into wider urban renewal projects that should provide clear benefits to the communities concerned. In solid waste management, city governments need to ensure the incorporation of informal sector operators who currently are involved in such activities as collection or recycling. For new infrastructure, they should seek ways communities can be involved in the construction and/or maintenance of the facilities. While in regional economic development, arrangements should be made to ensure that the poor and excluded groups will have access to facilities provided and involvement in proposed programs.

Basic service delivery, driven by communities

Successful examples of homegrown small-scale development, such as the Self-Employed Women’s Association (SEWA) and Operation Flood Dairy Cooperative movement in India and the Grameen Bank in Bangladesh, have demonstrated that community participation in projects is a key determinant of their success and sustainability, particularly when it comes to addressing the needs of the poor and the vulnerable. Based in this experience, the concept of community-driven development (CDD) has evolved and implemented in support of basic services provision in a number of countries. In Asia, Indonesia and the Philippines have large programs.

Power of communities

The approach of CDD is focused on participatory, demand-responsive support to defined communities in which poor people and their institutions are treated as active partners in development rather than passive beneficiaries. The definition of CDD is an approach that gives

control over planning decisions and investment resources for local development projects to community groups—the operative words are “control over planning …and… resources.” While CDD priorities are determined by the community, they include the gamut of services including basic local infrastructure, health, and education required to support poor and vulnerable households, in their efforts to climb out of poverty and a state of vulnerability. This is achieved through a combination of three program objectives or outcomes: increasing and securing incomes or economic benefits; improving basic services delivery; and empowerment, either collective or individual. The project outputs that enable the achievement of these outcomes are community-controlled assets, which can be physical, financial, human, natural or social, and basic services; community-based or supportive institutions, either within the community or outside in the form of responsive market organizations, nongovernment organizations (NGOs), or local government; and an improved enabling environment for collective action and local self-development.

CDD involves four major activities:

- Material development through financing of subprojects that create community assets.
- Community social mobilization that usually involves awareness creation, information sharing, and forming community-based organizations and federations.
- Capacity enhancement for community groups through training on aspects of project implementation, natural and financial resource management, and increased control over planning and decision making.
- Measures to create an enabling environment for local development by forging functional links between community groups and formal organizations, legal and institutional reform, and partnerships with the private sector.

Measures taken to address service delivery will vary from country to country. Boxes on the next page set out some principles involved in designing support for the poor and vulnerable in education and health.

**Educating the poor**

A review of best practices in education for the poor identified three key education challenges that low-income countries commonly face in improving institutions and outcomes for the poor. While the priority issues will vary from country to country, virtually all face some degree of challenge in three areas:

- Expanding the supply of schooling to ensure basic education access to all children.
- Improving quality.
- Stimulating demand, especially to increase the participation of girls.

The table summarizes the issues involved in each area. Experience from around the world offers some guidance to specific policy instruments and strategies that can help countries address these challenges most cost-effectively.
<table>
<thead>
<tr>
<th>Area of concern</th>
<th>Policy choices</th>
<th>Means</th>
</tr>
</thead>
</table>
| **Expand supply** | Low cost and carefully targeted expansion | Lower-cost designs and construction material  
Community-based construction close to where students live  
Fast-track quality pre-service training (i.e., shorter formal training, more hands-on training in classrooms, distance delivery)  
Locally recruited teachers  
Incentives for teacher deployment to remote and rural areas |
| More cost-effective use of existing school infrastructure | | Double-shift schools  
Multigrade schools  
Teacher redeployment and efficient class size |
| Greater private provision and financing of education | | Simple regulatory framework for private providers (i.e., accreditation system and quality monitoring)  
Grants to cost-effective nonpublic providers |
| Tighter system management | | Planning for HIV/AIDS impact  
School mapping (and later, more sophisticated education management information system)  
Review role, selection, and training of school heads  
Control of teacher absenteeism  
Equitable funding across schools (per student allocations) |
| **Improve quality** | Quality teaching | Emphasis on literacy and numeracy skills and clear learning objectives for students  
Student-centered interactive teaching methods  
Ongoing professional development in content areas and pedagogical skills  
Teacher networks and resource centers  
Quality teacher manuals  
Mother tongue instruction in initial years  
Increased days of instruction |
| Quality instructional material | | Local teaching materials  
Timely and equitable distribution of low-cost learning materials (textbooks) to schools and students  
Curriculum revision to improve relevance  
Distance education (e.g., radio education) |
| Tighter accountability mechanisms | | Simple school monitoring and reporting system (including private schools)  
Assessment of student learning outcomes  
Community participation in school affairs |
| Institutional strengthening | | Reinforced management functions (i.e., planning, budgeting, staffing)  
Greater school autonomy, school-based management |
| **Stimulate demand** | Promotion of education of girls | Targeted stipends for girls  
Labor-saving technologies, water points, and child care facilities at school to ease girls’ household work  
Site schools closer to communities and provide separate latrines for girls  
Recruit more female teachers and administrators  
Involve mothers in school committees |
| Ensure school affordability | | Eliminate school fees  
Provide textbooks and school supplies free to target groups  
Offer “safety net” stipends to poor households, especially AIDS orphans |
| Make schooling attractive to parents and communities | | Involve parents in school councils with decision power  
Make school calendar compatible with local economic activity  
Improve school environment with latrines, water, electricity  
School health and nutrition programs  
Early childhood development programs  
Nonformal education programs for youths and adults  
Community libraries (eventually Internet centers) |

AIDS = acquired immunodeficiency syndrome, HIV = human immunodeficiency virus.  
Improving, expanding health services

In many developing member countries, centralized ministries of health are responsible for providing health services and control large formal networks of hospitals and clinics. Health facilities are often concentrated in large administrative centers and in established areas of these cities. Incentives for ministry staff, hospital administrators, and doctors employed differ somewhat but often align in their advocacy of more spending on expanding and upgrading large hospitals accessible mainly to the nonpoor. Imprecise targeting of subsidies has often resulted in the nonpoor benefiting most from such facilities. Inadequate cost recovery has in turn compromised maintenance and hygiene. The rich often abandon public systems altogether, narrowing the public revenue base further. Lack of resources limits capacity to expand services into poor areas, to provide incentives to doctors to service these areas, and to fund community health workers.

There are clearly defined steps to quality health services for the poor.192 A framework for diagnosis and action starts with the key determinants for success in reaching the poor. The health sector’s performance can be assessed by looking at measurable factors that affect how it performs in each key area (see table below). This assessment should identify the main obstacles to better performance in providing essential services to the poor. Action can then be focused on the determinants that are most problematic. It can also become a checklist for monitoring improvements in system performance. A well-prioritized set of feasible, affordable, time-bound actions with known costs should result from this analysis.

### Restrictions on Health Sector Performance

<table>
<thead>
<tr>
<th>Key determinants of the sector’s performance</th>
<th>Examples of the nature of the problem identified</th>
<th>Instruments available to change each characteristic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical accessibility</td>
<td>Low access to clinic services, to community-based activities</td>
<td>Public, private, nongovernment mix Core health packages Human resources</td>
</tr>
<tr>
<td>Availability of human and material resources</td>
<td>Shortage of drugs, vaccines, trained staff</td>
<td>Pharmaceuticals Human resources Stewardship</td>
</tr>
<tr>
<td>Organizational quality</td>
<td>Inconvenient opening hours, lack of privacy</td>
<td>Human resources Community and civil society participation</td>
</tr>
<tr>
<td>Relevance of services</td>
<td>Mix of services does not correspond with basic package</td>
<td>Public, private, nongovernment mix Core packages Pharmaceuticals Contracting and purchasing Stewardship</td>
</tr>
<tr>
<td>Timing and continuity</td>
<td>Weak linkages with community structures, poor supervision</td>
<td>Community and civil society participation Contracting and purchasing</td>
</tr>
<tr>
<td>Technical quality</td>
<td>Inefficacious services because of failure to respect treatment standards</td>
<td>Contracting and purchasing Pharmaceuticals Human resources Stewardship</td>
</tr>
<tr>
<td>Social Accountability</td>
<td>No voice of the poor in delivery of services</td>
<td>Community and civil society participation</td>
</tr>
</tbody>
</table>


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Social funds
To ensure financing for small-scale public investments in poor communities, especially local social and economic infrastructure, microcredit, and business start-up funds, many countries have set up specific social funds. Investments are proposed by local government or community-based organizations, which often contribute to the financing, implementation, and operations and maintenance. Such funds are used to pilot new approaches in decentralized, participatory decision making, and management. Their origins were in Latin America in the mid-1980s, but they have expanded to Asia.

Social funds are usually special purpose vehicle (SPVs), set up outside government’s regular organizational structure that encourage contributions from beneficiary community and nongovernment entities. They have proven to be practical and effective responses, especially during economic crisis, natural disasters, resettlement, and in addressing poverty. The ability to target benefits geographically makes them a relatively efficient means of focusing resources in blighted urban areas.193 Where local infrastructure is provided through such funds and involves communities, local ownership is enhanced and the funds’ impact and sustainability are often better than that implemented under more traditional programs of government. Improving basic social and economic infrastructure through communities of slum areas is a good example. Placing social funds within local governments, along with the development of participatory planning, implementation, and accountability, encourages the strengthening of local governance.

Building a financial sector for the urban poor
In most Asian countries, financial services are available only to a minority of the population, although those with access are increasing. Still, a majority have no savings accounts, do not borrow from formal financial institutions and have no insurance; they rarely make or receive payments through financial institutions. But access of the urban poor to a well-functioning financial system is essential to improve their well-being. The emergence of microcredit, microsavings and micro-insurance in many urban areas has shown that poor people can be served, despite the higher cost of small transactions. Furthermore, the cost differential of serving poor customers has fallen as advances in information and communications technology have reduced the costs of transactions.194 An effective solution is to expand microfinance, but such institutions often lack access to mainstream financial resources. Environments that encourage the inclusion of microfinance institutions (MFIs) into domestic and international financial markets should be created. This often occurs when MFIs mobilize savings as a major source of funds along with debt and other short-term funds, including bonds, securitization, and equity finance. It is also necessary that they are included in national and international money transfers, and clearing and settlement systems. Such inclusion represents the broadening and deepening of financial markets to the benefit of the urban poor and informal business.

Enabling markets to work the solution for low-income housing
The basis of successful interventions in the housing market has long been established.195 The main theme is that “governments should be encouraged to adopt policies that enable housing markets to work.” The seven key enabling instruments are:

- Developing property rights through ensuring that the right of people to own and exchange housing is established by law and is enforced; and by administering programs of land and house registration and regularization of insecure tenure.
- Developing mortgage finance by creating a competitive mortgage market and institutions; and fostering arrangements for providing greater access to housing finance by the poor, especially through savings and microfinance approaches.
- Rationalizing subsidies by ensuring they are affordable, properly targeted, measurable and transparent, and avoid distorting markets.
- Providing infrastructure for residential land development by coordinating the activities of agencies providing utilities and services, and focusing on servicing existing and undeveloped urban land, including that of recently legalized or regularized areas.
- Regulating land and housing development by encouraging progressive land use and building regulations, while eliminating those that hinder housing supply. Encouraging self-help incremental construction is the key to low-income housing.
- Organizing the building industry by encouraging competition, removing the constraints to development

and use of local building materials, and reducing trade barriers that apply to housing inputs.

- Developing an institutional framework for managing the housing sector that includes strengthening institutions which oversee and manage the sector; bringing together government agencies, private sector, and civil society; and ensuring that policies and programs benefit the poor and encourage their participation.

Priority measures of national governments may vary across countries and within cities as shown in the table below.

At the local level, sustainable housing means:

- Participation, where communities, business, and other stakeholders are consulted.
- Choice of housing and its environment, where there is not one solution for all.
- Affordability, so that developments are such that all sectors of the market can afford, whether low or high income.
- Cost recovery to ensure that all investments are recovered to support financial sustainability.
- New technology within developments, including decentralized communal services.

To achieve this, city governments need to prepare and implement housing and urban renewal strategies to deliver basic needs and shelter provision in a sustainable manner through slum upgrading and land sharing, facilitating the development of new affordable housing, and taking action against illegal construction and land occupation.

### Shelter for the poor through housing and urban renewal

Key components of a shelter program focused on the low-income group would be:

- Comprehensive area upgrading which would cover resolving land tenure and security issues, the improvement of physical and social infrastructure, the improvement or rehabilitation of the existing housing stock (houses and apartment blocks), credit and other support for small business and microenterprise, and training and upgrading of skills. This would focus on existing slum sites by developing projects for their upgrading and regularization.
- New housing which should be developed at prices that can be afforded by all groups and, in particular, those with low and middle incomes.

### Policy Change for Housing

<table>
<thead>
<tr>
<th>Economy</th>
<th>Priority measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low-income countries</td>
<td>Market-oriented systems of property rights</td>
</tr>
<tr>
<td></td>
<td>Facilitate housing supply by investing in infrastructure</td>
</tr>
<tr>
<td></td>
<td>Enhance building industry competition</td>
</tr>
<tr>
<td>Indebted middle-income countries</td>
<td>Fiscal and financial policy reforms, especially housing finance institutions</td>
</tr>
<tr>
<td></td>
<td>Reducing budgetary transfers to the housing sector</td>
</tr>
<tr>
<td></td>
<td>Expanding infrastructure investment</td>
</tr>
<tr>
<td>Former centrally planned economies</td>
<td>Reform of property rights, housing finance, subsidies, land and building regulations, land development, material production and distribution, and residential construction industry reform</td>
</tr>
<tr>
<td>Other middle-income countries</td>
<td>Regulatory reform in land use and building</td>
</tr>
<tr>
<td></td>
<td>Facilitating transition to a more responsive system of housing supply</td>
</tr>
<tr>
<td></td>
<td>Development of mortgage finance</td>
</tr>
</tbody>
</table>

Finance, which would involve the development of mechanisms to increase the availability of formal mortgage finance for house, lot, and apartment purchases, and small loans or microcredit for housing improvements. New mechanisms such as mortgage default insurance or loan guarantees should be explored.

A slum solution that is sustainable

The approach is to prepare a city without slums (CWS) program, as shown in the diagram. An essential prerequisite for a CWS is political will to tackle the housing problem. Only if the national government and the local administrations are committed toward eliminating slums can the program be successful.

Slum upgrading is a local responsibility, but central government can provide resources and capacity building. Shelter programs must have a vision or mission, a stated goal, and measurable objectives. Resources must be allocated both on the supply side in improving infrastructure, education, and training, and on the demand side to enable people to purchase, develop, or improve their houses. The program must be designed on the basis of what is affordable, that change can be accommodated and the program is understood and supported by the poor. It should be sustainable and not leave debt obligations to future generations. Implicit is changing attitudes and behavior, from top-down to bottom-up planning and development, from sector to integrated upgrading and development, from teaching and informing to listening and learning from communities, from agency ownership to community ownership and management, from supply focus to demand orientation, from public to private sector credit, and from universal to targeted subsidies.

Positive projects and policies

There are two main components: projects that focus on those living in informal settlements which range from infrastructure improvements to microcredit for house improvements; and policies to implement programs which alleviate the problems that prevent the poor from improving their lives. Housing options are many and varied. What is afforded in one country may not be in another. Hence the public housing program should focus on those families who live in slum areas and on those who cannot afford to buy a house on the private market.

The Future of Slum Upgrading

Neither changes in housing finance nor regulations plus a top-down approach will continue to grow slums. Adopt an enabling, bottom-up, and participatory approach with financial sector and regulatory reforms. Improvement and elimination of slums are possible.


Strategy for a slumless city

The shelter components of a CWS comprise: slum upgrading at the core; on-site improvements where possible, involving security of tenure arrangements and house improvement financing; an affordable low-income housing program for new subdivisions and construction of basic housing units; and the adoption of measures needed to prevent the growth of new slum and squatter areas. A CWS must project the future housing needs of the low and middle-income groups and anticipate the future spatial growth of the city.

Slum upgrading is regularizing security of tenure, basic infrastructure provision or improvement, removal/mitigation of environmental hazards, community management and maintenance, and relocation and compensation. It also covers incremental home improvement, improved earnings and incomes through training and credit, improved access to health care, education, skills and social programs, and building an institutional framework and social capital to sustain improvements. At the core is the regularization of security of tenure, which means adopting one of a continuum of land rights and legal instruments. Affordable new low-income housing can be provided by city governments.

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CWS program preparation process

Development of key sectors

CDS preparation process

Data analysis
Poverty/slum profile and mapping
City profile review
Poverty sector review
Comparative analysis

Key sectors
- Local economic development
- Environmental degradation
- Geographical constraints
- Infrastructure/services
  - Transport
- Governance and management
- City finances and resources
  - Poverty alleviation

Legend:
- Main CDS/CWS program preparation process
- Important CDS/CWS linkage
- Linkages between ongoing CDS/CWS program process and key sector studies/review
- Review feedback

Data analysis
City profile
Sector themes statements
Targets/forecasts
State of city report

SWOT
City development strategy
(10–15 years)
Vision/mission/objective
Preferred strategy

Integrated development plans/income expenditure framework
(3–5 years)

Business plans/budgets
(3–5 years)
Implement
Monitor/evaluate

CWS phase 1 program
(3–5 years)
Objectives/targets

CWS program
(10–15 years)

Shelter needs assessment
Resource analysis

CWS action plan/impact projects
(1–3 years)
Design
Implement
Monitor/evaluate

City profile review

Proverty sector review

Comparative analysis

Managing Asian Cities

The project's objective is to reduce income poverty and improve the urban poor's quality of life. More specifically, DPUCSP aims to improve access of the poor urban households to secure land tenure, affordable shelter, basic municipal infrastructure services, and community facilities, enable the urban poor to avail of financial services for microenterprise development, home improvements, and housing, and assist in the decentralization of shelter sector activities and strengthen the role and capacity of local governments to meet their shelter sector responsibilities.

The Philippines is one of the most highly urbanized countries in the developing world, with almost 60% of the population living in urban areas. Affordable shelter and land markets have not kept pace with the demands of this rapid urban growth, resulting in approximately 40% of urban families residing in makeshift dwellings in slum settlements. Many of these urban poor families suffer from lack of access to basic services and infrastructure, poor quality housing, insecure tenure, and high risks to public health.

The Project Works through a Financial Intermediary—The Development Bank of the Philippines

The Structure of the Project

MFI = micro-finance institution

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**Income Generation Initiatives of Community-based Organizations and Linkage with Major Infrastructure Project, Baku, Azerbaijan**

Baku is a center of activities related to the petroleum development sector, including drilling, production, and transportation of oil and gas. These activities have been developed through a mixture of private and public sector consortiums. A major aim has been to maximize local development impact by the employment of local people and through local procurement. The latter has been a challenge since many local level firms are not yet at a stage where they can meet the supply needs of major companies.

There have, however, been some interesting initiatives. One is a women’s community-based organization (CBO), the Human Development CBO, through which women members have been trained and provided with equipment to manufacture working gloves and other safety goods for the oil industry in the area. The group is now exploring possibilities of manufacturing for other clients. This is an encouraging example of achievement of pro-poor growth through linkages of local level initiatives with private sector projects. The CBO has established a transparent accounting system and achieved national quality assurance accreditation. Members are contributing to a pension fund. A cutting press has been purchased with initial earnings to streamline production. Women are able to produce gloves working on sewing machines within their homes.


**Land Tenure Options**

- Anti-eviction rights
- Right to build
- Community ownership
- Individual land titles

**Enforce laws against illegal construction and land occupation**

City governments, with community help, must prevent further squatting, through the rigorous enforcement of laws against illegal construction and land occupation. This should be undertaken by enlisting community support and working with the neighborhood level of local government to identify, report, and check the legality of all new construction. The city government would actively enforce penalties on those who do not have the required permits.

**Upgrade the slums and regenerate the community too**

The goal of urban regeneration is to enable communities that have suffered from economic, social, and environmental decline to function again. The target of sustained regeneration is to create wealth by revitalizing the economy and funding long-term renewal and prosperity. Effective urban regeneration cannot be restricted to property-led renewal and should involve both physical and community development in an integrated program of socioeconomic renewal and improvement. Regeneration requires a broad remit.

Private sector investment is an essential component in the delivery of urban regeneration and must be a central theme in government policy. Although urban regeneration has been perceived as a high-risk and low-return investment, the experience of investors indicates otherwise. Developers, as short-term risk takers, occupy a pivotal role in stimulating initial confidence in the property market and in creating opportunities for longer-term investors. Measures, which are not in themselves based on financial considerations, are important in creating an environment, which will stimulate the flow of private finance into urban regeneration. Contaminated land is a problem for developers and short-term financiers. Its rehabilitation is critical to the reuse of brownfield sites and the leverage of investment into urban regeneration locations. There is evidence of increasing acceptability of partnership arrangements by the private sector in the delivery of urban regeneration.

**Regeneration is more than demolition, rebuilding**

Urban areas are dynamic, experiencing periods of growth facilitating the provision of major infrastructure while encouraging developer-built subdivisions, with housing units constructed according to design briefs that match affordability and allow for incremental expansion.
and obsolescence. In some cases, the inability of an area to quickly change can result in economic decline, which may be so severe that market forces are insufficient to provide a remedy. Economic theory shows that private sector piecemeal redevelopment will take place when the value of a cleared site exceeds the value of the site in its existing use. Then, redevelopment will maximize the profit of an individual developer acting in isolation. However, land uses and land values depend very much upon neighboring uses, that is, there are significant externalities involved. It is because of the inability of the private, small-scale developer to take the externalities efficiently into account that provides the main justification for comprehensive redevelopment. Where an area is comprehensively redeveloped the amount of risk attached to any one part will be reduced and because of the control, which the developer can exercise over all sites within the larger scheme, makes development more beneficial to the whole area.

Urban regeneration requires a wider vision and a broader package of programs and projects, including finance, education, training, enterprise development, and social provision, than property-led physical regeneration. Traditional policy concerns in urban Asia, such as low-income housing and livelihood are central to any regeneration strategy, but they only address part of the problem. Regeneration must be more comprehensive.

Public consultation is a major element in an effective re-generation strategy. This must involve key stakeholders. Private sector investment, too, is an essential component. Experience shows that the most effective institutional arrangement for urban regeneration is when partnership arrangements, coordinated through a formal corporate entity, are adopted. The corporate entity, however, must have a firm exit strategy.

**Ongoing care needed for public housing stock**

The approaches to solving the housing problems of different Asian cities have ranged from slum clearance in Hong Kong, China and Singapore; massive rehousing programs through purpose-built apartment complexes in the states of the former Soviet Union, People’s Republic of China, and Mongolia; to the more enlightened slum upgrading approaches of rapidly growing east and south Asian cities. As the states adopt market principles, and population becomes more free to migrate to cities, there will be increasing pressure and overcrowding of existing accommodation. There may even be growth of informal settlements, particularly in the dacha plots (small allotments) of many Central Asian cities. Future growth will need to be accommodated and overcrowding reduced in later years. However, a major problem in many of these cities currently relate to the existing housing stock consisting mainly of medium to high-rise former public sector apartment complexes. After the shift to market

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No Universal Solutions to the Problems of Deprived Areas

A recent report of the United Kingdom’s Audit Commission on economic and community regeneration has found that the most successful local governments are those that:

- are clear about why they are involved in regeneration and what they hope to achieve.
- draw up a socioeconomic profile of the area for regeneration and consult the community to establish and understand local needs.
- have outcome-based aims, targets, and use performance indicators for monitoring and evaluation.
- use economic development to tackle deprivation.
- add value through partnerships.
- seek beneficiary feedback to improve performance and gather the evidence of significant improvements.
- use public space and encourage neighborhood renewal.

Conclusions, however, were that there are no universal solutions to the problems of deprived areas and no guarantees of success.

economies, much of the public housing stock was simply transferred or sold at a low price to the existing occupants with no arrangements made to maintain or manage it. Key actions in these circumstances relate to setting up condominium associations to manage and maintain the common property with appropriate arrangements to pay for such activities. In addition, authorities must ensure that the consumption of communal infrastructure services, such as heating and water supply, within all buildings is metered and charged for.

**Encourage financial institutions to help low and middle-income families to buy houses and plots**

Most low- and middle-income housing markets in Asian cities are characterized by households who self-finance and provide their own housing in an incremental manner using whatever resources become available. Sometimes households secure short-term consumption credit or small-business microfinance and use the proceeds for house improvement or expansions. For the majority, access to housing finance is limited because of the substantial downpayment required; irregular or nonformal sector incomes are not seen as suitable for securing a housing loan; and required loan amounts are often considered too small by the potential lenders.

Improved shelter involves increasing the supply of finance for those buying land and purchasing or developing new units—long-term mortgage finance for house/plot purchase through banking system, credit guarantees if needed, and savings programs for program beneficiaries. Equally important is, financing house improvement and expansion in an incremental manner through microfinance.

National government needs to ensure that appropriate incentives are in place to encourage the availability of long-term mortgage finance. This requires:

- A legal system that recognizes and enforces property rights and security of tenure.
- A financial system that not only recognizes that the poor are bankable by providing them with greater access to credit but also can provide support to local government in developing infrastructure.
- A framework within which the poor can fully participate in conceiving, designing, developing, financing, upgrading, and maintaining infrastructure and services.

**Borrowing incentives – making them work**

Actions required relate to strengthening the primary mortgage market by encouraging the introduction of variable rate mortgages, promotion of mortgage default insurance, and eliminating problems over property rights and repossession, and ensuring that the conditions for the development of a secondary mortgage market are met. This involves:

- Macroeconomic stability that provides the basis for the development of a long-term capital market.
- An effective legal and regulatory framework for primary mortgages and mortgage-backed securities (MBSs)—in particular, appropriate foreclosure rules that facilitate the recovery of properties and clear tax and accounting rules for mortgage sales with minimal transaction costs.
- Sound underwriting procedures to ensure quality mortgages with minimal levels of default.
- Minimal transaction costs and taxes on the operations of bond markets.
- An open investment climate that encourages potential institutional investors to enter the market.
- An absence of price distortions, such as interest rate controls and subsidies.
- Appropriate legal protection for creditors, including mortgage insurance or guarantees.
- Sufficient capacity within the regulatory bodies.

**From public meetings to decision making—that is participation**

The previous sections in this chapter detailed methods of participation related to the delivery of specific services. However, the overall planning and prioritization of services involves a broader kind of participation. Local governments undertake this activity at various levels. Participation can take several forms, ranging from public meetings on topics
a complex set of rules that clearly define the responsibilities of governments and the participants. The rules regulate meetings and decision-making processes that allocate resources. Often the budgeting relates to specific public works and general social spending. Local governments, citizens, voluntary associations, NGOs, and the business community are generally involved. Participatory budgeting is more likely when local governments are open in providing information and supportive of new approaches in planning, programming, and project implementation.

Even Brazil has no universal model for participatory budgeting. Each program needs to be tailored to the specific political, social, and economic environment of its city. Local and state governments, particularly those that promote citizen participation and social justice, usually implement participatory budgeting. Participatory budgeting is based on a complex set of rules that clearly define the responsibilities of governments and the participants. The rules regulate meetings and decision-making processes that allocate resources. Often the budgeting relates to specific public works and general social spending. Local governments, citizens, voluntary associations, NGOs, and the business community are generally involved. Participatory budgeting is more likely when local governments are open in providing information and supportive of new approaches in planning, programming, and project implementation.

Mortgage-backed Securities

In the 1990s, mortgage-backed securities (MBSs) emerged as a means of enhancing funding of real estate loans by tapping into the capital markets. Loans originate from real estate lenders but are ultimately pooled and sold to individual investors as rated securities. In many developed countries, MBSs now are the second largest source of commercial and residential real estate financing, exceeded only by commercial banks. In 2004, MBS issuance in the United States exceeded $90 billion and is projected to grow. But a strong secondary market is needed to provide the liquidity and market efficiency that supports MBS and enables adequate credit ratings. This, in turn, requires regulation and adherence to highly structured procedures for the underlying loan transactions, including due diligence and documentation. Lenders and the market expect standardized documentation and consistent adoption of best practices. The securities are rated by specific investment grade according to a variety of factors, including their conformity to standard structures as well as credit. Standardization is especially critical because the loans are reviewed and administered by many, including originators, underwriting firms, trustees for ultimate holders, and those who service the original loan.


Participatory Budgeting in Brazil

The use of participatory budgeting began in 1989 in the municipality of Porto Alegre, the capital of Brazil’s southernmost state, Rio Grande do Sul. Porto Alegre has over 1 million inhabitants and is wealthy by Brazilian standards. In 1988, the Workers’ Party won the election for mayor. Its campaign was based on democratic participation and the “inversion of spending priorities,” which involved the reversal of a decade-long trend in which public resources were spent in middle- and upper-class neighborhoods. Participatory budgeting was intended to help poorer citizens and neighborhoods receive greater levels of public spending. When the Workers’ Party assumed office in 1989, it encountered a bankrupt municipality and a disorganized bureaucracy. During the first 2 years, the Government experimented with different mechanisms to tackle the financial constraints, to provide citizens with a direct role in the activities of government, and to change the social spending priorities of previous administrations. Participatory budgeting came into being through this experimental process. In 1989 and 1990—the first 2 years of participatory budgeting—fewer than 1,000 citizens participated but by 1992 the number had increased to about 8,000. After the Government was reelected in 1992, the program expanded, with participation increasing to more than 20,000 people per year. Participation grew as citizens realized it to be an important decision-making tool. Participatory budgeting has spread throughout Brazil, and in June 2000, some 100 municipalities and five states had tried it. Performance has varied widely because some administrations pay only lip service to the programs and others are financially constrained and unable to implement new public works.

When it is time to think participatory budgeting

Governments and civil society must consider several issues when deciding whether participatory budgeting suits a city’s needs and circumstances. To begin with, it will take a number of years before participatory budgeting will function efficiently. Governments must be sufficiently flexible politically and have the necessary political will to undertake such activities. Resources and capacity must also be sufficient to carry out reform. When governments are unable or unwilling to implement participatory budgeting programs, NGOs can act as a catalyst for increasing participation by disseminating information and monitoring government spending. Even before participatory budgeting is implemented, it is beneficial for civil society to examine and question how public resources are being and could be used. The first step generally is to focus on the budget and social spending.

Overview

For social development to occur at the local level, there must be plans for inclusive development, including greater community participation. Local communities need to be more involved in decision making, especially on local matters. One way for this to happen is through participatory budgeting.

Improving housing is critical too, with the resolution of land tenure issues, slum upgrading, and urban renewal at the core of the challenge. This can only be done if further squatting is prevented and governments enable housing markets to work and provide new and affordable houses.

National governments are important in all aspects of land administration. They can encourage banks and other financial institutions, including MFIs, to become involved in the low-income housing market. They can foster appropriate livelihood programs to deliver skills, education, and microcredit. They can promote the securitization of assets—mortgages and infrastructure revenues, in particular—and set levels for social safety nets.

Project investment structures should be based on a careful analysis of the community concerned, including gender analysis197 and consideration of other potentially excluded groups. Given this context, it is important to design all investments at the local level to be as socially inclusive as possible. Some priority sectors offer particular opportunities for activities to inspire and improve social development.

They include:

- Public transport, where an urban renewal component can be incorporated that provides clear benefits to the communities concerned, particularly those directly affected by the acquisition of land for improved transport.
- Solid waste, where projects can ensure that informal sector operators already involved in such activities are included in future programs.
- Energy conservation, which can involve poor communities in the construction and/or maintenance of the investments promoted.
- Sanitation, which is well suited to community-based approaches to provision, maintenance, and the inclusion of such components in urban renewal activities.
- Logistics infrastructure, where project coverage can be expanded to include area-specific urban renewal activities, and communities can be involved in the construction and/or maintenance of infrastructure, and in the economic activities the infrastructure will promote.
- Regional economic development, which can ensure that arrangements are in place to give the poor and other excluded groups access to the facilities provided.

Priority activities that national, provincial, and local governments should undertake to ensure a sustainable, inclusive urban society are summarized below.

**Key Actions**

**At the local government level**

- Plan strategically for inclusive development, including:
  - Access and equity issues
  - Potential for participation in deciding economic and environmental investments.
- Ensure access and equity in asset distribution:
  - Design and implement systems for local communities to make decisions on facilities, especially in health and education.
  - Prepare and implement housing and urban renewal strategies to deliver basic needs and shelter in a sustainable manner, including slum upgrading and land sharing, and the rigorous enforcement of laws against illegal construction and land occupation with help from the community.
- Expand civic leadership and partnership, including the city’s role in advocacy.

**At the national government level**

- Ensure effective operation of land administration and management systems: tenure rights, valuation and taxation and transferable development rights, especially in city regions.
- Provide incentives to encourage banks and other financial institutions to supply long-term mortgage finance for house purchase by low-income groups in urban areas, including guarantees.
- Foster appropriate livelihood development schemes, including micro, small, and medium enterprise development, through appropriate enabling frameworks; for example, amending usury laws to enable microcredit.
- Promote securitization of assets, including mortgages and infrastructure revenues, to increase development finance availability for city regions.
- Set levels for social safety nets in city regions and consider sustainable subsidies for local governments that cannot provide services to appropriate levels.
- Sponsor necessary enabling legislation and administrative arrangements for the above.
The priorities for action for the different types of communities, the nation, or the province; self-reliant and dependent cities, smaller towns, and villages, are set out below.

Matrix of Priorities for Action: Ensuring a Sustainable Society

<table>
<thead>
<tr>
<th>Classification</th>
<th>Housing and Urban Renewal</th>
<th>Participation</th>
<th>Social Development and Inclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nation or Province</td>
<td>Enabling financial and institutional frameworks for urban renewal and housing</td>
<td>Enabling frameworks for participatory budgeting and decision making</td>
<td>Social funds</td>
</tr>
<tr>
<td></td>
<td>Framework to increase availability of micro and housing finance</td>
<td></td>
<td>Incentives for inclusive financial sector to widen the scope of income groups served, such as microfinance</td>
</tr>
<tr>
<td></td>
<td>Ensure property rights</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Reliant Urban Areas</td>
<td>Urban renewal, housing and city without slums programs and projects</td>
<td>Mechanisms to allow citizen participation in planning and budgeting processes</td>
<td>Focus on improving access to basic health and education services in all areas, including appropriate subsidies for the poor</td>
</tr>
<tr>
<td></td>
<td>Comprehensive area upgrading and land sharing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dependent Urban Areas</td>
<td>Energy-efficient new housing</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Prevent further squatting</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Maintain public housing stock</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Towns and Villages</td>
<td>Low cost-housing programs tailored for lower density</td>
<td>As above</td>
<td>Link to larger urban areas where the population base is insufficient to provide services</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ensure equal access to these links</td>
</tr>
</tbody>
</table>
Chapter 8
Development Assistance for Asian Cities in the 21st Century
Development assistance has to change if it is to create better management in Asia’s cities. Multilateral and bilateral development agencies can help by providing development finance and technical assistance, building capacity, and promoting knowledge dissemination. They need to adopt fresh approaches, especially in the design of a new urban financing model outlined earlier. They should provide support and incentives to strengthen enabling environments to improve city management, encourage better financial management by city authorities, including the structure of fiscal transfers, and foster private sector participation in urban financing and infrastructure provision.

Defining objectives for development assistance: What is it for?

The preceding chapters have described the enabling frameworks required for the sustainable development of Asia’s urban areas. This book has also suggested steps that should be taken to put such frameworks in place and to manage them—both at national and local levels. What then is the role of development assistance? And what should the objectives be that define the results required?

Stepping back from the detail, it can be seen that the objective of the enabling frameworks is in a general sense to build the asset stock of enterprises, government, and households in cities—and thus the economy—and the benefits it produces for citizens.

An examination of the range of actions suggested for both national and local levels shows they can be described as fostering investment in “public goods.” In the economic sense, public goods are those that would be under-provided if left to the market alone since they have external benefits that are difficult for commercial enterprises to capture as revenue. The usual examples are armies and fire brigades but there are many types of such goods—collectively, “infrastructure”—that are important for cities. Infrastructure can be characterized in many ways. It can be “physical,” like bridges and other constructed infrastructure, or “nonphysical,” or “soft”—that is, the systems and the training to run them effectively. It can be “economic,” including physical infrastructure such as flood control or sewerage assets, and infrastructure that in general supports economic development. It can also be “social”—health and education, or related to building human assets, for instance—and “environmental,” having to do, for example, with the preservation and restoration of environmental assets such as wetlands.

The basic framework: City management and development assistance

Given the structure of this book’s suggested approach to city management, the objective is to provide the physical, social, and environmental infrastructure to build economic, human, and environmental assets. The objective of development assistance is thus to assist urban stakeholders at both national and local levels to build these as efficiently, inclusively, and sustainably as possible.

What this means in practice will be discussed at length but it is important to realize that this framework provides the basis for measuring results—building and sustaining assets is something that can be quantified.

Overview of the context and institutional issues: The market

The preceding chapters have described the context, institutional issues, market constraints, and options for action within the urban sector. Successful actions will change institutions to improve market outcomes for nations in general and for the poor in particular. To do this, it is necessary to clearly understand the incentives operating for relevant actors in the markets concerned and to develop a road map of change to an end state where their incentives will be in line with the desired outcomes.

Any urban investment will occur in the context of a regulatory framework (usually government), and involve both service providers (public and private) and consumers. In seeking change, therefore, it is necessary to work together with government, the private sector, and the community. This is a political process and the role of the development assistance agency must necessarily be one of facilitator.
Development assistance can support government, communities, and enterprise but, corresponding to coordination/capacity building and financing constraints, the three areas to focus support on are knowledge sharing through funding, technical assistance and network support, and investment financing. The difficulty is that traditional forms of such support no longer fit the context of urbanization in Asia.

Decentralization is a key feature of Asian development. It provides a reason and mandate for new modes of engagement in the sector, reflecting new roles and types of clients. Devolution of the mandate to provide services to end users without devolving the corresponding financial resources, and/or without incentives to utilize potential funds efficiently, has created problems for effective delivery of services. With few exceptions, local governments are unable to finance the capital and recurrent expenditure costs of infrastructure services or to coordinate provision among multiple districts or municipalities. This has led to shortfalls in coverage, service levels, and quality that can only be addressed by improvements in capacity, financial structuring, and coordinating structures at the city level.

Where are funds for investment and capacity development to come from?

Justified by decentralization that usually involves formula grants from national revenue, national governments are increasingly reluctant to borrow on behalf of local governments that have difficulty disbursing funds because of implementation constraints. These governments face multiple calls on their investment funds and find it increasingly difficult to justify loan financing of investments in social services or in environmental infrastructure where the scope for cost recovery is limited.

Local governments are themselves also limited in their ability to mobilize additional funds for necessary investments. They face short-term limits so much of their planning is short term and they are reluctant to take on multiyear financing commitments. Many cannot access the local capital markets, let alone manage the foreign exchange risk of borrowing funds internationally. National financial institutions are, in any case, reluctant to commit long-term funds in a rapidly changing environment and the local private sector is suspicious of projects that necessarily have extensive government involvement.

Development assistance can help solve these problems, fostering better design of intergovernmental transfers and better local revenue mobilization. But the additional resources that result may remain insufficient to fund needed investments, given the fragmented nature of local government under decentralization. While external or nonfinancial benefits may justify many investments, they remain lower priority and, if Millennium Development Goal targets are to be met and if projects are to deliver environmental benefits, some component of development assistance—grant financing—will be necessary.

Why national capital markets are not the whole answer

National capital markets also face problems in financing the required citywide infrastructure networks and services with local currency financing at competitive rates and terms. There are large differences among national capital markets. These include the scope of institutions and competition among financial entities, the depth of wholesale markets, the regulatory systems, and liquidity. In some countries, such as India and the People’s Republic of China (PRC), significant local private funds are potentially available to fund investments. In other countries, this is not the case. In some, even central government resources are insufficient. But there
is potential for supporting local government funding systems or facilitating private sector financing of infrastructure. Both public and private sector institutions have been involved in government municipal development fund mechanisms, with Financiera de Desarrollo Territorial (FINDETER) in Colombia and private sector institutions like the Infrastructure Leasing and Finance Services Corporation in India providing successful examples. Both were initially supported by development assistance resources.

**New trends to keep an eye on**

A number of new trends should be taken into account:

- Subnational governments, including local governments and, sometimes, states and provinces show a growing capacity to undertake projects that are sustainable and pro-poor. So do nongovernment organizations (NGOs).
- Their capacity to handle complex projects and programs is still limited, however, and few appropriate international financing mechanisms are available to them.
- Countries are looking carefully at debt levels in relation to their exchange rates and the cost of servicing existing debt and issuing new debt. Some countries have strong anti-debt lobbies. Loans are no longer unquestioningly accepted.
- Local capital markets—India and the PRC, for example—are increasingly competitive, if lacking long-term financing capacity and wholesale markets.
- The increasing outreach of international private sector sovereign finance and structured subsovereign financing, both public and private, through specific legal and corporate entities, is both an opportunity and a potential problem. It may be more expensive but it does not saddle the recipient with conditionality issues. However, in structured lending, including build-operate-own, outreach tends to “cherry pick” and can sometimes be inappropriate.
- International NGOs have a growing role and impact. For example, World Vision disbursed over $4 billion in 2001. Much of this, admittedly, was bilateral assistance but the total was substantial nevertheless.

To break the gridlock of conflicting incentives and frustrated potentials, clear strategies need to be articulated for regulatory agencies and service providers and explained to the community. Appropriate enabling frameworks and incentive structures must then be established in the organizations and agencies involved. What are the ways in which development assistance can support these enabling frameworks and incentives?

**Urban development assistance: how effective is it?**

As a basis for the design of effective incentives, it is important to assess the performance of development assistance in the urban sector. This involves two key aspects: the process of engagement and the project design. These determine the ability to initiate change in incentives and their operation during change and in the sustained implementation of the project.

**Process issues**

Good practice in development assistance sees effective systems of planning engagement—road maps—and efficient mechanisms of implementing change—program design.

**“Road maps” for context**

Urban services projects have often proven difficult to formulate, structure, and implement because weak and changing institutional structures in responsible developing member countries (DMCs) restricted the ability of development assistance agencies to respond effectively. New financing modalities must react to such challenges by (i) providing flexible and responsive structures for programmatic and long-term financing; involving the private sector; (ii) strengthening institutions, enabling environments, and coordinating across jurisdictions; and (iii) providing for project revenue streams. The latter are usually subsidies that correspond to the presence of external environmental and/or social benefits that lack financial value. In these circumstances, successful practice has shown that it is important to have a
clear direction and context for action, both in the sector as a whole and at the city level. Such potentially unpopular activities as restructuring intergovernmental transfers for greater incentives for efficiency, raising needed property taxes, adopting required coordination mechanisms, and leveraging governmental resources through public-private partnerships (PPPs) all need to have a clear payoff.

To support effective change in institutions, the development community has undertaken up-front reviews of the sector through urban sector studies as well as comprehensive assessments of the needs of a city—for example, through city development studies. These assessments should provide the basis for removing key constraints to economic development and poverty reduction in cities. The actions and investments required to overcome these constraints need to be “owned” and prioritized, and the programs and projects structured organizationally, legally, and financially for implementation.

An example of such action at the city level was the medium-term plan developed by cities in Indonesia under the Integrated Urban Infrastructure Development Program (IUIDP) in the 1980s and 1990s. Although not based on comprehensive economic assessment of the cities, and often top-down in nature, the design of the process linking physical, institutional, and financial development was sound. Organizations involved in implementation need to have capacity developed for implementation, on both how to plan and sustain operation. Again, in specifically addressing this need, a local institutional development plan was developed under IUIDP and the approach was sound in principle. Associated revenue improvement action plans addressed the issue of financial sustainability. The challenge is to put these programs and plans together so that they are implemented and adequately resourced. During implementation, support should continue to ensure that long-term cultural change occurs in organizations. This never happened under IUIDP. At the city level, road maps are important too. These necessities should be stated in national road maps and incentives provided to undertake the process and see it through.

**In designing programs, there is a need for flexibility and responsiveness**

Experience shows that assistance can only be effective when led within donor agencies by representatives who are in close contact with clients—in-country, where possible. In the urban sector, engagement must respond to the needs of cities and other urban areas on a strategic and programmatic basis over the long term, and effectively address the need for institutional reform, and the mobilization of private sector equity and debt financing. When there are capacity and term constraints, procedures must be user-friendly and provide for timely delivery of technical and financial assistance. Further, these processes must ensure better integration between public and private sector activities in the sector with more flexible products to adapt to situations of rapid change.

In dealings with government, officers of development agencies designing programs must see ownership within the context of the real constraints that exist to swift institutional change. Rigid approaches to demonstrating ownership through financial contributions need to be rethought. For example, there has been discussion at some length in Part One about projects where it is impossible to value significant benefits. DMC governments often do not prioritize such projects because they cannot. These projects are certainly desirable but political considerations make impossible the use of government money on projects that do not derive monetary returns and/or benefit specific communities. Under these circumstances, the donor community needs to provide the resources that will allow decision makers to act outside the box. Ownership will remain crucial but not all the initiative can come from local sources because they are constrained by politics, lack of skills, and lack of mandate.

**Where to begin, and with what**

Various tools are available to support decision makers who will take the initiative in new areas. The use of grants to bridge between what is financially viable and what has to be subsidized is important. In particular, output-based aid (OBA) approaches show promise. In addition, PPP approaches, sometimes combined with output-based grants, have the potential to extend government resources, provided risk sharing and community expectations are managed well.

OBA approaches hold considerable promise in this regard and experience has been positive. OBA involves explicit subsidies that are, for the most part, paid to the service provider upon the delivery of an agreed service or output, such as a new connection to an electricity grid or water network. At the heart of OBA is assigning clear responsibility for achieving a defined output to an entity that is rewarded for achieving that output, usually by contracting out of service provision to a third party and transferring performance risk to this service provider. Also central to OBA is the bridging—at least partially, if not fully—of the financing gap between what poor households are willing and able to pay for basic services and the required cost-recovering user fees. OBA
Changing Structures for Inclusive Delivery of Infrastructure: The Community-Led Infrastructure Finance Facility (CLIFF)

The Community-Led Infrastructure Finance Facility (CLIFF) provides project loans and other support to organized communities so that they can access subsidies and borrow from formal finance institutions to scale up community-driven housing and infrastructure initiatives that benefit the urban poor. The CLIFF project is coordinated internationally by Homeless International and is being piloted in India and Kenya. It is funded, via the World Bank Cities Alliance program, by the United Kingdom’s Department for International Development (DFID) and Sweden International Development Agency (SIDA), which have committed 6.8 million pounds (£) and 20 million Swedish krona (£1.5 million equivalent), respectively. Homeless International is providing guarantee funds worth £600,000. Local capital has been provided by SPARC/Nirman in India (£1.2 million equivalent) and the Pajoma Trust in Kenya (£250,000 equivalent).

When CLIFF started in June 2002, nearly all the project financing required for the selected portfolio was provided from preexisting SPARC/Nirman funds or from CLIFF. However, by July 2005, one third of the financing required by the portfolio of projects supported by CLIFF was projected to come from banks, and virtually all the projected bank loans had been officially sanctioned. These loans are from Citibank, National Housing Bank, and ICICI Bank for the Rajiv Indira-Suryodaya, Bharat Janata, and Oshiwara II projects, respectively. It is important to note that all of them have required CLIFF guarantees in the range of 10–25%.


Making Water Affordable: Output-based Consumption Subsidies in Chile

Chile began reforming the provision of water and sanitation services in the late 1980s. It first commercialized provision in the late 1990s and then privatized most services. Before reform, tariffs were well below cost. After reform, despite substantial efficiency gains, concerns remained about the affordability of water and sanitation services. To guarantee adequate and affordable services for low-income households, Chile introduced individual means-tested water consumption subsidies in the early 1990s. Although the public authorities determine how the subsidy is applied, the now mostly private companies deliver the service under a scheme with built-in incentives to ensure cost-effective service delivery by the companies and low wastage by the customers.


can be implemented with private- or public-sector providers and may or may not involve donor-community assistance. In other words, the subsidy source need not be an international financing institution (IFI) but can be the government itself. The current challenge is to scale up these activities.

Fresh ideas, flexibility needed for project design

In terms of project design, ADB evaluations of multisector projects such as IUIDP have generally been positive. These projects have included roads, drainage, water supply, and slum upgrading. But new approaches are needed in the decentralized context, with more flexibility in choice of sectors, including, in particular urban transport, and in partners. Community-based approaches at the local level have also worked. One example is the community and local government support sector development program in Indonesia.200

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The key elements in successful project design are:

- Clear definition of, and agreement on, the roles of stakeholders, in particular, those of central and local governments.
- A balance between an integrated approach and the need to focus on the issues in a particular sector. This can best be achieved by focusing on a particular city and its institutions rather than on many sectors across multiple cities.
- Clear definition of the organizational and financial mechanisms through which stakeholders will interact with the project organization and with each other. This applies particularly to the mechanisms of participation and responsibility, especially for payment or other contributions, of the communities involved, and the rights and responsibilities of the private sector.

And so, urban programs have provided key lessons:

- Decentralization of responsibilities from central to local levels without decentralization of resources does not work.
- The project-by-project approach to infrastructure and services investment has not worked. Single-sector plans are inadequate for a city where sectoral interrelationships are complex and important.
- Centralization does not work and the public sector provision of urban services financed by taxation alone has not provided a satisfactory level of service. Direct cost recovery is needed.
- Market-oriented public agencies can deliver services effectively when, for example, user charges can be introduced, as in water supply. Conversely, private sector delivery of services that are difficult to price on usage may not always be efficient.
- Technocratic, expert solutions to urban management problems often fail because important stakeholders are excluded from the decision-making process. Involvement of political representatives, or use of other participatory approaches by which beneficiaries can express their views and choices, is necessary.

There are lessons in terms of the design of project finance:

- Sovereign loans are difficult to use under decentralization.

There is a central–local disconnect where local governments are considered to have resources and, in extreme cases, where national governments simply do not allow local governments to borrow.

- Loans denominated in a foreign currency are difficult for local governments and even for provincial or state governments to accept. National governments are accepting large “policy” loans constituting significant balance of payments support but the structural impact is limited without projects to make the policy changes real.
- Conditions attached to loans or to debt relief are difficult to monitor and enforce. Detailed monitoring of decentralized projects by development assistance agencies is unrealistically resource-intensive and should be structured so local stakeholders assume a much larger role.
- Feasibility studies and project preparation processes have been long and inflexible. In particular, the gap between identification of investment needs and detailed feasibility studies currently funded by the multilateral development banks (MDBs) where detailed project structuring is required is not resourced well enough.

In the design of PPP in projects, key lessons include the need to structure projects so that the following elements are in place:

- Clear political support for private sector involvement.
- Trust and confidence between the public and private sectors.
- Skilled public administrators who can plan, set up, and regulate PPPs, including establishing and defending economic pricing that will attract private sector involvement.
- Effective partnerships between competent international companies and local or regionally based companies.

Response to urban challenges

The development community can help in several ways to support the new approaches to urban management set out in the preceding chapters. The approach will require more emphasis on assessing national enabling frameworks in the sector. It will involve a more comprehensive view of a city, its role in the national economy, and the constraints to economic development and poverty alleviation. The investments required to overcome these restrictions need to be prioritized and the programs and projects structured organizationally, legally, and financially for implementation.
### Encouraging Public–Private Partnership: Meeting Water Needs in Viet Nam

Bringing in the private sector to provide water has been a contentious idea, largely because people consider water supply to be their natural right and something to be provided by government. In Viet Nam, the issue was further complicated. Given its history as a strongly centralized economy, would the private sector be willing or able to respond to new opportunities in water infrastructure? Pilot projects testing a new approach in two Vietnamese towns provide encouraging examples.

In 2002, the Public–Private Infrastructure Advisory Facility provided a technical assistance grant of $406,000 to pilot a new way of providing water to district towns. The aim was to test the viability of a new approach to delivering financially sustainable, customer-focused services. This was to be a demand-driven approach in which each community would determine the best way to deliver services for which its residents would be willing and able to pay. The services required were bundled into a single contract, a design, build-and-lease contract, and each community, along with the local authority and the provincial water company, were to take part in designing and implementing the scheme. The pilots have also produced early lessons with broader impact:

- When consulted on what they want and are willing to pay for, consumers are willing to pay prices for water that exceed current charges, especially when service quality will improve.
- The willingness and ability of the local private sector to participate in the bidding for the contracts confirm the local market’s appetite for such opportunities.

Still, it must be kept in mind that developing and implementing effective approaches to seeking private sector participation takes time. Support is required to build capacity in both the public and the private sectors. The commitment of time and other resources needed to ensure success should not be underestimated.

Source: Public-Private Infrastructure Advisory Facility’s (PPIAF) Gridlines. 2006.

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### Change

**Shotgun, scattered approach**
- Urban projects with small investments in many urban areas
- Limited knowledge dissemination and learning from experience
- No long-term engagement

**Focused support to improved city management**
- Finance model that encourages private resources and supports financing of public goods
- Capacities of staff and organizations built to match demands of global urban societies
- Coordinated knowledge management among development partners
- Active dissemination of knowledge by development community and partnerships/networks
- Long-term, coordinated assistance

Organizations involved in implementation need to have appropriate capacity developed to cover how to plan and sustainable operations. During operation, support needs to continue to ensure that long-term cultural change occurs in the organizations.

**Issues to address . . .**

The key performance issues for the international institutions supplying finance are the needs for: quick response, given limited life of administrations; flexibility in investment size, since small local governments cannot finance large investments; concessional finance, including grants, for financially nonviable, pro-poor or environmentally beneficial investments; and resources to structure the funding of a program of multisectoral investments that requires a mixture of public and private financing identified
by such processes as city development strategies and road maps.

... and issues that challenge support

The ability of MDBs to respond has been limited. The constraints on lending have included policy conditions, sovereign guarantee requirements, graduation policies, national government debt ceilings, difficulties in working with local financial institutions, difficulty in utilizing cofinancing effectively, and lack of local currency loans. Guarantee mechanisms have been of limited value to date. However, these constraints are gradually being lifted. Bilateral agencies are restricted in the levels of grant support they can use for investments. Other increasingly important actors are NGOs, private sector foundations, and networks of practice. To employ the strengths of these various types of donor agencies in the sector, there is a need to coordinate and maximize synergies among them and the modalities of assistance they offer.

How to coordinate and maximize synergies

The following table sets out strengths of the types of development agencies delivering assistance through three main support modalities—technical assistance, financial assistance, and network support.

<table>
<thead>
<tr>
<th>Agency type/action</th>
<th>Multilateral agencies</th>
<th>Bilateral agencies</th>
<th>Partnerships/associations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical assistance and capacity building</td>
<td>Highly specialist advisers</td>
<td>Prime actors</td>
<td>Dissemination of good practice and core competencies</td>
</tr>
<tr>
<td>Network support Knowledge dissemination</td>
<td>World/region-wide experience, good practice, new approaches, and technology</td>
<td>In country experience,</td>
<td>Dissemination of good practice</td>
</tr>
<tr>
<td></td>
<td></td>
<td>good practice, new approaches, and technology</td>
<td></td>
</tr>
<tr>
<td>Financial assistance</td>
<td>Loans and equity that support the new urban financing model</td>
<td>Grants to support improved city management, social, and environmental programs</td>
<td>Conducts of assistance and mobilization of community contributions.</td>
</tr>
</tbody>
</table>


Future assistance must focus on supporting practical improvements in the institutional and financial frameworks for urban infrastructure delivery, following the proposals in this book. This means concentrating on facilitating the creation of strategic development companies, guiding the preparation of city region development road maps and strategic plans, fostering supportive actions by national governments through country urban road maps, supporting the creation of SIOs to implement core investments identified in the road maps, and engaging in strategic partnerships with the donors and the private sector appropriate to structure projects. The Department for International Development (DFID) of the United Kingdom has piloted such modalities under the Private Infrastructure Development Group Initiative (see box next page).

In summary, the development assistance community will need to find ways of packaging projects within the context of coherent road maps.
Project Packaging: Project Development Facility (DevCo)

High up-front transaction costs, risks, and poor information are important factors in deterring the private sector from investing in the design of prospective infrastructure projects in developing countries, even though commercial companies undertake such designs in countries of the Organisation for Economic Co-operation and Development. As a result, there is a paucity of infrastructure projects structured in a way that is attractive to private sector involvement. To address this problem, the Private Infrastructure Development Group in 2003 augmented an existing project development facility operated by the International Finance Corporation (IFC) to give greater emphasis to the development of projects for private sector investment in the poorer developing countries. The resulting facility has been given the name DevCo. The Department for International Development (DFID) committed £6.8 million over 4 years to launch the facility. IFC is providing a contribution of $0.25 million per year, and Directorate-General for International Cooperation (DGIS) of the Netherlands allocated $1.0 million for 2004/05 and a similar allocation is anticipated to 2005/06.


Detailed responses

Extending the impact of donor activity requires coordinated approaches to the sector that take into account the comparative strengths of the actors involved, as discussed above. This begs the question of how to coordinate. There must be agreement on strategic issues in the sector, which must come from dialogue among donors, with inputs from client groups. Such an approach is proposed by Germany’s International Cooperation Ministry and ADB in the City Development Initiative for Asia (CDIA). At the national level, there needs to be a division of labor between donors and government.

Such an understanding should be based on national road maps, which, in turn, are based on sound sector analysis. The object of the road maps at a macro level will be to maximize the growth and poverty reduction impact of urban development. They will do this by creating enabling frameworks for leveraging national government and development assistance resources with local government, private sector, and community resources and action.

At the city level, coordination is again needed, and dialogue through networks of development partners can facilitate this. Importantly, the focus must be on the strategic. Sustainable provision of urban services needs to be undertaken within the context of sound economic, social, and environmental analysis. The basis will be analysis of the city economy and land markets, including the surrounding rural hinterland. The position of the poor and vulnerable in the economy also needs to be determined to plan and prioritize economic infrastructure. A clear assessment of priorities for managing environmental impacts, both in terms of city form and specific environmental-infrastructure interventions like sanitation.

Development assistance needs to provide incentives for the adoption of such approaches and the skills needed to foster their widespread use. Development assistance has three main

The City Development Initiative for Asia

ADB and the Federal Ministry for Economic Cooperation and Development, Germany established a City Development Initiative for Asia (CDIA). CDIA links interested cities to the resources they need in their development. These cities both provide the demand base of CDIA and participate in its management. The Initiative also strengthen sexisting city networks by cooperating with them in fostering urban management capacities.

CDIA provides technical support to cities in areas where funding resources are insufficient or lacking under current modes of development assistance. Since urban projects are multifaceted and multisectoral, activities have to focus on strengthening the enabling framework for the institutions involved.

Services of CDIA include:

- Advice on the implementation of existing development plans and strategies at local level with focus on urban environment.
- Capacity development of implementing local agencies.
- Support of knowledge management and dissemination of experience.
- Support of the development and implementation of national urban strategies and regulatory frameworks.

modalities to achieve this, as previously discussed—technical assistance, financial assistance, and network support. Key approaches in each area are set out below.

**Technical assistance: Making it work**

In any subsector of the urban agenda are a number of international and local experts who well understand the issues involved in the relevant markets and can design a better institutional system appropriate to the country in question. The challenge is to put the design into sustainable practice. This involves designing appropriate incentives and passing on knowledge of market operations that will be required to the stakeholders involved. Knowledge is more than information. It requires instilling in stakeholders an understanding of the need for, and the required workings of, an institution with which they are engaged, whether as an employee, a customer, or a community affected by its projects. This, in turn, means that stakeholders must be fully involved in the processes that impact them. Consequently, at least two areas need to be strengthened in terms of the delivery of development assistance: the participatory process of project preparation and initial operation—the latter is important as people do not really understand what the implications are until the new systems are put into practice, and the process of catalyzing and sustaining cultural change in organizations.

Some headway has been made in respect of participatory project preparation. Technical assistance project designs and budgets reflect the need for greater community involvement—for such things as community action plans. They also reflect the need to establish local ownership and buy-in by local governments—incorporating competitive bidding for participation in a project, for instance. But few programs and instruments incorporate the capacity to test investments. The Japan Fund for Poverty Reduction fills this gap.

**Find a foreign twin**

Less well addressed is the issue of sustaining cultural change. “Twinning” is one way. This is the partnering of an organization in a donor or comparator country with an organization undertaking similar activities in the recipient country. A twinning program is designed for long-term engagement and culture change. It will often be structured in two streams, one for management and specific tasks identified by the project, another to be used on approval of the donor to address project bottlenecks as they arise. In practice, this can be facilitated by framework contracts or much larger contingency sums.

Managing organizations engage consultants or twinned staff either to serve in the recipient’s establishment or to perform specific tasks as they do in their domestic operations. The contract should continue over the duration of the design, funding, construction, and initial period of operation of a major project.

In terms of project design, such activities should take place in the context of flexible contracts for support, allowing adjustment of support modalities and reallocation of budgets as needs emerge or priorities change. Such contracts must have strong monitoring, review, and redesign components as a structural part of their design.

**Financial assistance: finding the right combination**

The key issue involved in output-based approaches and PPP is the appropriate mix of loans and grants in any particular program or project. DMCs will, of course, prefer to maximize the grant component but what are the principles

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**Twinning in the Philippines**

Working at a macro level, a twinning program supported by World Bank between energy regulators in the Philippines and the United States helped the former improve energy efficiency while also protecting the environment. With help from Oregon’s Public Utility Commission, the Philippines Energy Regulatory Board developed a regulatory framework for the provision of energy-efficient and environmentally sound energy policies with a focus on demand-side management (DSM). The introduction of DSM practices was designed to realize a 1–3% savings in annual power demand. In addition to these energy savings and realization of environmental goals, staff competence was increased, as was long-term institutional efficiency and capacity. The twinning program was a cost-effective means of technical assistance with all vested interests, such as consumers, community-based organizations, nongovernment organizations, and energy producers, cooperating in the formulation of ground rules for the design of DSM programs. The strengths of twinning are found in the development of partnerships, training programs, skills transfer, and entrepreneurial development, as well as in the enhanced quality of life for residents through improved energy services and environmental improvement.

on which this mix must be determined in the urban sector? In general, the following issues should be considered in program and project design:

- Is the concerned service commercial in any way? If so, can private sector resources be used for all or part of the investments? If yes, how will the PPP be structured and how will the component of the program or project that will not be funded by the private sector be paid for? Depending on the sophistication and depth of the local capital markets and access to the instructional capital markets, there is a wide range of options for structuring the finance of private sector components.

- For a component not funded by the private sector, what is the amount that can be sustainably financed out of existing and potential national or local revenues? This can be used for debt service or for direct finance of investments. In terms of intergenerational equity, the more of an infrastructure project that can be financed at reasonable terms, in general, the better.

- Given debt service capacity, where should debt be sourced? The preference should always be the local capital markets, although these may need IFI intervention to extend their capacity or to better manage risk.

- Given the debt service capacity, what additional investment and capacity-building resources are required? These will need to be grant financed, the former through output-based approaches, the latter through grants that should, as far as possible, involve DMC agencies in selection and management.

To date, the bulk of development assistance finance has been channeled through MDBs such as ADB and the World Bank. These institutions have passed on finance to DMC governments overwhelmingly in the form of loans. Bilateral agencies have generally provided grants but the quantum has been relatively small, although programs are growing rapidly in some countries. Loans were provided to the central government, which would then pass them on to a national government executing agency as loans, grants, or a mix of loans and grants. Decentralization and the increasing capacity of local financial institutions make this modality less effective in a number of countries. Increasingly, the stakeholders in the process of official development finance are the local financial institutions as conduits for MDB loans; the government as regulator of the financial institutions and as conduit of grant assistance; and beneficiary communities, given the increasing emphasis on ensuring that they contribute to projects to improve ownership and foster sustainable operation and maintenance.

Better coordination mechanisms are required to apply the above principles systematically and assign responsibility for funding. The most appropriate way is through joint work on, and agreement to, the national road map and, in turn, on the local road maps.

**Program and project finance**

DMCs work toward improvements in many areas, including per capita income, financial strength, the capacity of the capital markets, and administrative capacity. Within countries, cities have a similar role. For program and project finance, the implication is that different approaches are needed in the two types of client city—one that has significant income, potential access to financial markets, and capacity, and is called a self-reliant city or city region, and another where some or all these features are missing. It is not possible to quantify criteria for the first type since these features vary across countries but the typology is valid. The second type can be called dependent cities. It will require a more inclusive, flexible, and responsive version of the current approach that is likely to be primarily national government-driven. These approaches need to be detailed in the national urban road map.

202 The same principles will apply to a project where the community is involved in financing—for example, slum upgrading.
203 This is important as existing revenue streams may be now here near potential streams.
204 Burdening the current generation with the whole of the cost of an investment, which will predominantly benefit future generations is inequitable.
205 Some loans to lower-income countries are highly concessional, for example, the International Development Association funds of the World Bank and the Asian Development Fund of ADB.
Self-reliant cities or city regions should decide priorities and approaches to project structuring together with local governments, communities, business, and supporting national government agencies. They should identify the projects, undertake the evaluation, and submit a proposal for funding in the same way they would to a private banking entity. The decision whether to approach the multilateral lending institution would naturally depend on how competitive the terms of lending were, the conditions to be satisfied, and what other benefits were associated with such financing. This would require change in the way the multilateral and bilateral lending and assistance programs operate and a new approach to marketing their products. In particular, it would require a much more inclusive attitude to cofinancing and partnerships with local financial institutions. In turn, this would entail restructuring operations to support the preparation of coherent investment programs and the appraisal and financing of projects originated by city governments, the private sector, and civil society. The European Investment Bank Group (see box) provides an example of an agency that has adapted to such an environment in Europe, structuring itself to address the diverse needs of subsovereign (local government) borrowers.

To enable such self-sufficient entities to finance the cost of feasibility studies, project preparation facilities should ideally be established in each DMC. These would fund the preparation of feasibility studies for potential investment projects. One example is the private sector participation facility for urban infrastructure in Indonesia (see box next page).

Such a facility could operate through or be accessed by a number of institutions to encourage competition and could be supported by bilateral or multilateral agencies, along with government and private funding. Facilities should be

European Investment Bank Group

Following the Lisbon European Council in March 2000, which called for increased support for operations to assist small and medium-sized enterprises (SMEs), the Board of Governors of the European Investment Bank (EIB) set up the EIB Group, consisting of the European Investment Bank and the European Investment Fund (EIF).

European Investment Bank

EIB, the financing institution of the European Union (EU), was created by the Treaty of Rome. Its shareholders are the member states of the EU. EIB has its own legal personality and financial autonomy. Its mission is to further the objectives of the EU by providing long-term finance for specific capital projects in keeping with strict banking practice. It finances capital projects in accordance with EU objectives. Outside the EU, EIB implements the financial components of agreements under European development aid and cooperation policies. The EIB activities cover: (i) individual loans (12–20 years) to public and private sector borrowers, including banks; (ii) loans through intermediary banks and financing institutions for new capital investment projects of local authorities or SMEs; (iii) venture capital, through funds and conditional and subordinated loans; and (iv) structured finance facility (SFF) to match types of funding to the requirements of high-risk projects and to pursue equity financing and guarantee operations in large-scale infrastructure projects.

European Investment Fund

EIF was set up in 1994 as a joint venture and currently is owned by EIB (59%), the European Commission (30%), and European banks and financial institutions (11%). Its main task is to provide venture capital and guarantees. Venture capital involves equity investments in venture capital funds and business incubators that support SMEs, particularly those that are at an early stage and technology-oriented. EIF operates on commercial terms. EIF works through financial intermediaries and is not involved in individual investment or credit decisions. For its venture capital and guarantee activity, EIF uses either its own funds or those available within the framework of mandates entrusted to it by EIB or the EU.

Source: www.eib.org
Infrastructure Project Development Facility (PDF) in Indonesia

ADB provided a $26.5 million loan co-financed by a $7.6 million grant from the Government of the Netherlands to help accelerate private sector participation in Indonesia’s infrastructure sectors. The establishment of the project development facility (PDF) aimed to alleviate one of the most critical constraints impeding infrastructure development, namely, the lack of adequate project preparation. PDF was intended to help the government prepare feasibility studies for national and decentralized public–private partnership (PPP) projects, adopt open and transparent bidding processes, and execute project transactions. Resources were to be allocated through a national component of the PDF, focusing on large national projects, and through a regional component of the PDF to support smaller decentralized projects of local governments. BAPPENAS (the National Planning Agency) is the executing agency for the project. The project’s three components were: (i) PPP project preparation and transaction execution to establish a national component of the PDF to fund the preparation and bidding of large-scale projects, mostly in power, toll roads, and transport; and a regional component of the PDF to work with local governments to fund the preparation and bidding of smaller decentralized regional infrastructure projects; (ii) technical advisory services to the PDF and capacity building for PPP project promotion and execution; and (iii) procurement and administrative services to support PDF operations.


Joint Assistance to Support Projects in European Regions (JASPERS)

JASPERS is an initiative of the European Investment Bank, European Commission (Regional Policy Directorate-General), and the European Bank for Reconstruction and Development. The facility assists beneficiary countries, principally the new member states and acceding countries of the European Union (EU) to prepare major infrastructure projects, which will be assisted by the EU Structural and Cohesion Funds, 2007–2013. Assistance is offered free and is given to prepare individual projects or programs that cover more than one subproject or more than one country. JASPERS is complementary to the project preparation work carried out by national and local authorities, and provides upstream technical expertise as required from the early stages of programming and preparation to the final decision to grant EU assistance. Priority areas include: Trans-European Networks (TENs); the transport sector outside of TENs, including rail, river, and sea transport; intermodal transport systems and their interoperability; management of road and air traffic; clean urban and public transport; the environment, including energy efficiency and renewable energy; and private–public partnerships.


Networking

Experience has shown that fostering appropriate national coalitions for clear urban policies and peer-to-peer learning is important. But it must focus on two different groups: politicians, and government regulatory and policy staff. In most countries, either group has the power to block or subvert change. While the legitimacy of some study tours is now rightly questioned, exposure to other organizational cultures and success stories is effective in fostering change. This is especially so if the exposure is to professional or political peers. US Asian Environmental Program runs two parallel tracks for these groups and brings them together in a “problem-solving and commitment” process. The Cities Alliance, while being more professionally oriented, also addresses this need. The opportunities for expanding such activities are limited—depending as they do on grant funds provided by development agencies that are less attracted to those activities, given their few tangible outputs and high overheads. Nevertheless, such activities, appropriately targeted and monitored, should be programmed into the country strategy for the urban sector.

Coordination and knowledge development among development assistance agencies

Knowledge must first be developed and disseminated within an organization before it can be shared with others.
To address coordination shortfalls:

- Finance city and city-region coordination structures, special purpose vehicles, and their activities in formulating strategies for sustainable development, in particular, structures that encourage and regulate public-private partnership investment required for urban infrastructure.
- Finance investment program/project development and SPVs in the context of a coherent strategy for sustainable development in urban areas.

To address financial structuring shortfalls:

- Focus on reducing the transactions costs of access to finance whether grant, or privately sourced.
- Develop appropriate financial products in particular:
  - Financial structures allowing the mix of grant, development financing institution loans/ equity, and private sources as appropriate to a project
  - Credit risk/enhancement products at subsovereign level
  - Foreign exchange risk mitigation techniques for subsovereign entities
  - The support/promotion of local capital markets in investment finance
  - The “securitization” and other mechanisms to promote “wholesale” transactions relating to infrastructure investment and the unbundling of financing to allow the most efficient use of funds throughout the life of an investment.

To address capacity shortfalls:

- Finance capacity development relating to the above areas.
- Finance networking among national urban agencies, cities, infrastructure financiers, suppliers, academics, and nongovernment organizations in support of the above.

In addition, national enabling frameworks for the above activities should be supported.

specific projects. The incentives for MDB and bilateral staff do not align with this imperative. The way forward is to work through such multidonor entities as the Cities Alliance and CDIA and to focus on practical programs and projects in national road maps, with central governments assigning parts of those programs to particular agencies.

Concluding thoughts
Fostering sustainable development for Asia’s cities is one of the most important tasks of the 21st century. Failure will impact not only the cities and countries in question but also the planet itself. This book has set out the principles for fostering such development. They are both known and achievable. But they do require new ways of coordination, new ways of financing the needed investments, and new skills for the urban managers of most Asian cities. New partnerships with the leaders of self-reliant cities and new support to dependent cities must be a priority for national governments, international and local financial institutions, and NGOs.

For development agencies there can be no more important objective than this. Failure will result in environmental depravation and social deprivation for billions. Taking the action required for coordination among agencies and for long-term engagement is the real test of the Paris Accords. It is the ultimate global public good.
### Appendix 1

#### Urbanization Trends in Asia and the Pacific, 1980-2030

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Millions</td>
<td>% of Total</td>
<td>Millions</td>
<td>Population as % of Total</td>
<td>Population as % of Total</td>
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<td>Asia</td>
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<td>6.33</td>
<td>20.9</td>
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<td>Indonesia</td>
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<td>479</td>
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<td>Lao People’s Democratic Republic</td>
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<td>0.1</td>
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<td>420</td>
<td>651</td>
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<td>Myanmar</td>
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**Note:** The table presents data on urbanization trends in Asia and the Pacific region from 1980 to 2030, with columns for the years 1980, 2005, and 2030, including population and population as a percentage of total population. The data includes various countries and their respective urbanization percentages.
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% = percent, — = data not available, ( ) = negative value, n/a = not applicable.

## Appendix 2

### Asia and the Pacific's Millionaire Cities in 2006 and their Projected Populations in 2020

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% = percent, ( ) = negative value, – = data not available.
Source: Base data from City Mayors website, 2006.
### Abbreviations

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<tr>
<th>Acronym</th>
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<tr>
<td>ADB</td>
<td>Asian Development Bank</td>
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<td>ASEAN</td>
<td>Association of Southeast Asian Nations</td>
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<td>BID</td>
<td>business improvement district</td>
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<td>BMA</td>
<td>Bangkok Metropolitan Authority</td>
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<td>BOOT</td>
<td>build-own-operate-transfer</td>
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<td>BOT</td>
<td>build-operate-transfer</td>
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<td>BPS</td>
<td>basis points</td>
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<td>BRT</td>
<td>bus rapid transit</td>
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<td>CB-AP</td>
<td>capacity building action plan</td>
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<td>CBD</td>
<td>central business district</td>
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<td>CBO</td>
<td>community-based organization</td>
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<td>CDD</td>
<td>community-driven development</td>
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<td>CDM</td>
<td>clean development mechanism</td>
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<td>CDO</td>
<td>collaterized debt obligation</td>
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<td>CDP</td>
<td>capacity development program</td>
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<td>capacity development strategy/city development strategy/credit debt swap</td>
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<td>disability-adjusted-life-years</td>
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<td>DBO</td>
<td>design-build-operate</td>
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<td>DCM</td>
<td>debt capital market</td>
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<td>DFID</td>
<td>Department for International Development</td>
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<td>DMC</td>
<td>developing member country</td>
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<td>DSM</td>
<td>demand-side management</td>
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<td>EIT</td>
<td>equity investment trust</td>
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<td>EMS</td>
<td>environmental management system</td>
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<td>EPF</td>
<td>Employees Provident Fund</td>
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<td>EPM</td>
<td>environmental planning and management</td>
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<td>EPR</td>
<td>extended producer responsibility</td>
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<td>EU</td>
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<td>FDI</td>
<td>foreign direct investment</td>
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<td>FSU</td>
<td>former Soviet Union</td>
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<td>GDP</td>
<td>gross domestic product</td>
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<td>GEF</td>
<td>Global Environment Facility</td>
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<td>GHG</td>
<td>greenhouse gas</td>
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<td>GNP</td>
<td>gross national product</td>
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<td>HDI</td>
<td>Human Development Index</td>
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<td>HIV</td>
<td>human immunodeficiency virus</td>
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<td>ICT</td>
<td>information and communication technology</td>
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<td>IUIdP</td>
<td>Integrated Urban Infrastructure Development Program</td>
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<td>IPCC</td>
<td>Intergovernmental Panel on Climate Change</td>
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<td>independent power producer</td>
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<td>LEED</td>
<td>Leadership in Energy and Environmental Design</td>
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<td>North American Free Trade Area</td>
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<td>NGO</td>
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<td>NMV</td>
<td>nonmotorized vehicle</td>
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<td>NPC</td>
<td>National People's Congress</td>
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NPV  net present value
O&M  operation and maintenance
OBA  output-based aid
ODA  official development assistance
OECD Organisation for Economic Co-operation and Development
OSS  one-stop shop
PDAM water companies in Indonesia
PPA  power purchase agreement
PPI  private participation in infrastructure
PDF  project development facility
PFI  private finance initiative
PRC  People's Republic of China
PSP  private sector participation
R&D  research and development
RDA  regional development account
RDP  Reconstruction and Development Programme
REI  Real Estate Indonesia
REIT  real estate equity-investment trust
SDO  structured debt obligation
SCP  Sustainable Cities Programme
SDC  strategic development company
SFF  structured finance facility
SLA  subsidiary loan agreement
SME  small or medium enterprise
SIO  special investment organization
SPC  special purpose corporation
SPU  strategy and policy unit
SPV  special purpose vehicle
SWM  solid waste management
SWOT strengths, weaknesses, opportunities, threats
TFC  term finance certificate
TWG  technical working group
UK  United Kingdom
ULB  urban local body
UN  United Nations
UNCHS United Nations Centre for Human Settlements
UNDP United Nations Development Programme
UNEP United Nations Environment Programme
UNIDO United Nations Industrial Development Organization
URC  urban regeneration company
US  United States
USAID  United States Agency for International Development
VAT  value-added tax
VOIP  voice over internet protocol
WHO  World Health Organization
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About Managing Asian Cities

The book gives an overview of the major issues confronting Asian cities as they strive to provide the services and investment needs of their citizens in a period of rapid change and new challenges such as climate change and economic restructuring. It also sets out practical examples of addressing challenges and taking advantage of the opportunities presented in today's Asia. These examples are drawn from a global review of good practice in sustainable economic, environmental, and social development in urban areas. Lessons were also drawn from case studies of the urban sector in the People's Republic of China, India, Pakistan, Philippines, and Thailand. Recommendations for improved urban management, focusing on better coordination and financing and capacity building systems, are given in a way that will assist urban professionals, city leaders, and policy makers to both see the "big picture" and get the detailed information they need on issues important for them.

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