

# Slum Networking of Indore City

Planner: **Himanshu Parikh**, Civil Engineer

1989 and ongoing

Gandhinagar



In Indore, landscaped riverbanks now overlook a clean river that was formerly a sewage-filled, low-water river lined with decrepit slums.

Futi Kothi

Hawa  
Bungalow

Annapura Ro

Fal  
Bag

C.A.T

To Khandwa

To Almer



# Indore, India

Client: **Indore Development Authority**

For having successfully mobilized and coordinated the financial and human resources of funding agencies, government organizations, NGOs and local communities in order to create a better living environment for the residents of the informal settlements of Indore and, in the process, reclaiming for public use the formerly polluted lakes and riverfronts of the city. This has been done by establishing an innovatively planned, low-cost, city-level sewerage network, a solid-waste management system and recreational areas. What is unique about the Slum Networking of Indore City is that the slum regularization and upgrading exercise is part of a larger environmental upgrading plan for the entire city. The application of this approach to other similar conditions would go a long way in overcoming the weaknesses of conventional urban upgrading projects, which seldom attempt to integrate slums into the urban fabric.







The Slum Networking of Indore City is a community-based sanitation and environmental improvement programme that regards urban slums not as resource-draining liabilities but as opportunities to make sustainable changes and improvements to the city as a whole. Devised and pioneered in the city of Indore by the engineer Himanshu Parikh, the networking concept was made possible and sustainable by bringing together communities, governments, NGOs and industry for its implementation.

Centrally located in India's fertile Malwa Plateau, midway between Delhi and Bombay, Indore is a marketing and distribution centre for cotton, nuts, wheat and other cash crops, as well as an important textile-manufacturing city. Its growth as a business and transport centre has created numerous employment opportunities, resulting in a continuing rural-urban migration of jobseekers. Most of these people move into the 183 slums that are scattered throughout the city, many of them on the banks of the Khan

and Saraswati rivers. Of Indore's total population of 1,400,000 (in 1995), 28 per cent live in slums, a proportion expected to rise to 30 per cent by 2000. The Muslim population constitutes 25 per cent of the inner city of Indore.

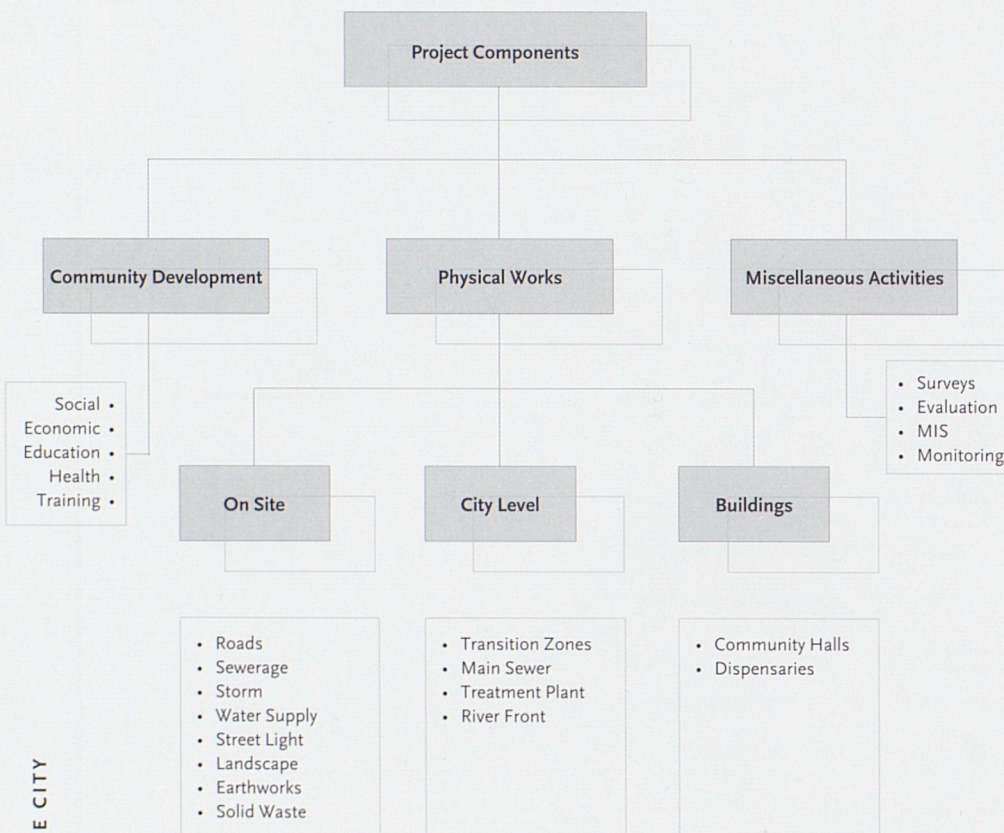
The Indore sewer system built in 1936 served only 5 per cent of the city's population. All the sewage and solid waste were discharged into the Khan and Saraswati rivers, which resulted in unhygienic conditions in the city and poor health in the slums. The concept of the networking project was to create an efficient urban infrastructure that in turn would help to upgrade the slums. Himanshu Parikh took advantage of the pattern of the Indore slums in order to introduce an efficient infrastructure path for sewage, storm drainage, and fresh water services that followed the natural river course. An extensive physical survey was conducted to plot the city's natural drainage paths to the river, and a socioeconomic survey identified the slum families with the greatest needs. The



**ABOVE** Secondary paths through the slums, once covered in mud, have been dramatically improved with the introduction of sewerage lines and concrete paving.

**OPPOSITE** Physical improvements made under the programme include paved roads and footpaths, storm drainage, water supply and sewerage hook-ups, street lighting, landscaping and solid waste management.





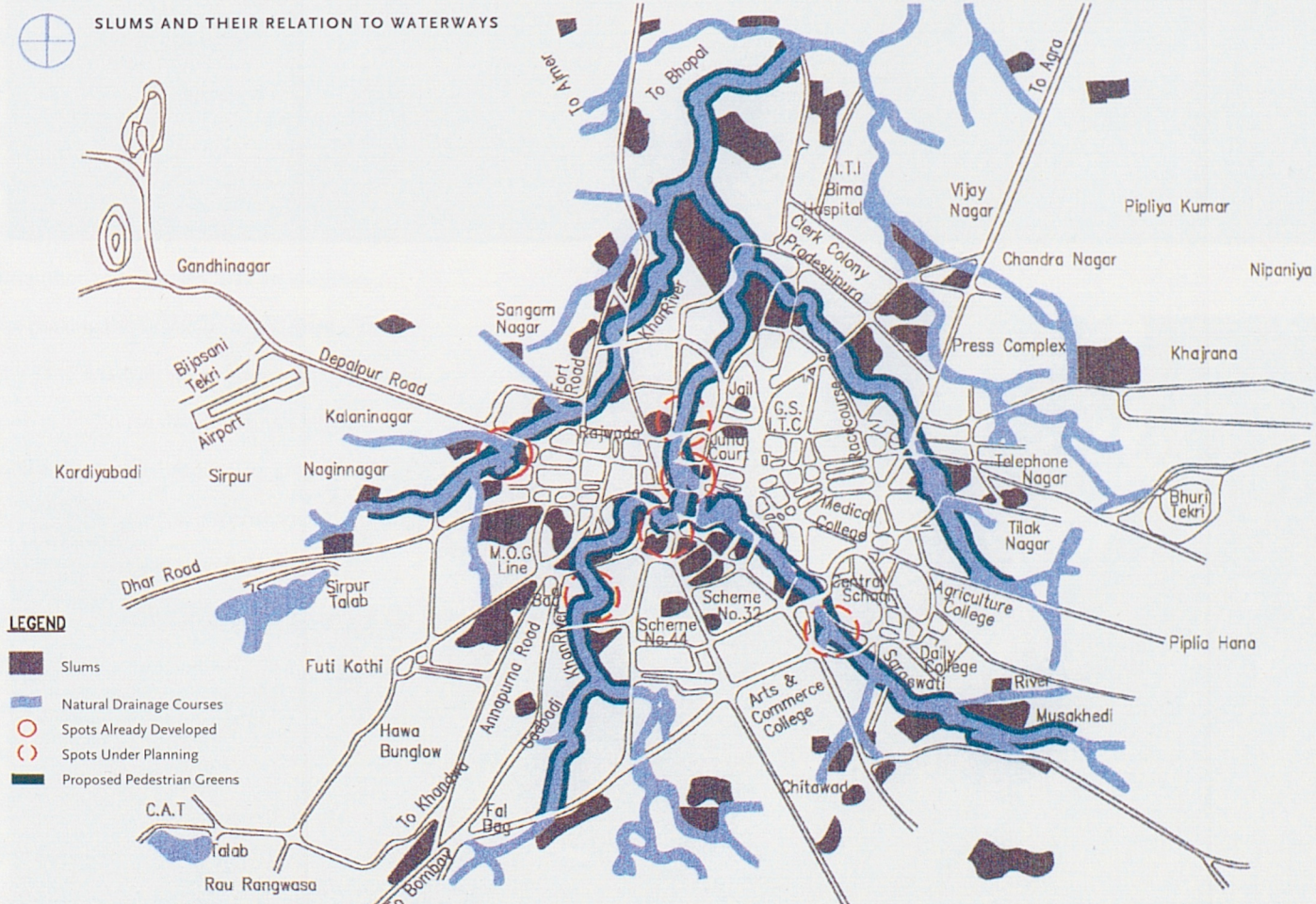
objective was not to find solutions unique to the slums but to explore the commonalties between the slums and the city and to integrate the two to make mutually beneficial interventions.

Slum networking set out five objectives: (1) a holistic approach to environmental issues in order to upgrade the slums and the entire city; (2) a significant reduction in the cost of utilities and housing; (3) the mobilization of material resources for the development of settlements; (4) the increase in community responsibility and control; and (5) the improvement of the overall quality of life in terms of education, health and income. The objectives were realized through innovative and low-cost engineering solutions. The designer gave priority to lowering and then paving the slum streets, so that they drain off excess rainwater during the monsoons; to placing a gully trap in each house for the removal of waste water and sewage; to installing a manhole-covered inspection pit for every six to eight houses; and to



OPPOSITE BELOW The success of the Indore Habitat Project relies on three main components: physical works, community development and various monitoring and information gathering activities that support those programmes.

OPPOSITE and RIGHT Underground sewerage systems and an improved water supply system have been put in place in the slum colonies. The slum dwellers pay for and build their own toilets and connections to the water and sewerage systems. The investment enhances their quality of life and hence their pride in home ownership.



connecting slum sewerage lines to the main artery along the river.

The solution was implemented at two levels. At the city level, a main sewerage artery funded by the Indore Development

Authority and Great Britain's Overseas Development Administration (now the Department for International Development) was constructed along the riverbank at a cost of us \$18,000,000. At





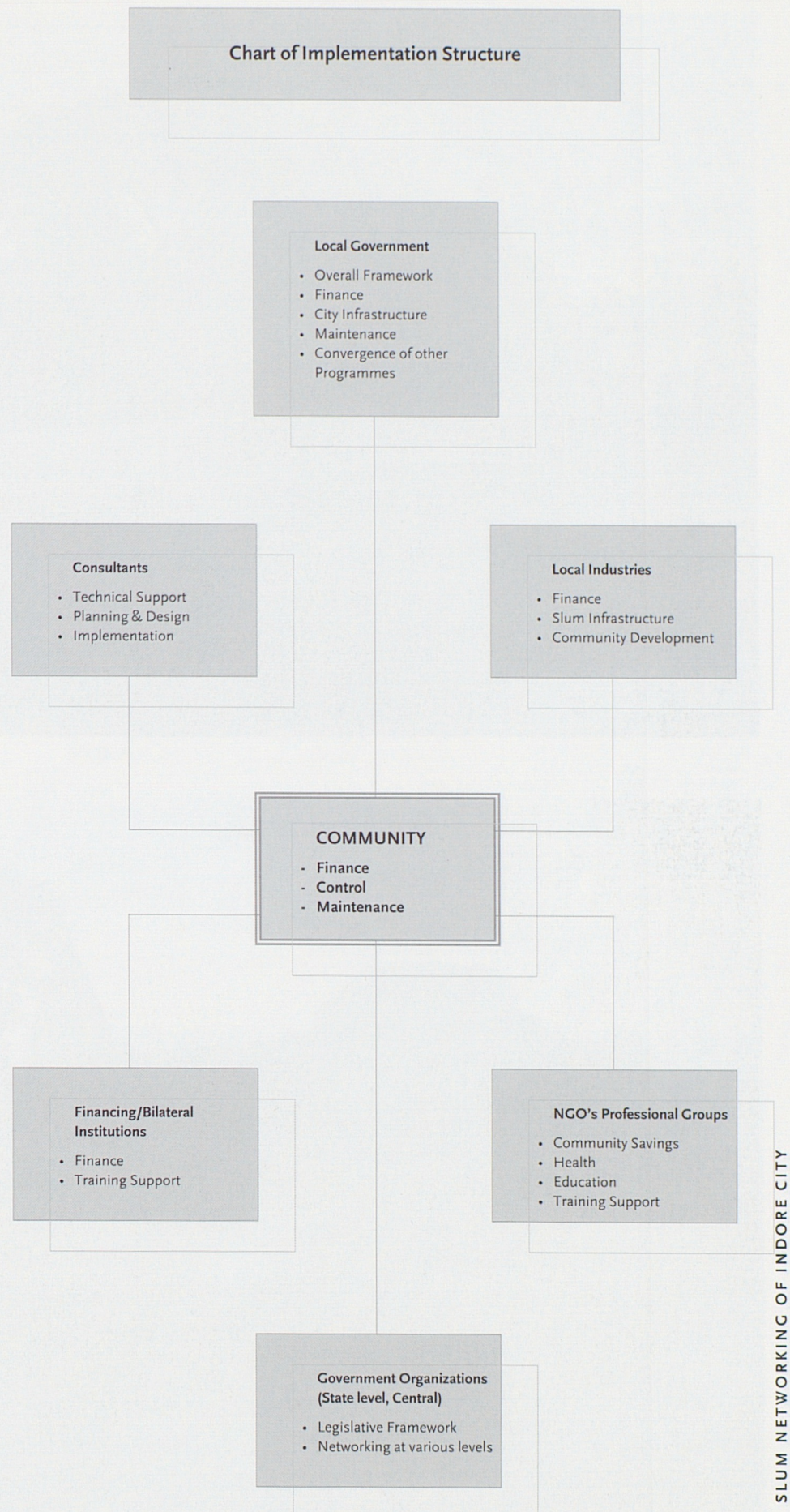


LEFT A study of the Indore slums showed that most were located along the city's natural drainage paths, which led to rivers polluted with sewage and waste. Through the networking system, the rivers have now been converted to fresh water lakes, and the riverbanks feature pedestrian paths and a new marketplace.

RIGHT The success of the project is due to the continuous collaboration of local authorities, professionals, NGOs and aid agencies with the community.

the slum level, slum dwellers paid for and built their own toilets and connections to water and sewerage lines at an average cost of 10,000 rupees (us \$260) per family. A state government ordinance that gave Indore slum dwellers long-term land leases, effectively legalizing their unauthorized colonies, was an incentive for making the sewerage investment. The dwelling lots typically provide space for a one-room house that contains a kitchen, a toilet and a washroom. The improved roads, the sewer and water services, the installation of street lights and the building of community halls led to dramatic improvements in the quality of the slum dwellers' homes, for once their neighbourhoods were improved, they invested in their houses. The façades that line the improved streets now feature different colours, cornices, railings and other decorations that enhance the city.

The pivotal point in the networking project is the *jheel*, the meeting of the Khan and Saraswati rivers, which is also the site of the Krishnapura slum at the centre of









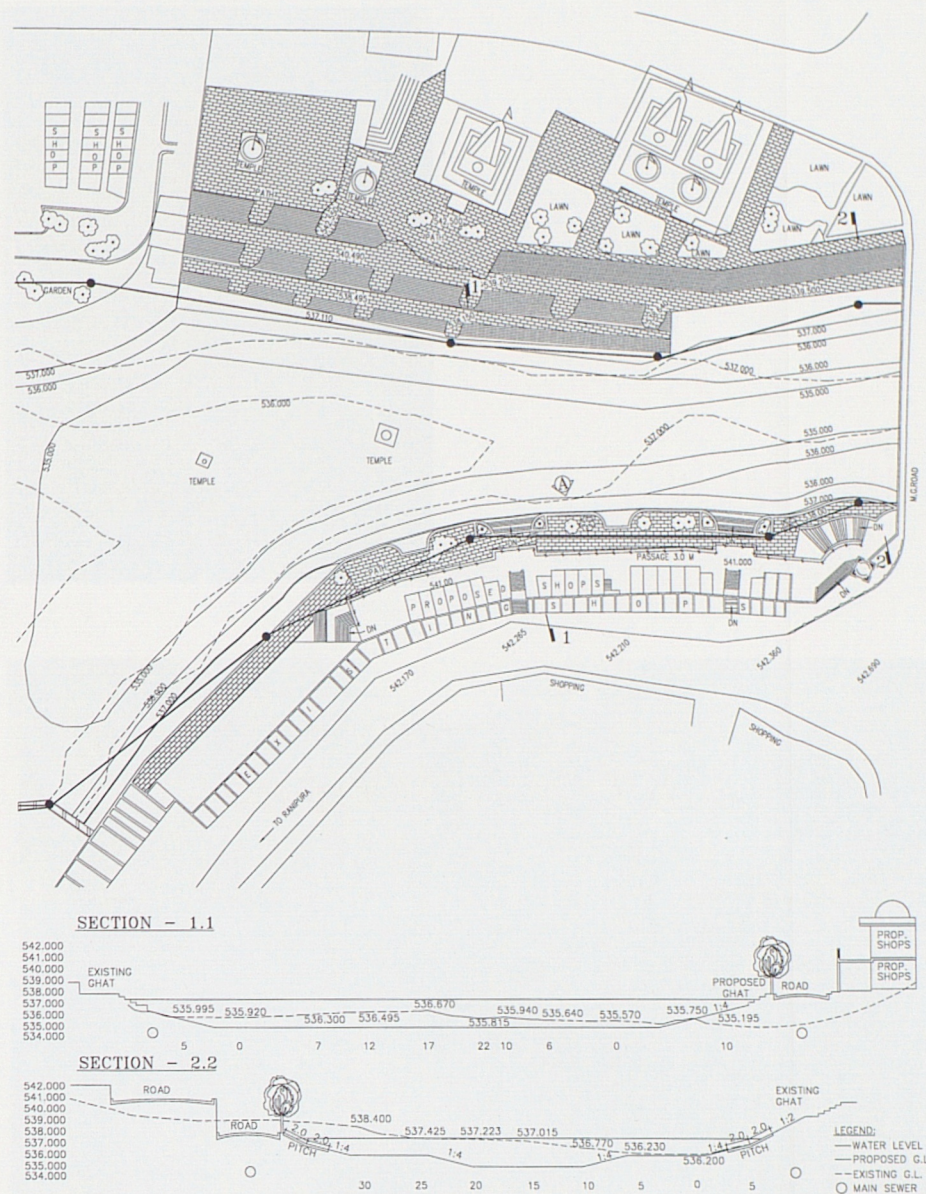
**OPPOSITE** Once the piped sewerage system was in place it was possible to clean the rivers and restore historic riverside structures. This improvement to the slums had a citywide effect, reinvigorating urban life at the centre of Indore.

**RIGHT** To increase water levels at the *jheel*, where the Khan and Saraswati rivers meet, the banks of the river were lowered. This also accommodated terraced pathways that improve access to the main bridge.

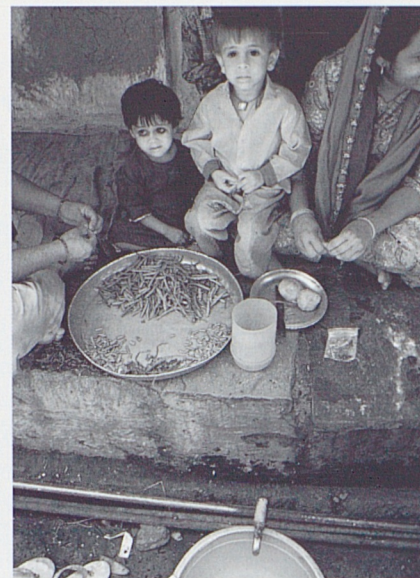
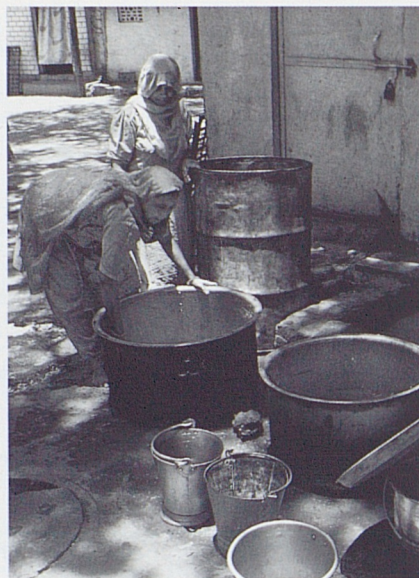
Indore. Once full of sewage and garbage, the *jheel* has been transformed into a waterfront area that has revitalized Indore's cultural heritage and the city as a whole. On one bank, two kilometres of riverfront have been landscaped with curved, paved walkways, flowering plants and shade trees. On the opposite bank, a two-level shopping arcade has been developed.

In the 1980s, slum improvement projects typically provided facilities such as community toilets and washrooms. Sharing such facilities gave rise to communal riots, crime and abuse. For privacy, women frequented the toilets early in the morning, where they were often subject to rape or assault. Now, with each house equipped with an individual toilet and washroom, not only is the housing upgraded, the slums are also nearly crime-free.

Alleviating poverty is a priority in developing countries but it consumes an enormous portion of national fiscal allocations and sustainability is often difficult, resulting in sporadic,







nonintegrated development. In Indore, major design innovations helped alleviate the poverty of the slums, and already similar networking programmes are taking place in such cities at Barodha, Ahmedabad, Jodhpur and Bombay.

A slum is an organic entity that grows, and if slum dwellers are evicted, they simply move. Slums are present in all cities, but once acknowledged they can become meaningful parts of a whole city. In Indore, the slums are a means to a solution. Recognizing and using nature's tools to upgrade and beautify people's environments, the Indore slum networking project strengthens people's right to have the basic necessity for human dignity: a home in their communities.







**ABOVE** The new sewers and water supply lines have improved life in the Indore slums. Slum dwellers are investing money and work in their communities and homes, meeting in community centres and taking pride in their accomplishments.

**RIGHT** A key factor to upgrading the slums was lowering the mud roads before paving them. The lowered streets and pathways now serve as natural drainage channels during heavy rainstorms, as well as improving the quality of life in the slums themselves by reducing the effects of dust and mud.

**OPPOSITE** Experience has shown that concrete roads are cheaper to build and easier to clean. The technology is such that local people are able to take part in the construction process.

