

Section 4.

Programs That Work



4. Programs That Work

In many metropolises the problems are so great and growing so rapidly that the task of achieving significant improvement in the urban fabric is truly daunting. Is there sufficient accumulated experience with successful programs that one can be confident that more resources can be effectively used? The answer is an emphatic “yes,” as the following cases illustrate. Unfortunately, only a modest share of urban development projects has been properly evaluated. We selected these particular examples because they illustrate success and they are comparatively well-documented.

Slum Upgrading and Prevention

An essential first step in developing an approach to the proliferation of slums is simply raising the awareness of a country’s and a city’s political leadership through accurate information. National and city governments often turn a “blind eye” to the concerns of slum dwellers until social stability appears threatened or a health problem begins to spread throughout the general populace. A good example of the results of such heightened awareness is Egypt, where in the early 1990s the government became convinced that the slum problem was becoming a national emergency. In response it created a special budget for slum upgrading. Since then, the country has reduced the proportion of slum dwellers by more than 22 percent. Similarly, Sri Lanka has reduced slum prevalence from 25 percent to less than 11 percent over the past 18 years, after adopting a series of national level pro-poor reforms.

There are three main approaches to alleviating slum conditions: (1) upgrading existing sites; (2) preventing new slum growth; and, (3) relocating residents to better sites (some projects of this type are underway but proven cases have not been documented). The most appropriate approach, or combination of approaches, is context dependent. The following case studies describe how each can be done effectively.

Upgrading

Despite the complexity of the challenge, a number of successful slum upgrading examples and approaches can serve as best practices:

■ **Indonesia.** The World Bank supported the *Kampung* Improvement Program (KIP) over a 14-year period from 1974-88.¹³ For a cost averaging from \$23 per

person in smaller cities to \$118 in Jakarta, almost four million *kampung* residents in 11 cities benefited from improved footpaths, roads and drainage, garbage bins and collection vehicles, safe drinking water through public taps, public washing and toilet facilities, neighborhood health clinics, and primary school buildings. There was noticeable improvement in the living conditions of the *kampung*s and the investments yielded an economic rate of return of 12 percent, even over a useful life of five years. In addition, as a result of the program, the *kampung* residents became better educated, household size declined, and employment rates increased.

■ **Morocco.** Based on a quarter century of experience in addressing a growing problem of slums and informal settlements, in 2004 the Government of Morocco initiated its “Cities without Slums” program with a goal of eliminating or transforming slum housing for over 280,000 families in over 80 cities by 2010. The national program has strong political support. It uses a combination of *in situ* upgrading and demolition of substandard housing, with provision of replacement/resettlement housing, creation of new subsidized, serviced housing sites on public land, establishment of a guarantee fund for “social” housing and creation of tax incentives for builders to create low cost apartments. Although it is a national program, the interventions are carried out by local authorities in close consultation with neighborhood residents. Through 2008, 140,000 households had benefited from the program.

■ **Nigeria.** In 2005, the Lagos mega-city of over 11 million people, 70 percent of whom live in slums, adopted a new citywide approach to slum upgrading after witnessing the

limited impact of previous “top down” efforts. A \$200 million credit from the IDA is supporting a seven-year upgrading program in nine (of 42) slum communities that includes the upgrading of roads and footpaths, installation of public toilets, drilling of water taps, the construction and rehabilitation of education and health facilities and skill-based training for youth. Community participation is central to the program’s design. The aggregate estimated economic rate of return for the infrastructure improvements is 17 percent, and a 75 percent increase in garbage collection by private operators has already been realized. The effort is supported by a new affordable housing policy (to provide private mortgages at ten percent) and a new land policy designed to improve institutional efficiency in land documentation, creating an up-to-date land registry and formally recognizing a right of occupation for those who have illegally settled on government land.

■ **Mexico.** The national government has a large-scale effort, *Piso Firme*, under way to replace dirt with cement floors in slum dwellings. By 2007, 300,000 floors had been replaced out of a total initial stock of three million units with dirt floors, at a cost of about \$150 per unit. To be eligible occupants must prove unit ownership. The incentive to obtain essential documentation is the possibility of receiving the benefits. A careful impact evaluation documents striking positive results on young children’s health: a 78 percent reduction in parasitic infestations, 49 percent reduction in diarrhea, 81 percent reduction in anemia, and 36-96 percent improvement in cognitive development. Adult welfare has also increased as measured by increased satisfaction with their housing and quality of life, as well as significantly lower rates of depression and perceived stress.

■ **Peru.** An impact evaluation of the effect of Peru’s nationwide program distributing titles to urban squatters on public land found that investment in housing renovations and improvements associated with land titling increased 68 percent in the four years following title receipt.

■ **Mexico.** Cemex, the leading Mexican cement producer, has gotten directly involved in housing construction by

targeting its *Patrimonio Hoy* program to low and middle income families that are building their units one room at a time. Cemex allows households to sign on to a 70 week program in which they make weekly payments in exchange for scheduled deliveries of cement at key intervals in the construction process. Prices are fixed when the contract is signed and technical assistance is available. Savings are on the order of 35 percent compared with other construction options. The program is fully commercial and Cemex has expanded it into other countries where it operates.

Most public interventions that improve land security or improve infrastructure produce the types of positive investment effects just noted for titling and are often facilitated and expanded by microfinance loans. USAID has played a major role in promoting such micro lending through technical assistance, direct funding, and the Development Credit Authority (DCA) guarantee program, some of which goes to support lending for incremental housing improvements.

Prevention

Slum prevention is at least as important as upgrading and clearly more cost effective. Planning for the inevitable growth of the urban population is key, as shown in Kyrgyzstan by the municipality of Bishkek’s quick and effective channeling of post-Soviet Union rural-to-urban migrants into laid out subdivisions that initially lacked public

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services but were ready to receive them. Another example is cities in El Salvador that have been able largely to prevent the formation of new slums through good planning and timely investments in transportation that provides decent access to peri-urban locations. Access to secure land plots—provided by municipalities or private developers—is key to encouraging the type of incremental housing construction by which the majority of the urban poor attain decent housing.



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The process can be accelerated, as can slum upgrading, with access to micro finance that permits use of higher quality materials each time as improvement is made.

Water and Sanitation

High urban densities are a particular blessing for water and sanitation interventions, as innovative solutions can reach far more people than they can in rural areas and municipal services can be provided much more cost effectively. Examples of successful programs demonstrate that, over time, increased and well-directed investment and improvements in policy, regulation (including community oversight), and utility operations and management, can reverse the current trend of increasing numbers of urban dwellers lacking adequate water and sanitation.

The following examples of effective interventions are particularly noteworthy:

- **India.** Beginning in 1988, an alliance of three Indian NGOs—the Society for the Promotion of Area Resource centers (SPARC), the National Slum Dwellers Federation (NSDF) and Mahila Milan (“Women Together”)—supported urban community organizations that over a 12-year period designed, built, and now manage toilet blocks that serve over half a million low income urban dwellers in eight cities. Community toilets such as these typically cost less than \$80 per seat. The design and construction of the toilet blocks by neighborhood associations have not only provided a much needed service to the residents but have also (a) demonstrated to municipal authorities the capacity and competence of urban poor organizations and (b) changed the nature of the relationship between community organizations and municipal authorities from one of clientism to one of partnership. The program’s success has also resulted in the national government providing a 50 percent subsidy for community toilet creation.
- **Senegal.** The nine-year (1995-2004) World Bank (IDA)-supported Senegal Water Project increased access to water services for 1.6 million people, expanding coverage from 74-81 percent of the urban population in 1996 to 98 percent in 2004, with household connections

reaching 76 percent, which is the highest rate in Sub-Saharan Africa. Through an innovative public-private partnership, water losses (mostly from leakages) fell from 32 percent to less than 20 percent over the project’s life. It is estimated that improved water management and sanitation will cut the incidence of malaria in urban areas by 20 percent.

- **Argentina.** In 30 municipalities that participated in a program begun in the 1990s to privatize water supply, child mortality decreased by five to seven percent, with the largest gains in the poorest municipalities. Child mortality in those communities fell by 24 percent and the privatization is credited with preventing the deaths of 375 children per year.
- **Brazil.** Between 1990 and 1995, Porto Alegre’s innovative “participatory budgeting” process has increased the number of households served by the drinking water network from 400,000 to 465,000. More than 98 percent of the households are now connected to the network and the share of households connected to the sewer network almost doubled (from 46 to over 85 percent). From 1989 to 2000 leakage in the municipal water network decreased from 50 to 34 percent and the proportion of treated sewage rose from two to 27 percent.
- **Uganda.** Investments funded through an IDA-financed water and sanitation project in eleven small towns in Uganda drastically reduced the average price of water (from 100 to 25 shillings for a 20 liter jerri can), significantly reduced the time and distance required to fetch water, increased average consumption, and expanded urban coverage notably. The overall Economic Internal Rate of Return (EIRR) of the project was almost ten percent.¹⁴
- **Pakistan.** An example of joint community-based / government sanitation program is in Orangi, a Karachi district of 1.2 million, begun in 1980, which financed sanitary latrines in almost all of the district’s 100,000 houses, underground sewers in the lanes and neighborhood collector sewers. Infant mortality in the project area fell from 130 per 1,000 live births to 37 from 1982-91, residents saved an average of \$8.33 per month on curative

health (ten percent of earnings) and property values increased by 30 percent due to the improvements in the lanes. A replication of the program in Faisalabad has reduced water and sanitation borne diseases by 60 percent.

Transportation

Two complementary policy sets are proven to work effectively to improve urban transport: (a) traffic and road-



focused management, including regulation, enforcement, and institutional development; and, (b) public transportation infrastructure improvement, broadly defined to include related land use and transportation planning.¹⁵

Management

Examples of improved management span a broad range. To provide positive incentives to use public transportation for those who would otherwise drive cars to work, a number of cities (including Seoul, Buenos Aires, Bangkok, and Manila among many others) have introduced premium express bus services at a higher price than the regular slower bus routes. Successful disincentives to reduce reliance on automobiles include a variety of congestion charges:

- **Korea.** In Seoul, tolls for use of the Namsan Tunnels that link downtown Seoul to the southern part of the city have cut peak period passenger volumes by 34 percent and increased average speed by 50 percent.
- **U.K.** In London, fees for private car access rights to the city center were implemented in 2001 with bus usage increasing by 40 percent.

■ **Developing countries**, lacking the sophisticated controls needed for London-type systems, impose restrictions based on odd-even license plate numbers and high parking fees. More generally car use is discouraged through levying high fuel taxes and license fees (some assessing higher fees on vehicles with larger motors or initial value).¹⁶

Another efficiency-enhancement measure is improved road maintenance. Severely deteriorated roads force drivers to carefully pick a path among large potholes, increasing travel times and causing damage to vehicles. The World Bank reports very high rates of return on its road repair investments.

Infrastructure Improvement

Among the concrete examples of effective infrastructure investment planning projects, some of the more impressive have developed bus rapid transit systems (BRT). These are now fairly common in major Latin American cities but have also been implemented in Jakarta and Chinese cities. BRT involves reserved lanes for buses and bus depots (instead of traditional bus stops), where passengers purchase tickets before boarding and where multiple buses can load and unload simultaneously.

■ **Colombia.** One of the better documented BRTs is Bogota's, which began service in 2000. It uses a flat fare system (for single ticket for BRT and feeder bus rides), which favors the poor, who live farther from the city center. The combination of the bus depots, large articulated buses, and high ridership resulted in high productivity, with nearly 2,000 passengers per bus per day in 2001. Fatalities from traffic accidents involving buses were sharply cut, and users' travel times fell by 32 percent.

■ **Colombia.** Medellin's municipal government has built two cable car lines to provide sharply improved access to poor squatter communities located in the hills overlooking the city. In 2008 the second line opened, reaching four km into the hills to serve the Antioquia *comuna*. Metrocable has significantly cut both travel time and cost to the city center. Reported results show a very impressive increase in the economic integration with the city, including an employment surge for Antioquia residents.

■ **Brazil.** The experience of Curitiba, a city of 1.6 million, is particularly noteworthy because its BRT was part of a coherent, integrated, and consistently implemented master plan that has made the city quite livable and efficient. Industry is located in designated areas away from main settlement areas. And the system provides good access to poor families living in peri-urban settlements, thereby increasing their employment opportunities in the city center.

Environment

Unless the growth of urban areas is properly planned, governed, and managed, the quality of the air, the availability and purity of the water, the disposal and treatment of solid and liquid waste, the prudent use of energy, the safeguarding of green and open space and other qualities of the urban environment that contribute to health and well-being will become increasingly threatened. The good news is that successful intervention examples show how, over time, progress can be realized:

■ **India.** In 1994 the rapid spread of a plague outbreak during a flood in one of India's filthiest cities, Surat, causing 58 deaths, was fueled by the city's almost total neglect of solid waste management. Although the city collected 450 tons of garbage daily, this was less than half the amount generated. In response to the plague outbreak, the city mounted an intensive and comprehensive effort to improve solid waste collection, which included: private sector participation in garbage management; a public awareness campaign; a carefully planned grievance, redressal, monitoring and surveillance plan; and municipal capacity building. In just three years, the collection rate increased by 400 tons per day, which was 94 percent of the garbage generated, and Surat became one of India's cleanest cities. In 2006, when another serious flood engulfed the city, the city and its residents were fully prepared and cleaned up from the storm before disease could set in.

■ **Thailand.** Since the mid-1990s, the municipality of Bangkok and the Royal Thai Government have adopted a number of air pollution control measures to reduce the levels of harmful pollutants originating from



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transport-related sources. These include enforcement of vehicle emissions standards, a vehicle inspection and maintenance program, roadside inspections, traffic management, and gasoline vapor recovery. Despite continued city growth, between 1997 and 2006 these and other measures succeeded in reducing the ambient air concentrations of particulate matter (PM10) by almost half and roadside concentrations by about one-third.

■ **Indonesia.** PROPER (Program for Pollution Control, Evaluation and Rating) program, implemented from 1995-98, used the power of public disclosure of water pollution performance ratings of the country's factories to substantially increase compliance with environmental regulations. In all, 187 factories in the first pilot group were classified into five performance levels from "gold"

(clean technology, waste minimization, pollution prevention) to "black" (no pollution control and serious environmental damage). The results were widely circulated in the media. After 18 months, the number of noncompliant factories in the pilot group had dropped from 118 to 38 and pollution had been reduced by more than 40 percent.

■ **Brazil.** In 2003, the City of Sao Paulo approved a Strategic Master Plan for the protection and expansion of biodiversity. Since 2005, the city has doubled the number of traditional, riparian, and natural parks to 67 (also doubling the area covered), established two municipal "protected areas" covering 20 percent of the city's territory, planted over 100,000 trees per year since 2006, and established a municipal environmental police force of 300 officers.



Cities Alliance

Successful shelter upgrading interventions seem to have three essential characteristics—significant citizen involvement; creative use of incentives; and a comprehensive approach that integrates investments across sectors.

Three Common Threads of Success

Many of the interventions just described share three essential characteristics: (1) significant citizen involvement, (2) the creative use of incentives, and (3) a comprehensive approach to shelter upgrading that integrates investments across sectors.

First, they include strong and substantive citizen involvement. The consensus is now overwhelming that citizen engagement with government in decisions on program design, prioritization of interventions, financing methods, and management and maintenance of facilities and infrastructure is critical to successful slum upgrading. Citizen engagement instills a sense of community ownership of the improvements, which is essential to their maintenance. Although slum dwellers and community leaders know first-hand and better than anyone else what challenges they face, they may not have the requisite skills or knowledge to

make informed decisions on designing sustainable upgrading programs. UN-HABITAT suggests an “enabling approach,” whereby local governments “empower” the residents by helping them acquire needed training, and financial and management support. This leads to a more equal partnership between the government and the slum dwellers.¹⁷

Second, successful programs introduce new forms of economic incentives in structuring subsidies that reward certain behaviors more effectively (i.e., stronger targeting and greater cost effectiveness) than their predecessors. Examples in the cases cited above include the Mumbai toilet program and *Piso Firme* in Mexico. Mexico’s well-known *Progresa* program is another example of creative incentives whereby cash transfers to poor families are conditioned on children being in school and getting regular health check-ups.

Third, some of the most effective programs approached urban development in a broad, comprehensive way, providing combinations of improved shelter, transport access, infrastructure services, and health care. This suggests that a narrow, sector-specific approach is less successful.

While the complex implementation environment of the urban context may at first seem daunting, the World Bank’s finding that urban development projects have higher success rates than other project types (at 88 percent over the 1992-2004 period¹⁸) provides impetus for action.

While this section has demonstrated that we know how to execute projects and programs, systemic policy challenges are major impediments to effective urban development, as discussed in the next section.