

# Systems of Cities

Harnessing urbanization for growth and poverty alleviation



**THE WORLD BANK URBAN AND LOCAL GOVERNMENT STRATEGY**

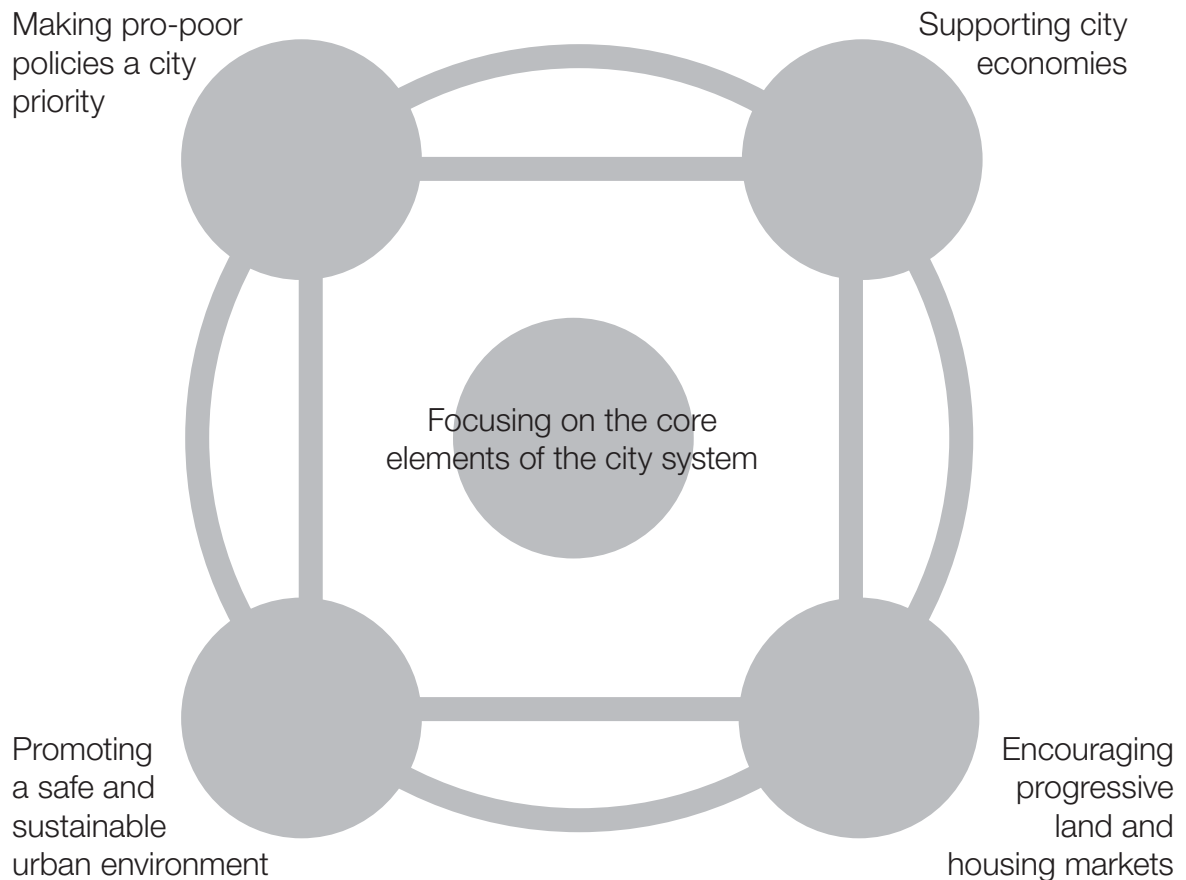


**THE WORLD BANK**

# Systems of Cities

## Integrating National and Local Policies

### Connecting Institutions and Infrastructure



The square in the circle is an iconic symbol of the ideal city, spanning cultures across the globe, from the Middle East to Asia, from Latin America to Africa and Europe. The square is a metaphor for the house, and the circle is the universe encompassing it.



# Foreword

From the earliest times, cities have been centers of democracy, creativity, and economic activity. Why? Economics and geography inform us that density and agglomeration are essential for productivity and growth. Cities also serve as catalysts for collective action, decision-making, and accountability.

The World Bank is putting forth its new Urban and Local Government Strategy at a critical time. For the first time in history more than half the world's people live in cities. Over 90 percent of urban growth is occurring in the developing world, adding an estimated 70 million new residents to urban areas each year. During the next two decades, the urban population of the world's two poorest regions—South Asia and Sub-Saharan Africa—is expected to double.

It is estimated that today one billion people live in urban slums in developing countries. Improvement in urban conditions, as demonstrated by many successful programs around the world, shows that slums can become vibrant and well integrated parts of a city, as in Senegal, Singapore, Thailand, and Vietnam.

The demands of poverty alleviation, climate change and sustainable growth will put today's developing cities to the test. An estimated 70 percent of greenhouse gas emissions come from cities and more than 70 percent of energy is consumed in urban areas. This places cities at the forefront of the climate change agenda where denser, more compact cities will be the essential urban form in the years ahead.

The new strategy also inaugurates the **Decade of the City**, a decade that will be remembered for recognizing cities at the core of growth and human development. Never before has there been so much interest in cities: city associations, citywide programs, city-university and private sector partnerships. In developing countries, cities often provide the first opportunity for elected officials to meet

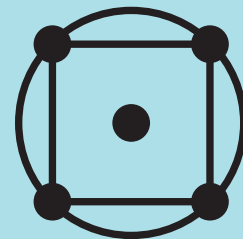
their constituents, governments to collect taxes, taxpayers to demand efficient services, investors to start new businesses. This is where collective voices are heard and accountability matters.

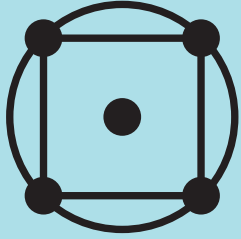
Successful cities change their ways, improve their finances, attract private investors, and take care of the poor. The new Urban and Local Government Strategy will help governments at all levels make cities more equitable, efficient, sustainable, and environmentally friendly. The strategy draws on two principles. First, that density, agglomeration, and proximity are fundamental to human advancement, economic productivity, and social equity. Second, that cities need to be well managed and sustainable.

The strategy unfolds along five business lines: (1) city management, governance, and finance, (2) urban poverty, (3) cities and economic growth, (4) city planning, land, and housing, and (5) urban environment and climate change. These set out the objectives and benchmarks for the Bank to monitor its financing and policy advice. Most of our clients still face an immense lack of resources, and it will take some time until all the poor will be fully integrated in the city tissue. For this reason, the new strategy calls for a broader-based, scaled-up approach to urban poverty, focusing more than ever on policies and actions that can create livable cities.

The World Bank's new Urban & Local Government Strategy aims to be a key element in helping civic leaders and national authorities think through, and implement, policies and programs for the benefit of their people, their cities, and their countries. I hope you will take a moment to look through this strategy and learn how we hope to make a difference.

*Katherine Sierra*  
Vice-President, Sustainable Development





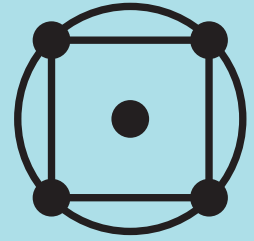
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# The new Urban Strategy



*Urbanization is a defining phenomenon of this century, and the developing world is the locus of this demographic transformation. Nearly two billion new urban residents are expected in the next 20 years, and the urban populations of South Asia and Africa are likely to double. Much of the growth will be in small and medium-sized cities; even today more than half the world's urban population resides in cities smaller than 500,000. This raises questions about managing urbanization and delivering World Bank assistance for urban development in the coming decade.*

With cities accounting for some 70 percent of global GDP, recent economic thinking is reshaping the Bank's approach to urbanization. A new paradigm, supported by a growing literature, underscores the benefits of urbanization, driven by rising productivity, fluid labor markets, and greater market access. For many today, the question is not how to contain urbanization—it is how to prepare for it, reaping the benefits of economic growth associated with urbanization while reducing congestion, crime, informality, and slums. Urbanization, if properly managed, can also address the climate change agenda through the design of denser, more compact cities that increase energy efficiency and reduce travel time and costs for urban residents and businesses.

The main messages informing the World Bank's new Urban and Local Government Strategy:

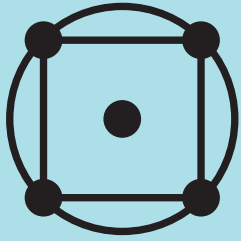
- Urbanization is too important to be left to cities alone—it requires national attention to critical policy areas, such as land and housing markets, that fall beyond the purview of a single city administration.
- Cities will need to be equipped to handle new residents—this will require being more proactive, for instance, in updating

their urban planning regulations to enable density and to prevent demand pressures for scarce housing and land to bid up prices excessively.

- The costs of not dealing now with the coming urban growth will be excessive and difficult to reverse.
- Actively fostering agglomeration's benefits and managing congestion will have big payoffs for economic growth and poverty reduction.
- To reach the increasing number of secondary cities, where much urban growth is happening today, the Bank will expand on its wholesaling approaches by working through financial intermediaries and by developing national and state programs that retail financial services and technical support to local governments.

The new Urban Strategy realigns the Bank's urban business with five business lines considered critical for cities and local governments in the decade ahead:

- Focusing on the core elements of the city system: City management, finance, and governance
- Making pro-poor policies a city priority: Reducing urban poverty and upgrading slums
- Supporting city economies: Cities and economic growth
- Encouraging progressive urban land and housing markets: Urban land, housing, and planning
- Promoting a safe and sustainable urban environment: Urban environment, climate change, and disaster management.



# A system of cities—driving growth, reducing poverty

*Urbanization in the developing world was once considered too fast and unmanageable, something to be resisted and controlled. Efforts by many national, state, and local governments have been devoted to curbing it. Indeed, this thinking represents the old paradigm. Many policymakers now recognize that urbanization is not only inevitable—it is also a powerful force for economic growth and poverty reduction. This new paradigm is grounded in the notion that density—and the urbanization that drives it—is essential to achieving agglomeration economies and productivity gains. Function, not size, is the metric for measuring a city's performance. So, how can urbanization be managed to harness its potential for economic development?*

*World Development Report 2009: Reshaping Economic Geography* identifies higher densities, shorter distances, and lower divisions as the building blocks for economic success. It also points out that no country has grown to middle-income status without industrializing and urbanizing. Building on these messages, the Bank's new urban strategy is based on facilitating spatial efficiency in production while addressing congestion and internal divisions within urban areas (box 1). The focus is on harnessing the potential of urbanization to deliver equitable and inclusive growth and poverty alleviation.

Policy discussions should start with the institutions and instruments that can promote



## **Box 1. Systems of city clusters**

China's current 11th Five-Year Plan (2006–2010) is encouraging city clusters to become the main form of urbanization. These clusters are designed to improve connectivity between large, medium, and small cities, each forming a city system.

China's encouragement of these city systems is motivated by the development paths of its two economic powerhouses: the Pearl River Delta and the Yangtze River Delta. The Pearl River Delta, encompassing Guangzhou, Shenzhen, Dongguan, Foshan, and other cities, is home to 2.2 percent of China's population, but accounts for 10.3 percent of GDP. The Yangtze River Delta, encompassing Shanghai, Suzhou, Hangzhou, Nanjing and other cities, has only 6.7 percent of China's population and accounts for 15.7 percent of China's GDP. Why are these places successful?

Much of their success builds on exploiting economies of scale, along with agglomeration economies from intraindustry and interindustry interactions. In the words of the CEO of one of the Pearl River Delta's largest electronics manufacturers, "The materials and components that we use in our 49 production lines today

arrive daily from suppliers in the zone by a route that generally takes not more than one hour. In practice, we are a single vast factory scattered across the territory. The existence in a relatively small area of everything we need to make the whole range of audio products is the region's strong point. In other places the cost of labor may actually be lower, but around their factory there is nothing else."

Improving the fluidity of markets for land, labour and products hold the key for successful urbanization—it allows the same parcel of land to accommodate higher value production, helps connect poor people with economic opportunities, and lowers transport costs to facilitate economies of scale and specialization. In fact, integrating the institutions that govern the transfer and use of agrarian and urban land is likely to yield high payoffs in economic prosperity and harmonious development.

Consider Hunan Province, where the cities of Changsha, Zhuzhou, and Xiangtan are cooperating to build expressways and railways, improving connectivity among three cities and with their hinterland. A regional cooperation plan specifies that market prices will allocate land for different uses and promote land intensification in central city areas.

economic density and manage social and environmental costs.

As countries develop and economies grow, some places “take off,” with rising economic densities that attract people to live in or near towns and cities. The urban share of the population rises sharply—from about 10 percent to 50 percent—as countries grow from low incomes to lower middle incomes of about \$3,500.

Between 2000 and 2005, the average urban population growth for low-income countries was 3 percent a year, more than twice the rate for middle-income countries and more than three times that for high-income countries. This spatial transformation is closely related to the sectoral transformation of countries from agrarian to industrial and then to postindustrial economies, helped by a healthy farm sector.

When agriculture is doing well, people who move are “pulled” by prospects of a better life in cities—not “pushed” from rural areas. Not only does this make them better off, it also improves the conditions in villages they leave and increases the productivity of cities where they settle.

What are the policy priorities for successful urbanization?

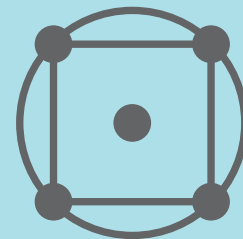
Urbanization policies should focus on increasing the efficiency of the transformation from a rural to an urban economy, in the process balancing agglomeration benefits and congestion costs from concentration. The most important market failures to be addressed are those associated with land markets. Increasing the spatial efficiency of production is inherently linked to how the use of the same piece of land changes to accommodate economic density. For places with incipient urbanization, it becomes important that land is registered and property rights are allocated and protected. The national institutions responsible for

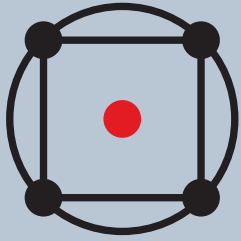
## **Box 2. New diagnostic frameworks to support national urban strategies**

Planning urbanization will require national urban strategies supported by new diagnostic frameworks. The Bank will assist countries in responding to urbanization pressures by piloting a new diagnostic framework and analytical tool. The Urbanization Review will be a client-driven instrument to examine demographic trends nationally and within critical urban agglomerations. It will look at impacts on land and housing availability and affordability. It will also look at mobility and access to jobs and critical infrastructure services. It will monitor the urban-rural spatial transformations. The Urbanization Review will inform country assistance strategy formulation with appropriate policy and institutional responses in countries where rapid urbanization requires a strategic plan.

administering land rights should be spatially neutral—not distinguishing whether a place is rural or urban. In places with low urban shares, assigning property rights will provide incentives to farmers for specializing in higher value crop production or making the land available for urban uses.

Urbanization is not a challenge exclusively for cities, so addressing the new urban agenda will require much closer collaboration across all tiers of government. To be effective, developing countries will need efficient, multitiered policy coordination mechanisms to support policy formulation and coordinated interventions between national and local governments. Metropolitan and regional agencies may be necessary where there is a mismatch between municipal boundaries and the urban economic footprint in order to deliver services more effectively and to promote economic growth.





# Focusing on the core elements of the city system

*This business line assists cities and local governments in planning and financing service delivery, strengthening urban governance, and making city management more effective. Over the past decade, decentralization has devolved more authority to local governments, without the corresponding and necessary fiscal decentralization. This business line aims to support updating legal and regulatory frameworks, building sound accountability mechanisms for local governments and utilities, and promoting a mix of financing strategies by segmenting local governments into those that can access market-based finance and those that will need technical assistance and performance incentives to access the market. These measures will be underpinned with improved local revenue mobilization, data collection, and monitoring at the city level.*



Understanding urban development through a city system approach departs from previous strategies. Like all systems, a city depends on the smooth functioning of its constituent elements. Under the new Urban Strategy, the focus is on the core elements of the city system—management, finance, and governance. These three core elements need to function well for a city to deliver on its mandate, including the delivery of vital services to the urban poor.

Good management and information systems, coupled with good leadership, can be ineffective if not supported by adequate financing. Similarly, a city without a commitment to good governance and accountability will have difficulty mobilizing tax revenue from its citizens and financing from the market. These core elements of the city system remain the most basic and important focus in the decade ahead.

City management, finance, and governance are at the core of the Bank's urban business lines. It comprises the largest number of projects and the highest lending volume. All other business lines in one way or another depend

on these core elements of the city system to function effectively (box 3).

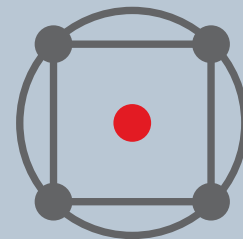
## City management

If urbanization is to be harnessed for its potential to deliver growth and improved livelihoods for urban residents, cities and local governments need to be positioned to exploit that potential. Yet a recurring theme across most of the developing world is the ambiguity and confusion over the roles and mandates of national, state, and local government actors in delivering services at the local level.

Great strides have been made in recent years in devolving authority to the local governments, as countries have increasingly pursued decentralization. For many, however, this process has been characterized by mixed signals, inconsistent legal and regulatory frameworks, and wide discrepancies between assigned and actual responsibility for delivering services. This is often the result of a mismatch between expenditure and revenue assignments, conflicting mandates between national, state and local actors, and uneven capacity across local governments.

**Professional development.** Capacity building to improve local government management is essential. But it needs to go beyond the provision of training to include reforms that change the “rules of the game,” using incentives and rule-based policy frameworks. Providing resources to the local government tier on a performance basis can instill a sense of competition for resources and act as an incentive to reform. These reform measures could range from financial management, accountability, local revenue collection, economic performance, and a host of other areas.

Other methods that have proven successful are professional certification programs for municipal staff that elevate, professionalize, and promote their development. The key is to design a system that recognizes heterogeneity across the local government



### Box 3. Giving Ugandan local governments power over purse strings

In the mid-1990s, Uganda's overburdened central government implemented reforms to decentralize service delivery—to give local authorities more power to deliver basic services. Local control is preferable. Compared with regional ministers, local staff can better target needs and make sure funds are delivered more efficiently.

But for this to work, local governments needed an overhaul: training, better accountability, more participatory decisionmaking, and robust oversight.

To this end, the World Bank provided financial support to streamline the transfer of development funds from the central to local governments, boosting local capacity. The first project, the Local Government Development Program, helped develop software for monitoring funding allocations and was supported by \$80.9m in World Bank funding and \$9m from the Ugandan national government and participating local governments.

A second complementary program supported similar efforts with additional attention to building local government capacity. The World Bank provided a \$75m grant and \$50m in additional credit toward this effort. Other governments joined: Danish International Assistance provided \$2.4m, Austria \$0.3m, and the Netherlands \$7.5m.

Local authorities thrived with the injection of financing and expertise, letting them better monitor budget performance and resource allocation. By 2007, revenue bases in some cases increased by 20% or more. And all major local governments had three-year development plans and were submitting accounts to the Ugandan auditing office on time.

With a renewed focus on strengthening the policy and institutional capacity of local government, the central government has institutionalized new training schemes. And thanks to World Bank advice and technical assistance, Uganda now has a bevy of accredited public and private training service providers that competitively bid for government contracts.

sector and provides an equitable basis for local governments of all sizes and capacities to participate. Block grants linked to performance criteria are one way of providing such assistance.

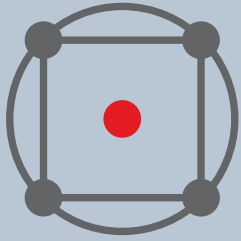
**Benchmarking performance.** Helping cities strengthen data collection and management systems will be a key focus of urban development support in the decade ahead. The new Global City Indicators Program, established by the Bank with other development partners, is envisaged as a facility that will help in that regard. The program, driven by cities, aims to provide a standard set of indicators that will enable cities to compare and benchmark their performance against their peers. Using a web-based platform, the program provides a framework for cities to learn through peer networks of other cities, in their preferred mode. It is now rolling out to all

regions, working through the Bank's regional urban hubs in Marseille and Singapore and with other regional partners.

**Community engagement.** Building on successful local government and community-based organization partnerships, the Bank will share good practices and promote programs that improve community engagement in addressing urban poverty, crime, and violence. For instance, practical measures supported through investment projects could include improving street lighting and renovating dilapidated public buildings or facilities to assist in bringing down crime and violence.

**Technology.** The Bank will also assist clients in accessing the benefits of information and communication technology advances and support judicious efforts to promote the use of new technologies by cities where there is





demand. Advisory support in this domain can help cities improve service delivery, enhance productivity, reduce costs, and increase local revenues. The Bank will support this effort by preparing an Urban ICT Toolkit that will outline key program and policy areas for ICT integration to support cities and bring good practices from around the world.

### **Infrastructure service delivery**

Urban transport infrastructure and services are the backbone of an efficient city system. Rapidly growing urban populations and rising numbers of private vehicles are overwhelming many cities, resulting in increased congestion, less mobility, more accidents, and poor air quality. Responses to these intraurban challenges include an emphasis on coordinating land use planning and transportation and promoting affordable public transport, with incentives for proper maintenance. Urban-rural and interregional linkages are also important in enabling a city system to function beyond the city core through connective infrastructure.

Another critical issue is the inadequate provision of basic infrastructure—water and sanitation, waste disposal, and power—to urban residents. More than 50 percent of the urban population in South Asia and 40 percent in Sub-Saharan Africa lacks access to sanitation services.

These deficiencies have real economic consequences. In Latin American cities, poor or inadequate infrastructure is estimated to have reduced urban economic output by 10 to 15 percent. The impact seems to be even higher on small firms and home-based enterprises, which cannot afford more reliable private sources, such as power generators and wells for water.

In countries with severe infrastructure service gaps and backlogs, the Bank will assist by supporting inventories of these backlogs, along with support to local governments in conducting economic analysis and investment planning

to strengthen service delivery. This support will be provided in preinvestment planning within the city development strategy framework and help to develop bankable investment projects with associated budgeting for recurrent operating and maintenance costs.

### **Urban governance**

The governance agenda is expanding in urban operations, and over the last six years there has been a 60 percent increase in the lending and capacity building assistance for urban governance. But much of this support has been focused on supply-side dimensions, including improvements in systems and internal capacity, with less emphasis on demand-side governance, including participation in budgeting and investment planning and increasing the voice of citizens on service delivery.

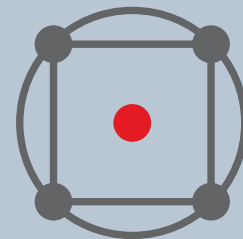
Participatory budgeting approaches in project design can often slow implementation of investments. Going forward, such participatory approaches, vital to ensuring effectiveness and impact, should be introduced in the preinvestment phase of the project cycle and benefit from city development strategies and other participatory upstream instruments.

The new Strategy emphasizes expanding demand-side governance approaches. These interventions will include provision of policy guidance and sharing good practices in the implementation of service delivery surveys and citizen report cards. Of critical importance will be mainstreaming these practices in the ways cities and local governments routinely conduct their business, emphasizing a client-driven, end-user orientation in service provision.

### **Municipal finance**

National governments typically have devolved service delivery and expenditure responsibilities to the local level but have retained control over significant revenue sources. Central governments have tended to maintain decisionmaking





power over taxes that can be levied locally, the tax rates, and user service fees that local authorities can charge for basic service delivery. But local governments seldom tap the full range of local revenue sources available to them, collecting only a fraction of the revenues legally due under the taxing arrangements in place. As a result, most local governments have a narrow fiscal base, with sharply limited discretion over own-source revenues. Even when local authorities have the legal authority to mobilize own-source revenues, they have been reluctant to fully exercise it.

**Untied revenue-sharing.** Clearly defined, untied revenue-sharing between central and local governments can yield local government receipts that are transparent legal entitlements. This will allow local governments to allocate the revenues received to expenditure priorities at their discretion. They would share the revenues of buoyant tax sources, like the VAT or income tax, that require uniform national administration, while retaining decision-making power over the uses of funds.

The Bank has assisted governments in rationalizing intergovernmental transfer arrangements. Bank advisory support will continue to focus on greater use of untied revenue-sharing and of performance grants or municipal contracts that reward local governments for specifically defined improvements in local service delivery and management.

**Subnational finance.** In the next few years, public institutions are likely to fill much of the subnational credit gap, just as international institutions fill part of the national credit gap. This will create an opportunity for innovative design in using public institutions to help channel private savings to the subnational market, without displacing private institutions already active in the market.

More effort is needed to structure and segment the municipal market into ones that

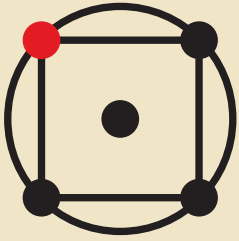
can access commercial credit and those that may need subsidies. In this area, Bank urban teams will work with IFC colleagues in the Subnational Finance Program to develop instruments that enable market segmentation, removing subsidies to local governments that can access finance, while providing technical assistance and support to those that have not yet reached this stage.

**Performance grants and municipal contracts.** Where local governments have not yet reached credit-worthy status, performance grants and municipal contracts can provide incentives for reform and capacity strengthening. Performance benchmarks may include such items as timely preparation of budgets and financial reports, greater citizen participation in setting budget priorities, better maintenance of infrastructure assets, and measurable improvement in local service quality or coverage. Local governments that perform well or meet the contractual standard are rewarded with additional grant funds. Poor performers in principle should be penalized by a reduction in transfers.

**Blending financial instruments.** A flexible blend of financing instruments will address a wide array of different circumstances. Wholesaling will be applied to expand reach and coverage to the growing populations in secondary cities. Intergovernmental transfers can serve as an on-granting mechanism to local governments that are not creditworthy within a specified reform program. Funds channeled through financial intermediaries will be based on market principles. Market-based financing to local governments can be extended through the Subnational Finance Program, accompanied by efforts to develop the market for financial services, removing legal and regulatory obstacles, developing local currency instruments and risk-sharing and guarantee instruments to facilitate local and international financial collaboration.



# Making pro-poor policies a city priority



*Narrowly focused neighborhood slum upgrading interventions, while generally effective, have fallen well short of addressing the magnitude and scope of expanding informality and slums. In addition to pursuing sound macroeconomic policies aimed at enhancing growth, cities need to be better equipped to address urban poverty. This business line aims to support cities and national governments in addressing urban poverty by expanding policy-based interventions and scaling up investments in services for the poor citywide and nationwide. It will be underpinned by urban poverty analysis to guide policy decisions. Partnerships will be encouraged with nongovernment organizations, community-based organizations, and the private sector.*

Many of today's urban poor in developing countries live in remote locations due to the high cost of housing in the city core. Living in peripheral urban locations, particularly without adequate access to transport services, can mean exclusion from a range of urban facilities, services, and jobs. In many areas, neighborhood stigma, which can reduce peoples' access to jobs and increase other types of discrimination, is also a major constraint for the poor.

Several countries with national approaches to slums have reduced or stabilized slum growth in the last 15 years. In Brazil, Colombia, Mexico, South Africa, Thailand, and Tunisia, political commitment at the central government level has led to large-scale slum upgrading and service provision for the poor through legal and regulatory reform on land policy, regularization programs, and inclusive policies.

Among programs aimed at the urban poor, slum upgrading is probably the most common. Slum upgrading programs have a long history, becoming quite popular in the 1970s with a shift away in the mid-1980s. This shift has been attributed to donors' focus on housing finance, adjustment loans, and public service privatization.

Local initiatives have also been effective when linked to social programs and carried out in partnership with local community organizations. For example, programs in Jamaica and Brazil combine microfinance, land tenure, crime and violence prevention, investments in social infrastructure for day care, youth training, and health care with local community action and physical upgrading of slums.

There is also an emerging role for the private sector in slum upgrading as businesses realize the potential purchasing power at the base of the economic pyramid. An enabling environment for small private service providers can help to facilitate private sector investments in slums. Microfinance has been demonstrated to be a powerful instrument for poverty reduction that enables the poor to build assets, increase incomes, and reduce their vulnerability to economic stress. Policy-based lending aimed at better targeting of subsidies to the poor while enhancing access to mortgage finance for middle-income groups have had positive impacts for the urban poor—and for housing outcomes more generally—in Brazil, India, and Mexico.

**Broad-based policies.** Urban poverty reduction strategies will take a two-pronged approach. First, they should include proactive policies that promote macroeconomic stability and growth, well defined property rights, a good investment climate, an attractive incentive framework, functioning land and labor markets, and investments in education and infrastructure. In many countries, urbanization has helped to foster this growth and thus can reduce urban poverty over the long term, providing new income opportunities for rural migrants, and through the second-round impact on those who stay in rural areas.

**Scaling up services.** The second approach, equally vital, involves working with countries to scale up slum upgrading and services for the poor to a national scale. Programs improving living conditions in slums through extending affordable services to slum dwellers and investing in upgrading can have



#### **Box 4. Millennium Development Goal for slum improvement**

Millennium Development Goal 7 sets the objective for urban poverty alleviation by calling for the improvement of the lives of at least 100 million slum dwellers. Estimates suggest that around one-third of the urban population in developing countries—nearly one billion people—are living in slums. Slums are generally characterized as informal settlements with poor quality housing, limited access to services, high densities, and insecure land tenure. Insecure tenure puts the urban poor at constant risk of eviction, prevents them from building assets and accessing credit, inhibits using one's home for income-generating activities, and does not allow for investments in service provision. Countries farthest from reaching the MDG target on slums are mainly in Sub-Saharan Africa, where urbanization is rapid and local governments lack the capacity to accommodate new residents.

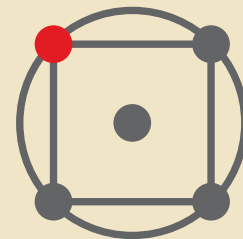
enormous benefits in health outcomes, help cities to adapt to the risks of climate change, reduce environmental and social costs, and generate new employment opportunities. Innovative approaches now provide important opportunities to improve service provision, such as delivering output-based aid, offering pro-poor incentives to utilities and the private sector, and creating an enabling environment for small private service providers while ensuring quality and affordability for consumers.

Going forward, the Bank is partnering with the Cities Alliance in exploring ways of scaling up to national approaches. In this context, the Bank aims to develop more policy-based approaches that will tackle the difficult issues related to land and service delivery in informal settlements. This will pave the way for a more comprehensive approach to upgrading at the national level.

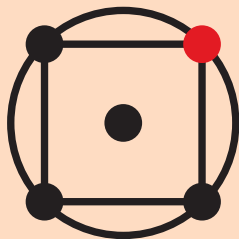
**Filling knowledge gaps.** Increasing support for analytical and diagnostic work on urban poverty will help fill knowledge gaps and provide the basis for better designed programs and policies. While the past decade has generated substantial new information on the characteristics of urban poverty, there are still major knowledge gaps. Cities often lack the tools to diagnose urban poverty and assess the extent to which their policies are pro-poor. Many cities lack even the most basic information on who the poor are, how many there are, and where they are located.

**Putting the poor on the map.** Building an information base at the city, country, regional, and global levels, as well as the capacity to use the information, is a top priority. New tools such as geographic information systems and poverty mapping are important instruments for urban poverty analysis. New analytical tools, such as the Vulnerability Assessment, are being developed to support cities in their efforts to collect and analyze data. The Assessment is designed to survey and analyze the vulnerability of populations in urban areas based on their multiple deprivations, as well as the risks to climate change impacts due to their precarious location in informal settlements. It will include a mapping of slums and vulnerable populations as a basis for targeting assistance to the urban poor.

**Safety nets.** Specifically designed social programs and safety nets for the urban poor need strengthening. Conditional cash transfers are particularly relevant in times of financial crisis when poor families may deem it necessary to withdraw children from school to seek employment. Workfare programs or labor intensive public works projects can also be very effective in urban areas to provide income support and short-term work opportunities, offer on-the-job training for unskilled workers, and construct or rehabilitate needed public infrastructure. To maximize the impacts on the urban poor, works can be carried out in low-income settlements, hiring local residents for slum upgrading activities.



# Supporting city economies



*With cities as the engines of economic growth, this business line outlines a range of strategies cities can pursue to drive growth. They include improving the sub-national investment climate, increasing competitiveness, and partnering with the private sector. Cities can also develop cultural heritage assets linked to sustainable tourism development and, in postindustrial cities, use brownfield redevelopment and urban revitalization to transform idle land and property into productive re-uses. New tools are also being tested to help cities develop market intelligence to attract new retail investment, financial services, and real estate developers to underserved inner-city areas.*

One of the main insights from economic thinking on geography and economic development is that firms in many industrial and business service industries value agglomeration. They prefer to concentrate close to other firms in the same or related product lines, and in locations with good access to domestic and international markets. This economic concentration accelerates when countries liberalize and open to trade.

In India, liberalization in the early 1990s led to greater concentration of industry in port cities and metropolitan areas. Recent evidence suggests that just 20 cities—with good market access—accounted for some 60 percent of private manufacturing investment in India between 2000 and 2005. Similarly in China, foreign firms entering after the “open door” policy in 1978 have preferred to locate in cities with a large industrial base and a history of foreign investment.

The benefits of agglomeration have been well documented in China, Japan, Korea, and Malaysia. China is perhaps most revealing, with 50 percent of GDP generated in coastal urban agglomerations accounting for only 20 percent of the territory. Many of the Bank’s clients have cities that would like to emulate China’s experience, and local economic development approaches are in high demand.

What are the priorities for urbanization policies in cities and towns in intermediate and advanced stages of urbanization?

In addition to facilitating density is ensuring that urban settlements are well connected to each other to gain from complementarities in their production structures. Market towns facilitate internal scale economies for firms, while also serving as conduits for marketing and distributing agricultural produce. Medium-size cities provide localization economies for manufacturing industries—benefits that come from the co-location of manufacturers within one or two industries that can benefit from supply chain linkages. And the largest cities provide urbanization economies, characterized by diverse facilities that foster innovation in business, government, and education services.

As demand for land bids up prices in metropolises, investors make decisions on relocating businesses—weighing the costs of wages, rents, and congestion with the benefits of agglomeration. It is common for manufacturing activities to deconcentrate from city centers to their surrounding suburbs—but not for services.

The stock and quality of electricity networks, road and other transportation systems, and telecommunication systems matter most for national growth. In India, the quality of transport interconnectedness between cities is closely related to urban growth and urban productivity. Further evidence shows that improving urban airport accessibility and size in countries such as Uzbekistan and Honduras can reduce total air transport costs by 10 percent.

Similarly, improving urban seaport efficiency, port infrastructure, and handling can reduce shipping costs by more than 12 percent. In international trade, this is equivalent to reducing the distance between origin and destination by 500 miles. These findings stand up in other sectors of economic infrastructure and in other regions. In Sub-Saharan Africa, power failures in Tanzania account for the



equivalent of a 10 percent sales loss for the median manufacturing firm.

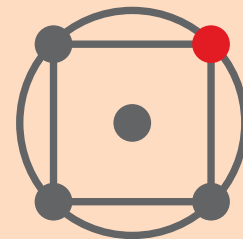
The operating scale of urban and metropolitan economies often does not coincide with their physical and administrative boundaries. In many countries, no institutional entity covers the economic footprint of the urban or metropolitan economy. So, decisions on infrastructure investments and its financing are made through complex (and inefficient) negotiations between central government, often multiple municipalities, regional or state authorities, and the private sector. A critical part of the new urban strategy involves filling this void, with support for both infrastructure decision-making and its financing.

**Fostering cities as gateways.** At the national and regional level, policies will need to enable cities to function as gateways to international markets and as facilitating agents for domestic production and consumption markets. This cannot be achieved by cities alone. National policy coordination is essential to ensure that cities have good connectivity to port and other transport infrastructure and to ensure appropriate linkages and connectivity between cities and their hinterland to serve as markets for agricultural goods and production centers for agro-processing and marketing. The World Bank can assist by supporting regional planning and integration analysis and strategy formulation, as well as related inter-agency coordination efforts that facilitate such linkages.

**Improving the subnational investment climate.** Often the first place to start for attracting investment to cities is improving the subnational investment climate, with a focus on reducing red tape. Over the past several years, the World Bank has expanded the scope and coverage of subnational Investment Climate Assessments and Doing Business Surveys, providing critical information about a city's ability to attract investment from a private sector perspective. Because the methodology and indicators are standardized, cities can compare their performance with their peers and establish benchmarks for improvement.

Such data have been used to define appropriate entry points for technical assistance and investments in improving a city's economic prospects. Going forward, the Bank will ensure appropriate linkages of subnational Investment Climate Assessment and Doing Business data with the design of the next generation of local economic development projects.

**Supporting urban regeneration.** For post-industrial cities in transition, the Bank can assist by supporting urban regeneration and brownfield redevelopment approaches (see boxes 5, 6, and 7). While the Bank's engagement in these areas has been somewhat limited, growing demand, particularly in Eastern

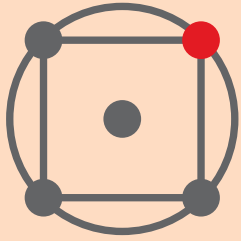


### **Box 5. Cultural heritage assets promote local economic development**

More than a decade of experience in cultural heritage interventions linked to sustainable tourism development position the Bank to provide critical assistance in this area. Since the 1970s, the Bank has provided financial resources for 241 projects having a direct investment component in heritage conservation and reuse with a total investment value of \$4bn. There are currently 117 projects under implementation, with a direct investment value of \$1.8bn in cultural heritage components.

In 2000, the Bank established a dedicated Trust Fund for Cultural Heritage—funded by Italy—that has provided almost 30 grants for a total of \$5.7m. The first round of funding supported 21 grants for vital technical assistance, capacity building, training, analytical work and pre-investment design studies that attracted additional financial support, leveraging about \$185m. This assistance has made cultural heritage preservation, its adaptive reuse, and sustainable tourism a fast growing area of support from the Bank and its development partners in assisting developing countries to promote local economic development.





## Box 6. Reclaiming Eastern Europe's land assets

Large swaths of cities across Central and Eastern Europe still showcase the derelict remnants of command economies. Abandoned or underused industrial land covers 13 percent of Prague and 27 percent of Sofia. Many of these sites, known as brownfields, are located centrally and in close proximity to commercial centers. Brown they may be, but developers and city planners see opportunities, if only someone would remove waste and clean up the contamination, a common and costly obstacle.

Many cities have already done this, starting by treating brownfields in different ways. Some are attractive enough to be developed entirely with private funding. Private cash is turning Bucharest's Semanatoarea Plant into a business and retail park, with a conference center and 1,200 apartments.

Other sites are more challenging: unclear ownership can make cleanup more difficult

and investors wary. In some cases a partnership with governments can assuage fears, as was done at the Skoda Plzen rehabilitation of a 180 hectare site using financing from the Czech government and the private sector, but highly contaminated sites may require full government financing. The German government had to invest \$1.5b in over 100 projects to turn abandoned steel works and mining operations in the Ruhr Valley into sites for other kinds of production, parks, office and residential spaces.

The World Bank, for example, is carrying out a pilot work program of stock-taking analysis in a few interested cities, and learning exchanges with cities in Western Europe that have experience in brownfield redevelopment, to build a foundation for assistance with brownfield sites. Compiling case studies and best practices from similar projects elsewhere will hopefully usher in new public-private financing schemes and much needed technical assistance. Soon more city brownfields will have shoots of green.

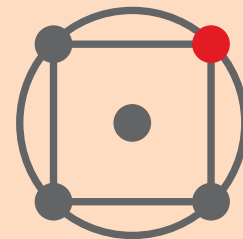
Europe, East Asia and the Middle East and North Africa, has signaled the need to expand engagement in both advisory services and investment lending in response. One effort now under way is to document good international practice in, say, riverfront or waterfront redevelopment approaches. Here the experience of OECD countries provides insights on dealing with real estate developers, environmental remediation for brownfield redevelopment, and district level redevelopment.

**Analyzing competitiveness.** City development strategies with a local economic development focus have often applied competitiveness analysis to identify promising manufacturing or service industries of a city economy. Specific sectors can be targeted, such as tourism, light manufacturing, fisheries or port activities. Or the strategy might adopt a spatial approach by focusing on redevelopment of central business districts or providing

serviced industrial land or enterprise zones in partnership with the private sector.

The strategies provide an operational framework for city visioning exercises and consultations with the private sector, NGOs, educational institutions, media, and other stakeholders. Linking strategy formulation to master planning and capital investment planning is vital, but many city development strategies lack well prepared investment plans and the financing to implement them. So, the Bank will support capital investment planning to prepare bankable investments over a multiyear program that can attract needed financing.

**Assessing inner-city markets.** Market intelligence can help cities attract investment in often overlooked inner-city areas. A new tool, the Inner-city Market Assessment, is being piloted in Bogota and Johannesburg, using data mining techniques to uncover underserved



## Box 7. Beyond oil: diversifying Yemen's economy through its port cities

Compared with a few years ago, Aden's seafront fish market is now a center of burgeoning enterprise. During peak periods there are roughly 230 fish sellers in the market (up from only 50 in 2003), and 200 fishing boats now moor in the bay area, far more than the 60 before. The market is managed by the local Fisherman's Association, a model of good practice, which carries out regular cleaning and maintenance of the new facility and leases out stalls to small-scale fishermen, many of whom supply new restaurants. As part of a broader redevelopment effort for the waterfront area, the market also links to an adjoining tourist attraction—a Portuguese castle on Sira Island—and has triggered private investment in residential and commercial buildings in the surrounding area. The upgraded fish market also provides \$25,000 in annual revenue to the local government.

The difference from 2003 is investment. The Sira Fish Market is just one of several projects under Yemen's Port Cities Development Program (PCDP), a 12-year \$98m effort to create employment opportunities in the port cities of Aden, Hodeidah, and Mukalla. In Aden, the PCDP has helped rehabilitate a small-scale industrial area lacking basic electricity, roads and sanitation infrastructure. The program began in 2003 with small infrastructure investments, followed by drafting city development strategies. For the first phase, the World Bank provided a \$23.4m adaptable program loan, and offered technical assistance to develop a port sector strategy. With the support of Cities Alliance, the PCDP also organized a study tour and learning

exchange with the city of Rotterdam to provide Yemen's port city officials with best practice examples about rehabilitating ports and integrating port activity with the city economy.

Attracting new businesses is critical. To most investors Yemen's economy begins and ends with oil. It accounts for 33 percent of GDP and a disproportionate 85 percent of export revenue. This makes Yemen relevant to the global commodity market, but it is a precarious foundation for an entire national economy—and indeed a government that relies on one resource for 70 percent of its revenue. It is not just irregular oil prices that pose worries; the big problem is that the oil is running out. Production decreased by a third between 2002 and 2008, and it only has 3 billion barrels left—a lot, but a billion less than in 2006.

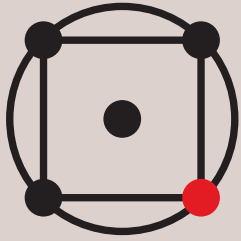
A partnership with the Bank's private sector arm—the International Finance Corporation—is also helping to establish a one-stop-shop for business registration and investor services. Local businessmen have provided a ringing endorsement of these new initiatives by contributing to a new Private-Public Partnership Fund, which has mobilized more than \$350,000 in private contributions to build a training center and fund rehabilitation of other infrastructure in Aden.

The second phase of the program is set to begin in 2010, and will focus more investments on Hodeidah (which is being promoted as an agro-processing center) and Mukalla (for its tourism development strategy), while scaling up financing across all cities to support investments of national significance; investigate the creation of a value chain that could deliver local economic growth within four to five years; and improve the management capacity of the three port cities.

markets in urban areas and attract investment, broaden retail services, and create jobs. Due to the informality of living conditions and market opportunities in inner-city areas, there has been severe undercounting in population and market potential. Initial indications suggest good scope for enhancing services and

attracting investment (in addition to expanding the local tax base). In Johannesburg, for example, a partnership with the Post Bank could help in providing basic savings and loan services down market, targeting the underserved residents and businesses in the city's Urban Development Zone.





# Encouraging progressive urban land and housing markets

*Enabling land and housing markets remains a cornerstone of the urban policy framework. But where formal markets have failed to reach a majority of citizens due to land scarcity and affordability issues, practical measures include microfinance for incremental housing solutions, low-cost building technologies, and rental housing. Most important, to anticipate future urban growth, urban planning audits are recommended to ensure that urban regulations are not set arbitrarily, preventing cities from achieving higher densities and causing land and housing scarcities that can drive up prices.*

Starting in the early 1990s, many developing country governments and donors adopted an “enabling markets” approach to housing, based on policies encouraged by the World Bank. This approach focused reforms on securing land rights, providing access and cost recovery for infrastructure, and improving the balance sheets of housing institutions. World Bank and donor projects helped to reform and expand mortgage credit, spreading these systems worldwide. The hope has been that pushing this and other aspects of the formal sector housing systems down market would eventually reach lower income households.

Despite some successes, affordability problems persist, and informality in the housing and land sectors abounds. By the mid-2000s, it became clear that the enabling markets approach was far too sanguine about the difficulties in creating well functioning housing markets where everyone is adequately housed for a reasonable share of income on residential land at a reasonable price. The general principles of enabling markets are still valid, but must be combined with sensible policies and pragmatic approaches to urban planning and targeted subsidies for the urban poor (box 8).

Four key housing and land issues consistently pose the greatest challenges in most urban areas: planning for markets, public land management, property rights, and housing finance. Dealing with each set of challenges

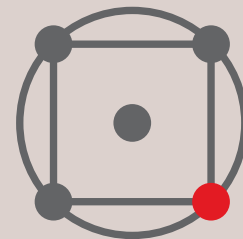
requires policies to push formal housing and land systems down market, while creating and sustaining more bottom-up approaches that serve the poorest.

**Eliminating regressive policies and regulations.** Urbanization will continue to put pressure on already limited access to land, so cities should eliminate policies and regulations that exacerbate this pressure. Urban regulations are indispensable for markets to function, but they should be assessed for their impacts on land and housing supply, affordability, and structure. Urban spatial structures evolve slowly but often irreversibly through market responses to infrastructure investments, regulations, and taxes. The effects of ill conceived policies are thus difficult to undo.

How then should cities proceed? Experience suggests that only a few regulations are critical: minimum plot sizes and minimum apartment sizes, limitations on floor area ratios, zoning plans that limit the type of use and the intensity of use of urban land, and land subdivision ratios of developable and saleable land in new greenfield developments. Cities can use urban planning audits to determine which regulations should be changed to enable density and urban form to move in tandem with urbanization. The Bank is developing a global knowledge product for cities to systematically assess urban planning regulations and guidelines and their potential distortionary effects.

**Preparing the fringe for new settlement.** Given the predictable rapid increase in city populations, a more proactive public role in preparing the periurban fringe to accommodate new settlement would in many cases be sensible. One approach would require governments and municipalities to acquire land for block-level infrastructure rights of way around the peripheries of rapidly growing cities. For some cities, former irrigation networks may be a useful starting point. This should be complemented by institutional measures to protect these rights of way from





### Box 8. Promoting pro-poor urban growth

As urban populations increase rapidly, so too does urban poverty. In Vietnam, every year sees one million new urban residents. By 2020, 40 percent of Vietnam's 100m are expected to live in cities. Rapid development is sure to follow, but what is less certain is that it will help those most in need. Too often, gleaming city centers are surrounded by slums.

To address this problem, the Vietnam Urban Upgrading Project, launched in 2004, targeted certain cities to help planners develop better pro-poor strategies. New partnerships between communities and local governments have helped resettle families out of dilapidated shanty-towns, upgraded infrastructure, and expanded social services. Small-scale loans allow for incremental home improvements and technical assistance has drastically improved land administration processes.

Funding has been collaborative: Vietnam allocated \$150m to the program, supplemented by \$5m from the Japanese government and \$4m from local community groups. IDA contributed \$222m. In July 2009, an additional \$160m was approved to complete a canal improvement

project in Ho Chi Minh City, benefiting 1m residents.

Midway through the project, over 200,000 of Vietnam's poor have benefited directly from schools, health clinics, and community centers. New drainage and wastewater systems in multiple cities are benefiting 400,000 people. More than 36,000 housing improvement loans have been made, with a 95 percent repayment rate. Eighty percent of households in targeted cities now have proper land-use certificates, an increase from 50 percent before the program, and property values have increased two to four times.

But perhaps the most encouraging benefits are the reforms to administrative procedures that are aimed to be more inclusive of local community voice and priorities. Participatory planning and community supervision of works were instituted in all target cities, and a National Urban Upgrading Strategy was approved by the Prime Minister in 2009.

Phase two of the project is upgrading low-income areas for another 600,000. All told almost 2m people are expected to benefit directly from both phases, and another 1m will experience indirect benefits.

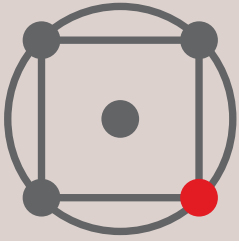
encroachment before building the infrastructure, which should occur only after effective demand is confirmed and resources are available.

**Managing public lands.** Recent Bank technical assistance to governments on public land management is paying dividends and should be expanded to policy-based lending where appropriate. While not all governments are large land holders, those that do control a large stock in the public sector need to be strategic in the way they manage those assets, including the way they are disposed. Bank advice on public land management has addressed inventorying and accounting for public land assets, clarifying rules and

decisionmaking chains for the use of these lands, and improving information systems related to these assets. Where appropriate, governments are advised on the design and execution of market-based auctions of some public land assets. In recent years, such auctions have raised noteworthy sums of municipal finance for Cairo, Mumbai, Bangalore, Istanbul, Cape Town, and Bogota. This approach needs to balance the risks of making municipal budgets too dependent on land-based finance, a source of vulnerability during an economic downturn.

**Continuing with sites and services.** The deficit of affordable shelter supply and the dominant incremental construction patterns





of the urban poor, suggest a continuing role for sites-and-services projects. Once the mainstay of the Bank's urban assistance, these projects are increasingly rare in the Bank's portfolio except in post-disaster reconstruction. But for governments with large tracts of public land, they sometimes offer a politically irresistible opportunity for direct intervention in urban shelter markets. Going forward, Bank support for such projects will engage governments in careful scrutiny of the proposed locations based on effective demand and transport connectivity to labor markets.

**Compulsory land acquisitions.** The Bank can now finance compulsory acquisition of land when a direct role in land development is justifiable. Compulsory land acquisition is already common in many Bank operations. Such acquisitions may be justifiable for rights of way for road or rail network improvements. They may also be needed to bring trunk-level infrastructure services within reach of existing informal settlements on the edge of the city or to provide adequate transport links between sites and services projects on the periphery and income-earning opportunities in the heart of the city. They may also be required for negotiated resettlement or relocations associated with informal settlement upgrading or inner city regeneration.

**Developing primary mortgage markets.** Prerequisites for a functioning primary mortgage market include land titling or at least a registry system, enforcement of contracts including foreclosure procedures, and fair and transparent underwriting guidelines. The World Bank has helped and will continue to assist countries develop primary mortgage markets. In Brazil, Mexico, and Morocco, the Bank provided housing development policy loans in excess of \$1 billion, as well as a technical assistance to promote the conditions needed to push formal finance down market. As part of this effort, the Bank helped rationalize the system of homeownership subsidies by targeting lower income households.

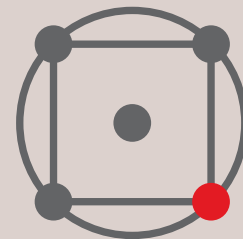
Work on housing finance and subsidy reform is expected to continue in Brazil, Egypt, India, and elsewhere as countries look to the formal housing sector as a source of economic stimulus in the current downturn. Likewise, where primary markets exist, it makes sense for countries to pursue a secondary market strategy as a source of long-term capital for financial institutions—as long as the lessons from the recent experience of lax underwriting and weak oversight are incorporated.

**Promoting microfinance for housing.** Housing microfinance holds promise as a way to reach individuals or families who build incrementally or who are too poor to qualify for conventional loans. Most housing microfinance experts believe there is vast potential demand for their products. Experience suggests that housing microfinance products have served the low-income salaried poor, and even those with irregular incomes, with encouraging results. Subsidies are not necessary as long as loan amounts are reasonable and terms are short. One of the most promising innovations is the “hybrid value chain” in which private sector companies (such as cement or floor tile companies) team with microfinance providers and citizen groups to lower the cost of producing housing. Here, the Bank can help promote, expand, and evaluate existing and new microfinance efforts.

**Supporting rental markets.** Rental housing is an important part of a balanced housing policy. Renting may be a better option for smaller households, newer households, and poorer households. It also allows workers to more easily move to jobs. And it frees capital for other types of investments. In developing countries, the demand for rental housing is substantial, accounting for between one-third and two-thirds of the housing stock in many cities. In a rapidly urbanizing world, the demand for rental housing will continue to grow.

Segmenting rental markets will lead to better-targeted policies. Some overall policies may make sense—reasonable codes, balanced landlord-tenant relations, elimination of rent





### **Box 9. Numbers on doors: how to address the developing world**

In recent decades, many cities in the developing world have experienced rapid urban growth. But inadequate identification systems have created a worrisome predicament: all the efforts to improve government capacity and service delivery can be useless if ambulance drivers and tax collectors cannot find (or even know about) a residence.

Painting house numbers seems like a cheap remedy. The challenge is knowing what to paint. Expanding a moribund system or starting from scratch is not as easy as it first seems. Imagine creating a computerized address database in a sprawling city with thousands of unmarked homes stacked along winding streets. With no system of street coordinates, how can drivers find their way around a constantly growing city? How can municipal services be provided, and able to pinpoint breakdowns in water, electricity, and telephone systems?

Implementing a system is generally undertaken by municipal administrations, which may set up

a special unit to manage it. To support them, the World Bank has reviewed practices in 13 African countries, and written a comprehensive street addressing manual for developing systems and keeping them updated.

There are three main benefits. For local governments, addresses increase municipal revenues and improve urban management. For the public, it makes the city more user-friendly. And for the private sector, it enables utility concessionaires to manage their networks effectively and improve fee collection.

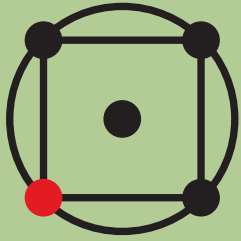
The program also advises governments how to go about setting up addresses. Officials must work closely with the public, which can pose a few pitfalls. Street addresses can raise the issue of property rights. Names and numbers are a sign of ownership, a thorny subject in many cities. Numbering squatter settlements can be interpreted as an implicit recognition of ownership. Such uncertainties should not deter governments from working with local communities in finding intermediate solutions, given the potential benefits of increasing access to services for the poor.

control, tax incentives. But a more nuanced picture of local rental markets is needed to develop local policies. Developers, small-scale operators, people sharing living quarters with tenants—all have different needs and motivations. The Bank is well positioned to provide research and technical assistance to cities seeking information on the various ways rental properties come to market, how the properties are financed, how land pressures affect the operation of rental markets, and how migration affects rents.

**Expanding street addressing.** The Bank intends to help client countries expand the use of intermediate land tenure and administration

tools, such as street addressing in informal urban areas (see box 9). Street addressing, now implemented in more than 50 African cities, basically maps existing settlement patterns regardless of the land tenure or ownership and translates that spatial information into a geographic information system that city administrators use for a wide variety of purposes ranging from postal delivery to epidemic monitoring. In the coming decade, the Bank will expand use of this product in other regions, where appropriate. It will also explore other emerging incremental approaches to consolidating property claims, including those linked to legally recognized forms of land tenure.





# Promoting a safe and sustainable urban environment

*This business line advocates a focus on urban form and design to achieve efficiency gains, reduce a city's greenhouse gas (GHG) emissions, and take advantage of the co-benefits of climate change mitigation and adaptation. As part of the Urban Strategy, the Bank is launching the ECO<sup>2</sup> Cities Program. Using an ECO<sup>2</sup> Cities Audit, participating cities can develop a baseline diagnosis of their current status and suggest such measures as changing technologies and retrofitting infrastructure and buildings. The Bank's joint work with the Global Facility for Disaster Risk Reduction, combined with the development of a new Vulnerability Assessment tool, aims to improve the safety and well-being of vulnerable urban populations, particularly the poor.*



The vulnerability of urban systems to climate change poses numerous dilemmas for decisionmakers and stakeholders at the local, national, and regional levels. A majority of the world's cities are on coasts or river flood plains, especially such megacities as Mumbai and São Paulo. Climate change risks must be understood in a context of deteriorating environmental health conditions due to rising air pollution, and significant risks to urban water supply due to watershed mismanagement.



Linking environmental health, energy efficiency, and livability concerns, leading cities are now considering how to build sustainability into the way they plan for the future. This has important climate change co-benefits, because a greater emphasis on public transit, higher density, energy-efficient buildings, and better facilities management can contribute to city development objectives while reducing a city's greenhouse gas emissions.



Rapidly urbanizing cities in middle-income countries can determine their efficiency in their choice of urban form and corresponding infrastructure investments, simply because such investments represent long-lived capital stock that can lock in emissions for long periods. The investments tend to be “lumpy” and can generate significant ancillary emissions. Taking

this path dependency into account in the design of cities, it is important that consumers respond accordingly. In cities where densities are low, consumers respond by locking into vehicle purchases, housing types, and locations that prevent them from responding to price signals and government-induced incentives to change behaviors. Good examples of cities that have addressed the challenge of reducing dependence on cars are Hong Kong and Singapore, which limited individual car use and urban sprawl early on.

Smart growth policies can address housing, transport, and environmental concerns by promoting denser developments when such density is desirable—and can support jobs, services and other amenities.

Reducing energy use through efficiency measures and improved urban planning can reduce a city's dependence on imported fuels and reduce energy costs, freeing up resources for improved city services. It brings socioeconomic benefits, such as reduced commuting times, improved air quality and health, and more green and community space. And it improves competitiveness by lowering energy bills and operating costs. But there may be substantial barriers to energy efficiency—such as rigid procurement and budgeting policies, low energy prices, inadequate planning and design methods, and limitations on public financing. There may also be limited technical and risk management skills, large project development costs, public repayment concerns, limited equity, and the need for new contractual mechanisms. Public end-users may have limited incentives, unclear ownership of cost savings, and a general lack of awareness. And financiers may be faced with high transaction costs, high perceived risks, behavioral biases, and problems in adopting new technologies.

A sharper focus on climate change and its impact on developing country cities will require retooling the approaches to urban environmental management. The World Bank's approach is informed by a five-cluster analysis

of key issues and constraints and the corresponding responses.

- *Cluster 1: Urban household and workplace environmental health challenges* are characterized by poor quality housing, cheap dirty fuel, and inadequacies in provision of water, sanitation, and solid waste removal. This cluster also includes the environmental health aspects of occupational health and safety, such as biological pathogens, chemical pollutants, physical hazards, and health-damaging noise levels.
- *Cluster 2: City system environmental challenges* comprise air and water pollution, traffic accidents, and solid waste management.
- *Cluster 3: City eco-system challenges* are interactions between cities and their physical regions that include unsustainable use of freshwater resources, the erosion of protective eco-systems, poor watershed management, city expansion into hazardous sites, and the export of solid wastes, liquid wastes, and air pollution.
- *Cluster 4: Disaster risks to the city system* comprise extreme events within and around the city, such as cyclones, storms, earthquakes, floods, and landslides.
- *Cluster 5: Cities and global environmental challenges* are characterized by issues of resource availability and eco-system functioning at a global level, with rising greenhouse gas emissions being the most pressing.

There are good reasons to set priorities for different clusters over time and in accord with a city's development. In low-income and middle-income nations, for instance, setting a priority for the first cluster would be most appropriate. These challenges can and should be addressed through focusing on sound municipal management, and the provision of basic services.

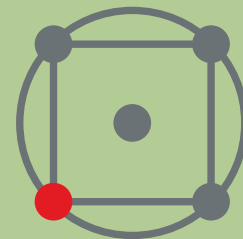
For larger urban centers or centers of heavy industry (irrespective of national income), the second cluster must also be addressed. Larger and more successful urban centers also need to give priority to the third cluster, while addressing the first two for their low-income population.

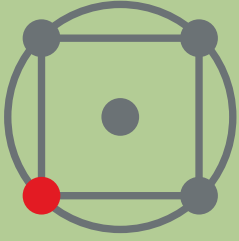
The fourth cluster must be a priority for urban centers where extreme weather events are already causing problems or are likely to do so in the near future because of climate change.

Since per capita greenhouse gas emissions of urban citizens in the developing world are usually one-twentieth to one-hundredth of those in high-income nations, cluster five may well be a lower priority for many cities. But carbon financing and other incentive programs can make it worthwhile for a city to reduce emissions. Many cities have taken initiatives on their own, and such innovations need to be shared across countries and regions to provide guidance for other cities wishing to emulate their success. For example, Amman, Jordan, attracted by the link to carbon financing, aims to capture methane gas at the city landfill and convert it to green energy to be fed back to the grid (box 10).

For slums (cluster 1), upgrading would be the principle approach, but with specific applications including support for home improvements, such as concrete floors in homes and increasing ventilation, and supporting programs targeting vulnerable groups, such as waste pickers. The approaches recognize the importance of incremental housing improvements to the lives and well-being of the poor.

For the environmental challenges of cities (cluster 2), the Bank is focusing on phasing out highly polluting vehicles, improving public transport, and monitoring air quality more intensively. For solid waste management, new sector policy-based approaches are being tried, as in Morocco, establishing a sound policy framework to set collection and management standards, ensure cost recovery, and put in place accountability measures





### **Box 10. Carbon credits for a city: improving municipal solid waste management in Amman**

For the residents of Amman waste disposal is basically the same as it is anywhere else around the world. The Greater Amman Municipality (GAM) collects around 2,400 tons of solid waste on a daily basis for almost all residents and disposes of it in a semi-controlled landfill outside the city.

This would seem a luxury for an emerging economy—indeed, it is—but Amman residents are paying dearly for it, through levies on electricity bills and fees tacked onto business licenses. Good service is not the only reason costs are too high: the system is comprehensive but terribly inefficient and does little to collect revenue from other sources, such as recoverable materials and landfill gas recovery.

To increase revenues, the municipality is working with the World Bank on the \$40.5m Amman Solid Waste Management Project, approved in September 2008. It will fund two new transfer stations to improve cost effectiveness for waste

collection and transport, and upgrade an existing disposal facility to meet the city's future long-term needs. Technical assistance and institutional support will help Amman improve strategic planning and evaluate performance in the solid waste sector.

The project has substantial environmental benefits. Engineering services will enhance the environmental and operational performance of existing disposal facilities. And current practices will be more low-carbon and allow for the generation of green electricity.

Attached to this lending operation, the World Bank has entered into an agreement with the municipality to develop and implement a Clean Development Project operation, and to purchase part of the certified emission reductions resulting from this project. These amount to 0.9 to 0.95m tons of CO<sub>2</sub> equivalent from 2009 to 2014, creating revenues estimated at \$15m by 2014. The project will also generate green electricity (about 160,000 MWh by 2014), with revenues estimated at \$25m to 2019. The project will thus generate net revenues of \$16.9m in present values, following an incremental investment of \$23.5m.

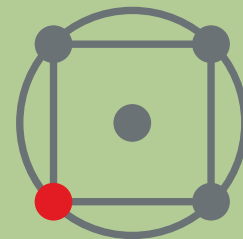
between municipalities and national oversight agencies.

In dealing with eco-system management (cluster 3), a combination of specific interventions and holistic approaches is being tested and developed. These approaches include focusing on urban design issues, such as including appropriate infrastructure and basic services for pedestrians, cyclists, and other nonmotorized transport in city planning schemes, creating a variety of housing and transportation options that would minimize motorized vehicle transport for low-income groups in accessing city jobs, and using inclusionary zoning, shared-equity arrangements, and tax incentives to create affordable, mixed-income communities in transit corridors. Increasing areas of support also

include a focus on managing watersheds and protecting city rivers and lakes from illegal dumping of untreated wastewater.

Most recently, the Bank has developed a holistic approach to promoting ecological and economic cities: the ECO<sup>2</sup> Cities Model combines energy efficiency design with environmentally sound technologies (box 11). This approach begins with an ECO<sup>2</sup> Cities audit to diagnose potential efficiency gains and emission reductions as a basis for interventions that include retrofitting infrastructure and buildings, coupled with introducing new technologies. In greenfield situations, the ECO<sup>2</sup> Cities model or approach can be adopted from the outset. Cities have a role in each of these areas, but there is often a need to coordinate with national transport,





### **Box 11. Eco<sup>2</sup> Cities: ecological cities as economic cities**

Rapid urbanization in developing countries presents a unique opportunity to plan, develop, build, and manage cities that are ecologically and economically sustainable. It also provides an impetus to retrofit and redevelop existing areas. Doing so has immediate effects and locks-in systemic benefits in the future.

Through its innovative approaches to urban planning, city management, and transport, Curitiba, a city in the Brazilian state of Paraná, has been able to sustainably absorb a population increase from 361,000 (in 1960) to 1,797,000 (in 2007). Well known for its innovative bus rapid transit system, Curitiba has implemented innovative planning solutions and institutionalized an enduring culture of sustainability. Consequently, Curitiba has the highest rate of public transport ridership in Brazil (45 percent), the lowest congestion related economic losses, and a low rates of air pollution. The city's programs have also made a concerted effort to make the reforms pro-poor, building ecologically-friendly community housing and starting small business assistance programs.

Curitiba also invested in large parks for flood prevention and recreation, solving the city's flooding problems at one-fifth the cost of constructing canals. This also greatly enhanced the attractiveness of the city for residents and

tourists, provided bike routes and pedestrian pathways that linked into the transportation network, and increased property values.

Curitiba is not alone. Singapore, Stockholm, Yokohama, and Vancouver all show that it is possible to realize greater socioeconomic value from smaller and renewable resource bases while simultaneously decreasing harmful pollution and unnecessary waste. Urban sustainability of this kind is a powerful investment that will pay compounding dividends. In a fast-paced and uncertain global economy, cities that adopt such an integrated approach are more likely to survive shocks, attract businesses, and manage costs.

To systematically promote these efforts in the developing world, Eco<sup>2</sup> Cities, a new World Bank initiative, aims to help cities achieve greater ecological and economic sustainability by providing a foundation for integrated and sustainable urban development. It is based on a one-system approach that helps cities plan, design, and manage integrated urban systems and marks a clear divergence from typical silo-based urban development. It also promotes a more holistic framework for decision-making and investment planning by incorporating and accounting for life-cycle cost-benefit analysis, the value of all capital assets (manufactured, natural, human, and social), and a broader scope of risk assessments in decision making. The Eco<sup>2</sup> analytical and operational framework can be adapted and customized to the particular needs of a city.

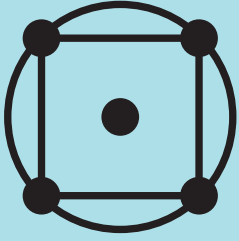


water, and environment agencies at the policy level.

In responding to disaster risks (cluster 4), the Bank supports approaches to climate change-induced and other risks due to natural causes. Interventions include risk assessments, zoning regulations, land use planning, building codes, disaster resilient construction of critical infrastructure, and preparedness activities, including city and subcity emergency plans. For the recovery

phase, activities include the damage, loss, and needs assessment, which form the basis for the reconstruction and recovery plan. The goal for the urban planner should be to mainstream these activities in the policies of city government.

To address resource use efficiency and ecosystem functioning at the global level (cluster 5), a combination of energy efficiency measures, emissions monitoring, and carbon financing approaches is recommended.

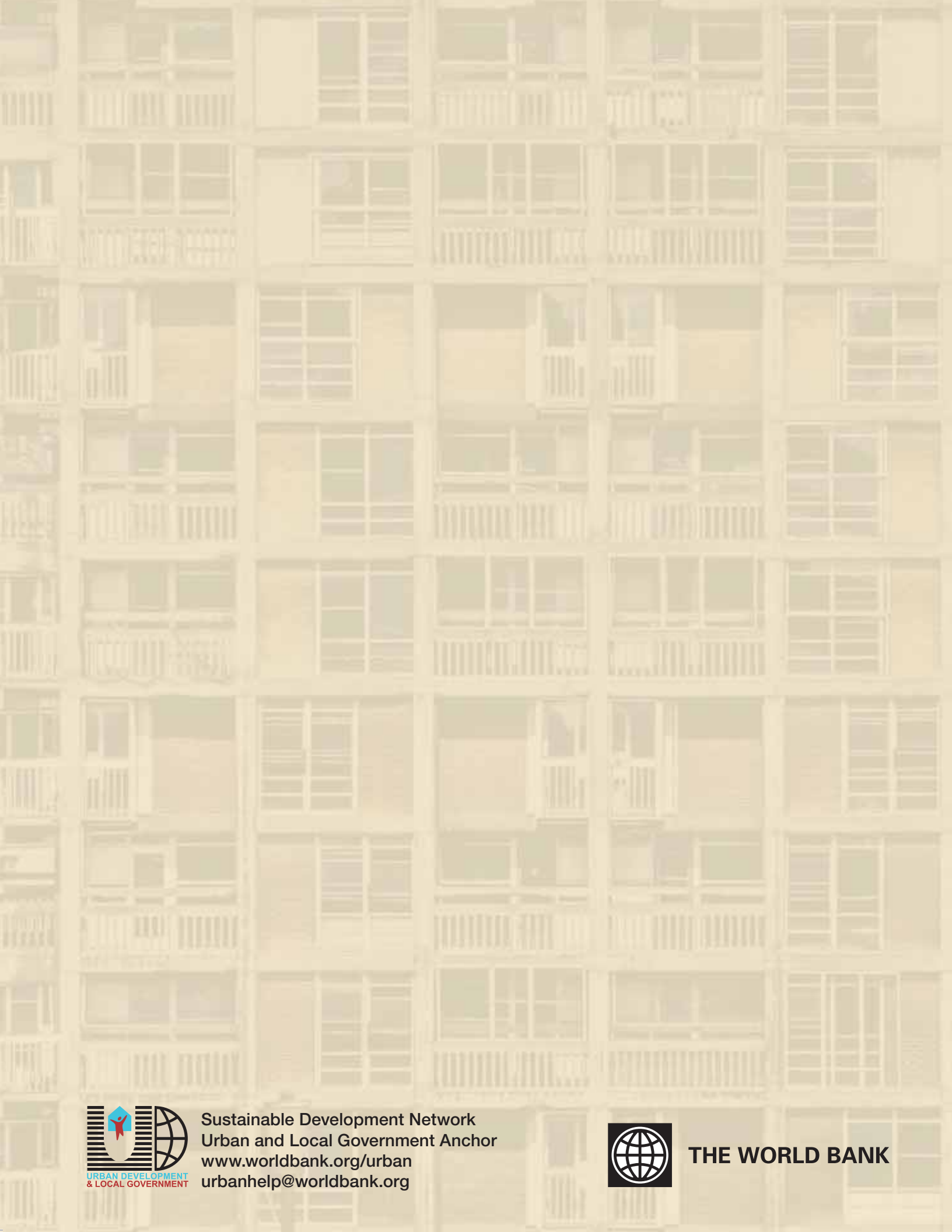


# Cross-cutting approaches to reinforce the strategy

Four building blocks will support the implementation of the Bank's Urban Strategy:

- *Knowledge programs, product development, and dissemination.* These activities will ensure that the Bank maintains its leadership in developing knowledge programs and products, while promoting the dissemination of knowledge and good practices through a variety of instruments and initiatives. The Urban Research Symposium will be continued, coupled with expanded collaboration with universities and think tanks on critical areas of research interest. A new Scholar in Residence Program will reinforce this partnership, with an initial focus on urban planning. New and ongoing knowledge products and services are also being developed or brought in line within the framework of the new Urban Strategy.
- *Financing strategies.* Financing strategies for urban development will address a range of circumstances, depending on the financial status of the local government, the impact of the global economic and financial crisis, and the quality and coverage of existing infrastructure services.
- *Partnerships.* Ongoing collaboration will be fostered through thematic group engagement and special initiatives. External partnerships will be enhanced through joint collaborative ventures with development partners, using to the extent possible the Knowledge Partnership Platforms of Marseille and Singapore. Cities Alliance, Water and Sanitation Program, UN Habitat, and United Cities and Local Governments will continue to play important upstream, preinvestment roles through their engagement with cities on several levels.
- *Results management.* A renewed focus on results management is elaborated in this strategy in response to the global agenda on aid effectiveness. The Bank's urban units are defining meaningful and measurable project indicators to better report on the impacts of the Bank's urban development assistance. Support to national governments and cities will come in the form of establishing urban databases and facilitating participation in the new Global City Indicators Program. The Bank recognizes that building successful institutions and in-country data collection and analysis will pay the largest dividends in strengthening urban management and increasing responsiveness to the results agenda.





Sustainable Development Network  
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