

Public Disclosure

## The Changing Nature of Infrastructure

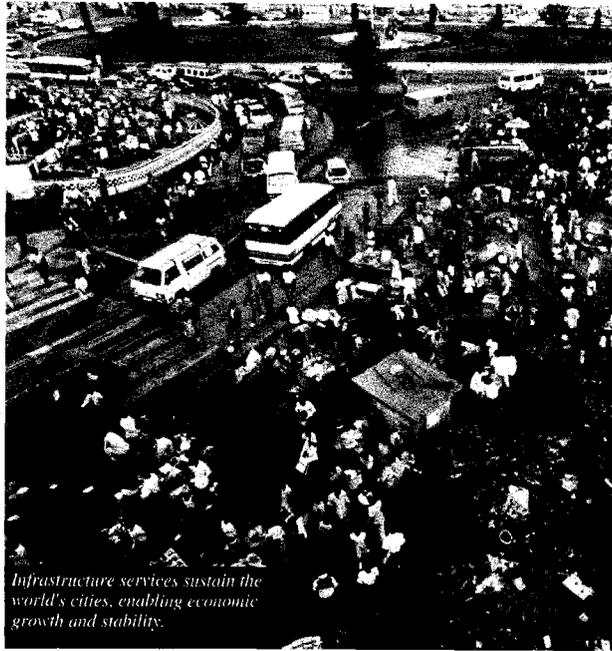
Infrastructure. The word conjures up images of concrete roads, steel girders, and metal pipelines. Over the years, it has been identified with huge physical projects—dams, sewerage tunnels, super highways, and electric utility plants. Such mega-projects have involved billions of dollars of capital costs and been evidence of a country's economic growth and prosperity.

Yet the view of infrastructure is changing. Prodded by deteriorating roadways and bridges, shrinking public finances, and a rash of natural disasters, cities in both developed and developing countries have begun to rethink the concept of infrastructure. Is it a static physical entity? A myriad collection of technologies and services? Necessarily a public sector activity? And why does it often seem to be in such poor shape?

These questions have led national governments and multilateral aid agencies to redefine the nature of infrastructure. Lenders are also grappling to understand why the vast sums of money spent on infrastructure over recent decades have not resulted in greater benefits in developing countries. Developing countries have allocated on average one-third to over one-half of public investment to infrastructure sectors, yet many still lack adequate services. Traffic clogs urban streets, water and sewerage facilities are nonexistent or vastly overworked, and utilities fail to provide reliable sources of power. Deteriorating infrastructure seriously constrains the productivity of many developing country cities through failing to attract private investment and in jeopardizing public health and safety.

The dilemma is not reserved solely for the developing world. In January 1993 the OECD hosted a meeting of experts to discuss infrastructure policies for the 1990s. Citing an infrastructure "overload" likely to increase in the next decade, the conference called for governments to make difficult decisions on how to improve efficiency, which projects to select, and how to finance them. The conclusion of the group was that infrastructure is a complex issue that seems to be requiring more and more lead-in time and planning.

With investment in infrastructure in the United States estimated at as high as \$1.4 trillion, concerns about its deterioration are also growing. A committee of the U.S. National Academy of Science's National Research Council calls infrastructure "a wide range of economic and social activities, a crucial enabling environment for economic growth and enhanced quality of life.... We must find new and imaginative ways," continues the committee, "to deal with the problems we have created for ourselves through past policies and programs. Doing nothing at all, simply waiting for the future, is intolerable."



Infrastructure services sustain the world's cities, enabling economic growth and stability.

### THE STAKES

Infrastructure services have taken on a new urgency, in part because they have a direct bearing on economic growth. Studies show that adequate infrastructure reduces the costs of production, which affects profitability, levels of output, and employment, particularly in small-scale businesses. When infrastructure "works," productivity and labor increases. When it does not work, economic renewal can be postponed or even halted. This is especially true of countries struggling with structural adjustment programs or hoping to restart a stagnant economy. In India, for example, it is perceived that the effects of the country's bold economic reforms could be foiled

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## LETTERS TO THE EDITOR

We welcome your comments, thoughts, and criticisms on future issues of the *Urban Age*. Below is a sampling of comments and suggestions received on our "Urban Entrepreneurs" issue.

Dear Editor:

I read with great interest the last issue of the *Urban Age* dedicated to urban entrepreneurs and the economy. As a Brazilian, I would like to add to the discussion the *Urban Age* has started.

The informal sector in Brazil has been seen as a sector that, while not generating salaried employment, does nevertheless generate products, services, and incomes for millions of people. In the 1970s economists and sociologists insisted on its role as a survival strategy for the urban poor and on its importance within the urban economy. Since the 1980s, however, scholars have been calling for reconsideration of the original concept of the informal economy. It is necessary to differentiate between the "informal sector of the poor" and the "underground or illegal economy" where different economic agents make use of sophisticated methods of hiding from taxes and tariff duties. It is believed that activities related to the narco-traffic have been inflating this illegal economy.

On the other hand, a new trend in the urban labor market has emerged that also calls for reconsideration of the social actors of the so-called informal economy. Data from the most recent National Household Surveys (PNADs) show that in urban areas self-employment has been growing much faster than salaried labor. Interestingly enough, it has been pointed out that such growth is not necessarily associated with the increasing impoverishment of the population nor with the expulsion from the formal labor market due to economic restructuring. In Rio de Janeiro, to give an example, it has been observed that the growth of self-employment has been higher between middle and upper-income groups than between the low-income population. Joining the informal sector are increasing numbers of professionals and white collar workers who made the shift for personal reasons.

If one is to consider policies for the informal sector, these types of "nuances" should be taken into account.

Licia Valladares  
Instituto Universitario de Pesquisas do Rio de Janeiro (IUPERJ), Rio de Janeiro, Brazil

Editor:

We would like to commend you on the thought-provoking articles in the latest issue of *The Urban Age*. The issue contributed to the World Bank's understanding of the needs of urban microenterprises and identified some of the more successful innovative institutional responses.

For the Bank, the discussion focuses on two key considerations: i) the services that microenterprises require to increase income,

create jobs, and contribute to economic growth, and ii) the implications for local financial institutions which face this dynamic, potentially profitable set of clients.

A recent review by the Gender and Poverty (GAP) Team of the Bank's project portfolio reveals that enterprise projects that reach women clients in the Asia Region are typically agriculture sector initiatives. For example 4 of the 27 projects from 1983 to 1992 were industry sector initiatives, and they represented only 6 percent of Bank lending.

Reluctance of Bank project designers and local financial institutions to support urban microenterprise initiatives could be due to a perception that urban low-income neighborhoods are unstable. It is true that there are often social and cultural differences between lenders and low-income borrowers. There is a legacy of subsidized credit, politically motivated lending programs, low repayment, credit diversion, and debt forgiveness in many countries. Urban areas are especially prone to some of these biases.

Despite such challenges, urban areas can be fertile ground for projects which provide appropriate services to enterprises. Transaction costs can be controlled, taking advantage of existing banking infrastructure. The experiences of PRODEM (Bolivia), ADEMI (Dominican Republic), and SEWA (India) have demonstrated that urban strategies may be especially effective in reaching women clients.

As the *Urban Age* articles show, it is critical to understand the needs of microenterprise operators and financial institutions in order to develop sustainable, mutually beneficial, dynamic relationships which will contribute to poverty reduction and economic growth in developing countries.

Lynn Bennett and Mike Goldberg  
The World Bank

## Editor's Note

In this issue we take a look at the changing nature of infrastructure, with particular focus on African efforts to improve the flow of services to users. Private-sector participation (through AGETIPs), the importance of "social infrastructure," and the growing numbers of technical exchange programs between cities are highlighted.

Our next issue (Summer 1993) will focus on the global problem of urban violence, particularly as it affects young people. We look forward to your comments on this issue, as well as suggestions for the upcoming one.

# Infrastructure: The Crux of Modern Urban Development

by Akin Mabogunje

Akin Mabogunje is an urban geographer and chair of the National Board of Community Banks in Lagos, Nigeria. He has taught at universities worldwide and has written extensively on city, regional, and national planning in Africa.

In all developing countries, particularly those in Africa, the acid test of efficiency in the management of cities is the state of infrastructural provision. How much of the road system in the city is tarred? How well maintained are those already tarred? What about water supply, is it available twenty-four hours a day? And electricity, how frequent are blackouts? Telecommunications—how much hassle is there to put a phone call through? Perhaps of more immediate impact on the visitor to the city is the state of environmental sanitation. How clean are the streets? How effective is refuse collection, particularly, refuse disposal? How is sewage and other effluent disposed of? How safe is drinking water? For many urban residents the ease of travel from home to the workplace and back is often of greater importance. How adequate are the mass transit transport facilities? How much scrambling must one engage in to get from one place to the other. How are the buses and minibuses managed and how costly are their services?

All these basic requirements of urban existence have not always been so. They are the product of modern urban industrial development. The pre-industrial city had very little need for most of these contrivances, partly because it was not so large, partly because there was not always a separation of home from workplace for the majority of inhabitants, and partly because the technological solutions for dealing with the environmental needs of their not-so-large population had not been perfected. It was true that the ancient world could boast of relatively large cities like Rome which had a population of over 100,000. Cities like Paris and Venice had also reached this figure by the 14th century. But by and large, most urban centers before the industrial era were small-scale affairs, with population varying from a few hundred to about 40,000 inhabitants.

Modern industrialism with its factories and mass production capabilities changed all that. The modern city became the creature of technology. Infrastructural provision on an extensive, continuous, and self-sustaining basis became a sine-qua-non for the efficiency of operations of urban enterprises and the liveability of cities. This provision, in turn, was characterized by technical indivisibilities and investment lumpiness. Water reservoirs must be provided to be adequate to serve a growing population over several years. They cannot be constructed incrementally on a yearly basis. The same thing can be said for an electricity power station, a telephone exchange, a refuse disposal site and so on.

Modern urban infrastructure thus gave rise to a quantum leap of change in the history of urbanization. It required that the management of the affairs of cities be placed on such a new footing that each city can pay to provide itself with these basic necessities. Starting with the Municipal Incorporation Act in Britain in 1835, cities everywhere in the world have had to engage in major urban reforms to ensure that they are in a position to raise adequate financial resources to pay for their infrastructure. Urban planning was also transformed to take account of the need to extend infrastructural facilities and services to individual plots of land within the city. The links between urban infrastructural provision, urban land administration, physical planning, taxation, service delivery, and urban management thus became an intricate and essential web in the development of the modern city. At the height of European colonization this complex relationship had come to be taken for granted. Large agglomerations of people were allowed to emerge in particular sites without a strong appreciation that this requires a major re-arrangement of the

affairs of such urban centers. Invariably, what such re-arrangement calls for is the greater democratic orientation of urban management allowing citizens to be easily mobilized and motivated to pay the installation and maintenance costs of their infrastructural needs without excessive evasion and delinquency. It also calls for better land administration, the development of fiscal and legal cadastre, a closely coordinated physical planning, and an effective taxation system. More than this, it necessitates an administrative orientation that enables urban residents to be able to see the close relation between the taxes and the fees that they pay and the services (and the quality of them) that they receive. In other words, the re-arrangement of affairs is towards making the management of cities more transparent and accountable.

African nations in the post-colonial period have gone through a period of increasing centralization when most of the functions of city administrations as providers of infrastructural needs were taken over by central or higher levels of government or handed over to parastatals. This created a degree of opaqueness in the management of their urban centers and is responsible to a significant extent for the poor state of infrastructural provision in many of these cities. The prevailing economic crisis in most of these countries is today inducing a better appreciation of the need to decentralize and to empower urban administration to render its fundamental obligations to its residents. Such empowerment must, however, go hand-in-hand with conceding to municipal authorities the autonomy to mobilize resources from all possible sources, including raising bonds on the capital market, so as to be able to provide their residents with adequate infrastructural facilities.

For this empowerment to yield the expected results, it must not stop at the level of only the municipal authority. It must permeate down to urban residents organized in their neighborhoods and wards. Residents must be kept fully informed of all proposed developments (infrastructural or otherwise) in the city and be allowed to have a voice in the decision-making, especially when this entails financial obligations for which they would eventually be responsible either by way of user-charges or increased taxation. The idea of a municipal authority or a state parastatal incurring a heavy investment burden through borrowed funds for improving the water supply system in a city without informing or securing the commitment of the residents to repay the debt over time is a classic recipe for fiscal delinquency and financial irresponsibility.

What this emphasizes is the close relations that must exist between the efficient provision of infrastructure and good municipal governance. A municipal authority that would provide and maintain its infrastructural facilities in good heart on a self-sustaining basis can do so only if its activities are transparent to its residents and subject to public accountability.

Urban reform has become a compelling priority in Africa in order to ensure that many cities provide their residents with the infrastructural facilities they require. The ability of African governments to see this reform through is bound to be the measure of how quickly their cities and metropolitan areas can become part of the rapidly evolving network of global cities of high and growing productivity.

*The ideas expressed in "World View" are not representative of any agency or organization, but reflect the personal comments of each author. They are included to stimulate lively debate and interaction on various issues in the developed and developing worlds.*

## INFRASTRUCTURE

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by shortages in electricity and communications. Not maintaining facilities also has its costs. In sub-Saharan Africa the World Bank estimates that the backlog of neglected maintenance for roads alone exceeds \$5 billion, more than seven times the annual spending needed to keep the roads in good shape.

In addition to economic considerations, inadequate infrastructure affects the health and well-being of citizens. The 1991 cholera epidemic in Peru (largely a result of improper sanitation) in eight months caused over 269,000 cases, 2,500 deaths, and hundreds of millions of dollars in lost revenue from tourism and exports. Sanitation problems in Lagos, Nigeria, are not dissimilar; only one-half of the city's domestic refuse generated daily is being collected. Throughout the developing world, less than one-half the population has access to safe drinking water. The unavailability of such services as water and sanitation is itself a measure of welfare; people *are* poor because they do not have access to basic necessary services. Infrastructure thus affects the dimensions of poverty; in developing countries it has become a central poverty issue.



In Olinda, Brazil, local labor was hired by the community association to construct low-cost sewers.

And finally, infrastructure has the power to determine the quality of life for residents, particularly in urban areas. Neighborhoods often arise around infrastructure services; they contribute to the community's cohesion and livelihood. And it can also be a cause and a solution to environmental concerns. Wasteful or environmentally damaging methods of delivering water or of using fuels or land can drain a country's financial and natural resources. Yet innovative transportation systems, such as those implemented in Curitiba, Brazil (see box, next page) can provide the public with reliable transportation with minimal damage to air quality. Transportation costs in Curitiba are also among the lowest in Brazil.

## A NEW DEFINITION

Given the importance of infrastructure, why has it apparently fallen into such disrepair? In large part, the dilemma results from a lack of attention to operations and maintenance of existing investments. The situation was made worse by the fiscal crisis of the 1980s. Decreases in expenditure, however, are not necessarily the reason behind the decline in performance. More important has been the static concept of infrastructure, which fails to recognize that infrastructure is an *on-going process* of delivering services. Funding of operation and maintenance, training and rewarding of staff to run facilities, and institutional and policy reform often have not been given adequate attention in project design. Emphasis instead has been on resources to construct and expand physical assets. Not as much time has been devoted to thinking through infrastructure's long-term up-keep, or even the genuine demand for the services. Although this imbalance has begun to be corrected, recent independent studies have shown that the *implementation* of projects has been woefully inadequate; in laypersons' terms, this means that the "flow" of services, such as for operation and maintenance, has been neglected.

The World Bank, in a recent review of its lending in the sector, calls for a new focus on this "flow of services," as well as on the demands of users and their willingness to pay for services. The report calls for greater use of the private sector and encourages community participation in project design. "Many infrastructure services do not have good sustainability over the long-term," says Christine Kessides, leader of the team who prepared the new report. "We need to focus more on end-user performance and give attention to the *quality* of services being delivered. Stressing the need to respond to customers implies an enormous psychological shift in the way infrastructure is delivered."

The new focus on "customers" shows that agencies are realizing that the end result, or the value gained by those who receive the services, is a more reliable indicator of a project's long-term success than are supply-side, top-down indicators. Do the people served need and want the services enough to pay for them and to be involved in their upkeep? Is it the kind of service they need and at a price they can afford? By responding to "effective demand," which has its roots in community participation and a participatory style of planning, infrastructure projects can avoid the pitfall of being constructed without input from users who will be responsible for its upkeep and maintenance. With public finances stretched to the limit in many countries, users' willingness to pay for on-going services has become a crucial ingredient in project design.

## GETTING THE COMMUNITY INVOLVED

Yet matching supply, or the availability of infrastructure, with the demand for it has been extremely difficult. Despite large supply-side investments, basic needs among low-income groups still are not being met, in part because of demographic pressure and rapid urbanization. Unserved communities, recognizing that the only way to afford and maintain services is to provide it themselves, are in some cases taking the initiative to construct, pay-for, and maintain their own services.

For example, in 1983 the municipal government in Recife, Brazil, began an environmental upgrading project in Olinda (a city of 400,000 in the metropolitan area of Recife). The project was launched in a slum neighborhood where the community association hired local labor to carry out drainage works using low-cost materials produced through newly created microenterprises in the area. Neighborhood residents were responsible for maintaining the works. While initial concerns were voiced through a community association for the larger area and through

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political leaders, the project stimulated the creation of a dwellers' council within the pilot slum neighborhood. The city supported community involvement by creating a special project unit within the municipal urbanization company that provided training and public education in addition to urban upgrading. The project continues to supply the community with improved drainage, solid waste collection, low-cost sanitation, and road upgrading.

Another example is in the informal settlement of Dharavi in Bombay, India (approximately 400,000 people), which in 1979 formed a local organization called PROUD to improve its living conditions. Today, PROUD is a well-established, active organization made up of 150 neighborhood committees that meet monthly to discuss local problems and plan solutions. Problems that cannot be solved within this committee are referred to one of five area councils; these councils are further represented in an executive committee which formulates policies and implements programs in the settlement. Because of PROUD's strong base of support among residents, it has been effective in petitioning municipal authorities for environmental improvements and blocking plans for demolitions and development that would adversely affect the community.

The importance of community participation is being recognized in industrialized countries as well. In the South Bronx, New York, an integrated plan for a \$2 billion redevelopment project has been held up so that community groups can participate in the design of a community housing project (see story, pg. 13). The original design by the city failed to take community needs into consideration, especially regarding relocation of residents. With the backing of the Bronx Borough President, the original design was scrapped, and the community, under the banner of the Nos Que Damos (We Will Stay) committee, is redesigning the project with the help of technical and professional expertise provided on a pro bono basis. City agencies have agreed to accept the committee's recommendations provided they meet certain legal requirements, such as for environmental impact statements.

### A NEW FORM OF GOVERNMENT

Government reform over the long-term is as important as community involvement in improving the state of infrastructure. In the past, providing traditional forms of infrastructure—roads, garbage collection, utilities, water supply—has been largely the domain of government bureaucracies. Such bureaucracies rarely are held to cost accounting and strict revenue constraints. Through bringing commercial practices into the sector, the mind-set toward what infrastructure should be changes. Instead of an inefficient drain on government resources, infrastructure could be seen as an "industry," able to generate revenue and satisfy a demand for services. "Even though most of infrastructure will remain publicly-owned and some of it has a legitimate need for public subsidies," says Kessides, "there is no reason that it can't be managed in the same way commercial enterprises are managed."

A major problem has also been that governments have interpreted the "public interest" in infrastructure to mean that governments should be the main suppliers of infrastructure and extensively control any private involvement. Governments, according to the World Bank study, must be willing to stand back in some instances and allow the private sector to take on tasks it handles best. "Where an activity lends itself to competition, for example," continues Kessides, "government shouldn't prevent the entry of the private sector into the process." Other commercial aspects such as the use of market incentives (based on pricing through user charges) can be used to improve performance. The main task of government therefore is to provide an *environment* that promotes competition, efficiency, and participation. This enabling approach allows

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### Transportation in Curitiba, Brazil\*

Curitiba's road network and public transport systems are probably the most influential elements contributing to the current shape of the city. Its public transport system was developed over a 20-year period beginning in the 1970s when city authorities began implementing an urban design that emphasized linear growth along structural axes. At the same time, they worked to pass land-use legislation for the transportation plan to be implemented.

According to the plan, urban growth has been encouraged along five main axes with "structural" roads. Each axis was designed as a "trinary" road system. The central road has two restricted bus lanes in the center for express buses flanked by two local roads. On each side of this central road, one-block away, are high capacity free-flowing one-way roads, one for traffic flowing into the city, the other for traffic flowing out of the city. In the areas adjacent to each axis, the land-use legislation has encouraged high density occupation, together with services and commerce.

The plan was created to encourage the use of buses rather than metrolines or light railways. Buses are color-coded: express buses are red; inter-district buses are green; and the conventional feeder buses yellow. People can easily transfer from local buses to the express buses and back to other buses; large terminals are located at each end of the five express busways for transfers. One single fare is valid for all buses within the city. Despite having some 500,000 cars (more per capita than any other major Brazilian city), Curitiba does not have a traffic problem; its public transportation system is used by more than 1.3 million passengers each day. The system accounts for the city having one of the lowest rates of ambient air pollution in the country, and residents spend approximately 10 percent of their income on transport, a relatively low proportion for Brazil.

\* Drawn from "Curitiba, Brazil, Environmental Case Study" by Jonas Rabinovitch, Instituto de Pesquisa e Planejamento Urbana de Curitiba

flexibility and more carefully targeted projects. It also narrows the gap between the supply of services and effective user demand for those services.

An example of an evolving change in government responsibilities toward infrastructure can be found in Sri Lanka. In 1975 the Department of Water Supply and Drainage, located within the Ministry of Local Government, Housing and Construction, was almost entirely devoted to performing capital construction projects. In 1984 it was transformed into an autonomous body with responsibility for developing and operating water supply and piped sewerage. By late 1984 the company was functioning reasonably well in terms of constructing new schemes but had been unable to shift its role from a focus on capital projects to operation and maintenance and consumer billing. In 1985, with the help of development assistance, the company began to develop corporate planning, regional decentralization, improved operation and maintenance, improved financial management, and customer relations. The department has succeeded in shifting from an engineering orientation to an operation, maintenance, and commercial orientation. Collections and billings have increased, consumer complaints decreased, and the percentage of unaccounted for water has lessened. Although outside input to the project was key, its sustainability is due to the decentralization of responsibility to regional centers and the establishment of effective corporate management capability in the institution.

### INNOVATIVE METHODS

Tools for implementing greater participation by the private sector and encouraging innovative government programs have been tried in several developing countries. Under the "public enterprise/public utility" arrangement (as illustrated by the Sri Lanka case cited above) infrastructure services are turned over to autonomous or semi-

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autonomous public corporations. For this to produce incentives for good performance, the agencies must be given separate budgets and financial autonomy based on tariff revenues, and the managerial autonomy to act as a business. "Service contracting," as illustrated by the AGETIP example (see story pg. 9) occurs when specific operations and maintenance are contracted out to the private sector; "management contracting" when responsibilities given to the private sector encompass a broad scope of operations and maintenance for longer periods of time. Through "lease contracting," private companies lease equipment from public agencies, or pay public owners for the exclusive rights to operate facilities for a period of time. And finally, "concessions" allow contractors to have all the obligations of lease contractors but with the added responsibility to extend or replace fixed assets.

There is evidence as well that it is not as important who "owns" the services as it is to have clear and distinct lines of responsibility separating ownership, operation, and regulation. In France and Germany, for example, public services such as water supply and sanitation have traditionally been provided by public or mixed-ownership corporations under contract with municipalities to perform operation and maintenance. Similar approaches are being used in a lease contract for water supply in Guinea and for power in Côte d'Ivoire. Likewise, ownership and regulation by strong local governments can help to ensure that an environmental agenda can be pursued effectively. Greater participation and involvement by NGOs should be prominent *at the outset* of a project and not as an add on. "Good governance" or self-government through whatever local community organizations have the support of the population is essential to allow cost recovery and ensure support for environmental protection, which can be costly.

Another condition that should exist according to the World Bank's sector policy paper, is to encourage competition (even between public and private operators). This requires disclosure of information (about the condition of fixed assets, for example) and a transparent process of bidding for contracts. Second, regulatory policies should be based on a clear rationale for government intervention in determining the conditions for entry and/or tariff setting. In many cases, the possibility of competition eliminates the need for government to exercise intensive regulatory oversight. Regulation does not always require a separate agency to be created for this purpose, but can also be exercised effectively through designing and enforcing a specific contract, such as for a lease or concession for urban water services. A basic prerequisite for regulation is a stable, predictable legal framework which is enforced, especially regarding property rights, liability, and contracting. Finally, infrastructure is more likely to be economically efficient, and to have favorable impacts on the environment, when it is subject to *user charges*. The absence of user charges has often not promoted access to services by the poor, but rather reduced availability and worsened inequalities. User charges should be based on economic prices reflecting both costs of supply and demand considerations (willingness to pay).

### A QUESTION OF VALUES

Nuts and bolts aside, the changing nature of infrastructure carries with it a profound look into the future. Increasingly, people in both developed and developing countries will have to look beyond the tangible capital



The "waiting game." Commuters in Lagos, Nigeria trying to get to work are faced with endless queues and delays.

assets of infrastructure to create networks of services that run the gamut from airports to energy supply to landfills to waste treatment plants. New technologies have the power to change our daily lives, much the same way the automobile and airplane changed the lives of those living in the twentieth century. "The virtue of infrastructure is its flexibility," writes Herbert Muschamp of *The New York Times*, "It can be expanded to embrace, and to join together, many elements of the built environment, including housing, transportation, and public space."

William Morrish and Catherine Brown, architects/planners at the University of Minnesota, in an article for the French publication *Urbanisme* call infrastructure "the systemic framework which underpins a community's ability to fulfill its mission of providing a base for its citizens to be productive and to nurture social equity." Restoration of infrastructure signifies a renewal of a country's culture and value system, in much the same way as does the building of monuments or the design of museums. In the end, the revival of deteriorated infrastructures can have as much to do with peoples' priorities and values as with engineering properties or economic ambitions. "Infrastructure is a kind of public trust or common wealth that should manifest something more than the sum of its parts," writes Nancy Connery, a member of the U.S. National Academy Committee on Infrastructure. "It serves as a slender thread that weaves together human needs and values with those of our environment." This translates into a shared commitment to people, their well-being, and the quality of their lives.

— Mary McNei

# Technical Exchange: The Raleigh-Tetouan Experience

by Robert MacLeod

Robert MacLeod is an environmental advisor with USAID's Office of Housing and Urban Programs.

The call to "Think globally, act locally" is more than a politically correct bumper sticker in the U.S. city of Raleigh, North Carolina.

Through an outreach program initiated by the U.S. Agency for International Development (USAID), Raleigh not only thinks globally but acts globally, too. Its partner is Tetouan, a bustling city on Morocco's northern coast. What binds this unlikely pair is a shared concern for garbage and sewage.

In March 1992, the mayor of Raleigh and the president of the Council of Tetouan met in North Carolina and signed a formal Agreement of International Cooperation. At the heart of this agreement was the resolve to find practical solutions to problems associated with municipal waste management. Raleigh brought to the table expertise and access to state-of-the-art technology. Tetouan brought a roster of challenging solid and liquid waste-related problems. The Moroccans also demonstrated an all important willingness to address these problems. Says Carl Simons of Raleigh's Public Works Department, "The municipality is fortunate to have these young, dedicated professionals in this division to carry out their management responsibilities. Everyone seems to be extremely interested in learning new techniques to improve their ability to provide better and more efficient services to the citizens of Tetouan."

The Raleigh-Tetouan twinning arrangement evolved from an urban infrastructure project in Tetouan.

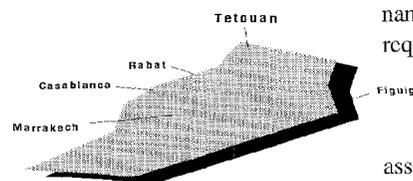
Under this program, two of the city's largest low-income neighborhoods will be improved through the construction of new roads, sewer trunk lines, and a potable water distribution system.

In addition, the project is supporting the development of a Sewerage Master Plan to assist the municipality select the most appropriate technology for a future wastewater treatment plant.

To facilitate the implementation of the Sewerage Master Plan, USAID, in collaboration with the International City Management Association, looked to the City of Raleigh for guidance. Raleigh was an ideal candidate; it is comparable in size to Tetouan and has been recognized by the U.S. Environmental Protection Agency as one of the best managed sewerage systems in the United States. Raleigh agreed to share its lessons learned in waste management with Tetouan. It has been a dynamic and fruitful union.

One achievement has been the restructuring of Tetouan's Technical Services Division into smaller, more efficient and manageable departments. For example, responsibility for solid and liquid waste management has been consolidated under the newly created Environmental Services Department.

The result of this split has been to refocus human and financial resources into a department that not only oversees the day-to-day



**Morocco**  
Population 1990 = 25.1 million.  
Growth rate 1993 est. = 2.4%.  
Urban population in 1990 as a percentage of the total = 48%.  
GNP = \$950

business of waste management, but also plays an important role in establishing long-term waste management policies and strategies. According to Abdelhak Drissi, Tetouan's Director of



The Mayor of Tetouan and the Mayor of Raleigh sign an agreement of international cooperation.

Environmental Services, giving the department autonomy and a broader mandate to plan for the future are key components of a more effective system.

In addition to improving management skills through hands-on technical assistance, the program features another, more tangible component: equipment. On March 31, 1993, representatives of both cities met again, this time in Tetouan, to sign a Program Agreement. Under the terms of this second agreement, a \$600,000 letter of credit has been extended to the City of Raleigh for the purchase of sewer line maintenance equipment and items required for a water quality testing laboratory.

The program works like this. Based on previous needs assessments, the City of Raleigh prepares a draft purchase order for equipment and materials specifying quantities and costs. Tetouan subsequently reviews and approves this order. Raleigh then applies its standard bidding procedures to acquire the equipment in the United States for shipment to Morocco. All items purchased under this agreement enter Morocco duty free. Once the

equipment reaches Tetouan, Raleigh provides follow-up technical assistance to ensure that the equipment is installed and maintained properly.

What distinguishes the Tetouan-Raleigh program from other technical assistance programs is its shared-ownership quality. Despite a generous commodity component, the program's success can be attributed to the good will that has been established between the leadership and citizens of Tetouan and Raleigh. The high profile nature of entering into an International Agreement of Cooperation, coupled with the program's focus on environmental quality, provides a solid foundation for sustained commitment by both cities. In effect, ownership of the program belongs to the cities themselves. Currently, efforts are focused on replicating the Tetouan-Raleigh twinning experience in Thailand and Jamaica.

UA

# Guinea-Bissau: Social Infrastructure Project Develops Schools, Hospitals

by Ephim Shluger

*Ephim Shluger, a Brazilian architect, lived in Guinea-Bissau and was coordinator of the SIRP.*

Most Guineans live in extreme poverty and social deprivation. The country has one of the worst social indicators for health, infant mortality, life expectancy, and the status of women in the world. Per capita income is estimated at US\$190 and life expectancy at birth is less than 46. The illiteracy rate is estimated at 70 percent; and about 60 percent of school age children do not attend schools.

To mitigate the adverse effects of structural adjustment programs, the government in 1989 launched the Social and Infrastructural Relief Project (SIRP). The project's main goal was to rehabilitate "social infrastructure"—schools, hospitals, clinics, and water and sewerage plants which were deteriorating due to limited government resources. The project was entrusted to the Ministry of Public Works, Planning, and International Cooperation, which worked closely with the Ministry of Education, the Ministry of Health and Social Assistance, and the Municipal Authority of Bissau. In addition to constructing up to 200 physical projects, SIRP was to create approximately 2,400 jobs during three years of implementation, mostly through public works contracts. In addition, skills training programs were to be designed as a way of improving opportunities for job placement in a market that increasingly demanded a higher quality of skilled labor.

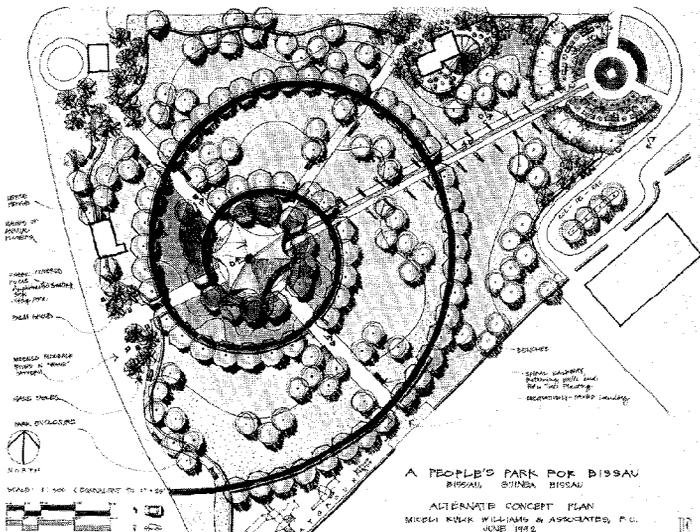
The project has rehabilitated and added new facilities to public schools, health centers and regional hospitals, public markets, dirt roads and paving of sidewalks, extended storm water drainage and built community water supply systems and promoted environmental sanitation in Bissau. In the education sector, 270 classrooms were rebuilt or added; roughly 16,000 students and 560 teachers are direct beneficiaries of these improvements each year. In the public health sector, three regional hospitals, in Bafatá, Gabú, and Bolama and three health centers, in Bissorã, Quinhamel, and Bambadinca, were rehabilitated. These works will provide direct health care access to residents in the provinces, substantially alleviating the demands currently imposed on the hospitals of Bissau. These facilities have also been upgraded by the provision of new equipment and furniture, and a supply of essential drugs procured under the SIRP.



A new public water supply system is installed in Ponta Nova, Guinea-Bissau.

Even though the project was never envisioned to assist in public sector reform, it has nonetheless improved and strengthened managerial capacity; most of the national technical staff employed on the projects have first-hand exposure with more advanced forms of project management and implementation strategies. Yet the concern remains that the maintenance of rehabilitated buildings will suffer degradation once the construction phase is completed; the sustainability of public services in light of limited budgetary resources and general institutional weakness threatens their long-term existence. Similarly, few of the public services have adequate mechanisms for cost-recovery. Machinery breaks down and spare parts are scarce; there is an ongoing shortage of trained workers and shortages of fuel to operate physical plants. To address these issues will require setting up a system of user charges.

As for the long term, sustainable development of public infrastructure and delivery of social services will largely depend on the reforms of the public sector and, particularly, in generating additional resources and securing their proper allocation. For instance, implementing a more efficient collection and realistic levels of user-charges—needed for covering the rise of recurrent costs—would have lasting effects on quality, volume, and frequency of drinking water and sanitation services, as well as for public health care and education programs.



Project plans include the construction of a people's park to provide greenspace and an area for concerts and events.

# AGETIP: Private-Sector Management Takes Root in Africa

by Leslie Péan

Leslie Péan is an urban economist in the Africa Infrastructure Operations Division of the World Bank.

Providing urban services, such as schools and clinics, road maintenance, sanitation, and drainage is an important prerequisite to ensuring and maintaining healthy living conditions, promoting a safe environment, and encouraging economic activities. Until recently, these services often have been supplied inefficiently by the public sector through force account, or direct contracting, a system plagued by the vicious cycle of low productivity, payment delays, and high unit costs. Moreover, the policies of the public sector have not properly addressed the problem of unemployment among the urban poor who are swelling the inner cities. This problem has been accentuated in the short term by structural adjustment measures.

The Agence d'Exécution des Travaux d'Intérêt Public, currently known under the French acronym of AGETIP, is a Public Works Executing Agency. The first AGETIP was created in Senegal in 1989 and the Public Works and Employment project was launched in March 1990. Today, similar projects are being executed in five other African countries (Niger, Benin, Burkina Faso, Mali, Mauritania) while four are being prepared in other countries (Gambia, Chad, Madagascar, Togo). These executing agencies are privately managed legal entities that enter into a contractual arrangement with the central government for executing infrastructure projects. The contractual arrangement is stipulated in several documents, among which are an agreement and a manual of procedures defining the duties and responsibilities of the two parties. The main contribution of the manual of procedures is that it provides a solid organizational set-up and guide for the project. These guidelines ensure that projects stay on course when socio-political and economic forces try to pull it in different directions.

Municipal and central governments sign specific delegated contract management agreements with AGETIP each time they submit a project for execution. The delegated contract management framework incorporates institutional arrangements that give AGETIP's managers the independence and autonomy needed to run an efficient, impartial, and transparent operation. The coherent legal regime of a not-for-profit entity, reflecting the French Law of 1901 or the US 501-C3 type organization, is applied to shelter AGETIP-type structures from political pressures. According to AGETIP Executive Director, Magatte Wade, independence from political interference is a

central prerequisite to ensuring that operations will be run efficiently and effectively (see box).

AGETIP is an alternative way for providing needed urban public services. It relies on private-sector principles and companies while encouraging efficient employment creation. With the support of a 20-member professional staff, Senegal's AGETIP i) hires consultants to

## Q & A

### An Interview with Magatte Wade, Executive Director of AGETIP, Dakar, Senegal

**UA:** Why do you think AGETIP works as well as it does?

**Wade:** AGETIP is based on the "owner's delegate" concept, which delegates authority for providing needed infrastructure services to the private sector. The government doesn't interfere in the operation of the company; the owner's delegate concept gives autonomy and protection to AGETIP so that it can operate like a small enterprise.

**UA:** One of the benefits of the AGETIP concept is that it uses labor-intensive methods, generating employment among low-income groups. How does this work?

**Wade:** We keep a roster of entrepreneurs and local consultants. When a project comes up, we have it designed to require that between 20 to 50 percent of the funds available should go to salaries, thus ensuring that we deal with the employment issue. This also promotes small enterprises working in the construction business. We have an obligation to recruit people in a labor-intensive manner; not to do the work through the use of heavy machinery.

**UA:** How does it work to create employment for youth in urban areas?

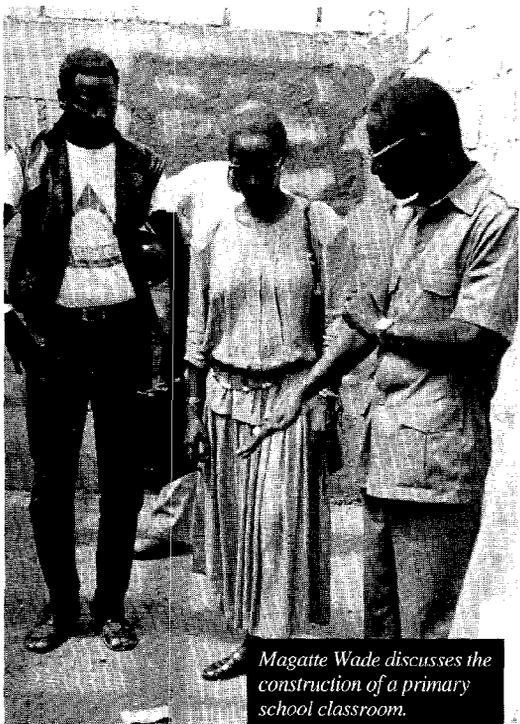
**Wade:** We hire young people who, although they have little training, are able to work on labor-intensive projects. We can hire them on a short-term basis, and then keep them on our rosters. For many young people this is a good arrangement.

**UA:** What is the starting point for getting projects similar to AGETIP launched in other African countries.

**Wade:** For us in Senegal, the concept was given a chance because the President was willing to be aggressive about employment issues. The owner's delegate concept involved us working through the public sector while still making use of the private sector. For me, an essential prerequisite is that there be an open political mind to the idea. If you have any restrictions that prohibit you working like a private company, it is better not to become involved in the concept.

prepare designs and bidding documents and to supervise works; it ii) issues calls for bids, evaluates and adjudicates the bids, and signs the contracts; and it iii) evaluates progress, pays the contractors, and represents the owner at the final handover of the works. The "contracting-out" approach creates demand for the services of local contracting and consulting industries, stimulating their development.

continued on page 10 ►



Magatte Wade discusses the construction of a primary school classroom.

AGETIP currently has 980 local contractors and 260 local consultants on its roster.

AGETIP uses an integrated approach that takes into account the limited output of small contractors, the existence of an unlimited supply of laborers, the weak project-identification capability of local governments, and the availability of consultants, architects, and consulting engineers. These constraints are carefully evaluated to design works in such a way as to promote competition while facilitating access to small contractors. Project eligibility and selection criteria are spelled out, with particular emphasis on labor-intensive methods (labor costs must exceed 20 percent of total estimated project costs). Open competitive bidding weeds out wasteful and inefficient operators. In addition, AGETIP looks not only at the management aspects of executing public works but also at the accompanying measures necessary to help municipalities, contractors, consulting engineers, and the population at large to participate in implementing projects.

As of January 1993, Senegal's AGETIP had implemented 330 projects for a total amount of US\$54,788,000. These projects are located in 78 municipalities and have created 50,600 temporary jobs corresponding to 1,585,000 man/days of employment, or an average job duration of 31 days, and 1,500 permanent jobs. The wage bill represents US\$12 million or 22.2 percent of total project costs. Over half of the projects executed have dealt with the environment (drainage, garbage collection, canal clearing, sidewalks, and road maintenance), 13 percent were for community infrastructure, 19 percent for public infrastructure, and 7 percent each for health and education.

AGETIP takes pride in paying contractors in ten days compared with the months taken by public entities. These results are obtained with an extremely low overhead, roughly 4.8 percent of its turnover. This performance is owed to a management information system and to a sense of accountability that allows for decision making to be made without delay. At any time, AGETIP's managers know what the situation is for every project, supplier, payment, voucher, and bill. The consolidated project accounts of AGETIP are audited financially every six months by an independent auditor. AGETIP also submits to bi-monthly management audits and to an annual technical audit.

The success of AGETIP cannot be disconnected from project design. As the instrument for implementing public works projects, AGETIP is an intermediary for reducing market imperfections and restrictions that impede a large demand (coming from the public works market) to be met by a small and fragmented supply. The viability of the system is tested through executing selected pilot projects to uncover potential problems that would prevent it from functioning effectively.

The project is also designed to provide needed financial resources in the form of grants, mainly to local governments, for basic capital and rehabilitation works. By helping local governments supply services to their citizens, the public works project gives local authorities the capacity to raise revenues since they are meeting basic local service needs. AGETIP also serves as a link between the local government and the private sector, providing basic services in urban areas. The boost given to the private sector is expected to have a multiplier effect and to increase even further the revenue base of local government, allowing, in the medium term, for maintenance works to be financed through local resource mobilization.

The demonstration effect of AGETIP on institutional development cannot be overstated. Central and local government are inspired by the approach to restructure certain government functions to make them more responsive to their citizens. The involvement of women, nongovernmental organizations (NGOs) and neighborhood groups known as

Groupements d'Intérêt Economique (GIE) in executing works and services for AGETIP provides an element of ownership that in turn represents the first step in ensuring the maintenance of completed works. Along with an information/education campaign for the population, this involvement is vital for harnessing the stifled "critical mass" needed for good governance.

The AGETIPs recently met in Ouagadougou to create AFRICATIP, a network to exchange experience and a forum to critically examine and fine-tune the "machinery" to maximize its usefulness to meet the urban challenge. Coordination between executing agencies is important not only to maintain the orientation of these public works programs but also to get the most from AGETIP in terms of urban management.

## Africa Regional Program Launch Workshop

More than 75 city managers, urban planners, and other specialists from 20 Sub-Saharan countries met January 11-15 in Nairobi, Kenya, to launch the African regional component of the Urban Management Programme.

The meeting, held in a bilingual format, addressed the political, institutional, and socioeconomic concerns of African cities. Participants were interested in finding out where and how they can have an impact on development and stressed the importance of implementing good policies in the areas of urban environment, municipal finance and administration, infrastructure, poverty alleviation, and land. Of chief concern was the negative image of African cities and how to change that image. Professor Akin Mabogunje, an urban geographer and one of the chairs of the meeting, talked about the need to develop an "urban culture" in African cities and to improve on Africans' sense of belonging to communities in urban areas.

Through the regional program, a network of African urban experts will be established to exchange information across the region. The aim is for African cities to benefit from the knowledge and experience of other African cities to create a more unified approach to urban problems.

The office for the new regional program will be in Accra, Ghana. For more information contact Alioune Badiane, Africa Regional Coordinator, Urban Management Programme, 35 Boulevard Circulaire, BP 7518, Lomé, Togo.

## Correction

In the Community's Speaks column of the winter issue, we reported that the surveys conducted by the Social Weather Station in Quezon City contain a sample size of 100 households. This should be "...1,200 households, at the national level

and approximately 300 at the city level." Also, SWS though located at the Philippine Social Science Center, is not affiliated with the University of the Philippines.

# Community Revitalization in the South Bronx

The South Bronx is one of five boroughs in the City of New York and home to more than half a million people. Years of urban deterioration, abandonment, arson, suburban flight, and drug trafficking have plagued the area, giving it an unduly tarnished public image. The French have coined the phrase "C'est quoi? Ce Bronx?," which literally means "What is this, the Bronx?" when describing disastrous situations, and when former U.S. President Jimmy Carter visited the area in the 1970s he declared it an urban war zone.

Despite this appearance, the South Bronx has a vibrancy and diversity that belies its reputation. The most recent evidence of this is a new plan for a "South Bronx renaissance" that goes beyond the massively subsidized low-income housing projects of previous years. Through this new plan, local people, including community advocates, educators, and business leaders are meeting with the city government, politicians, and planners to forge a new alliance. Its goal: to develop the area with the interests of the people who live and work in it as a top priority.

The effort was launched by Bronx Borough President Fernando Ferrer, who in the spring of 1992 appointed a Bronx Center Steering Committee to oversee the integration of various development projects already slated for the area. Ferrer's purpose was to create "an active consensus-building" atmosphere that would benefit neighborhoods from the bottom up. A crucial element to the project was that the community's voice be heard *early on* in the development process.

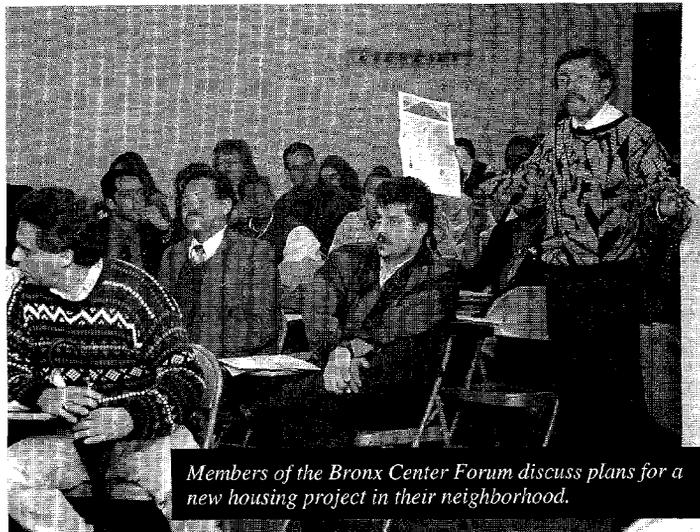
The Steering Committee, chaired by Richard Kahan, president of the Urban Assembly, a non-profit organization that works to form consensus among urban constituencies, is made up of a diverse group of business leaders, educators, local residents, borough officials, and community development specialists. A working group provides hands-on assistance to the project in five areas: housing, open space and urban design; education and culture; transportation; health and human services; and economic development. The chairs of the working groups work on a pro-bono basis; they attend public hearings and bring their professional expertise to the community without vested interests.

## Pratt Institute Center for Community and Environmental Development

The Bronx Center project was launched with the help of the Pratt Institute Center for Community and Environmental Development (PICCED), which along with the Bronx Borough President's Office and the Municipal Arts Society of New York, was involved in its early planning stages.

Launched in 1963, the PICCED is an independent non-profit organization that uses the professional skills of architects and planners to help low- and moderate-income communities combat poverty. It does so by addressing the social and economic conditions of communities rather than their physical infrastructures. Working closely with community-based organizations and their constituencies, PICCED offers education and training and technical assistance on urban development projects. It emphasizes coalition building and empowerment of communities through "ownership" of the community development process. In helping to prepare guidelines for the community participation component of the Bronx Center project, PICCED encouraged early on and frequent dialogue with the community, culminating in an on-going "Bronx Center Forum" that would continue to provide a vehicle for residents to monitor and voice their concerns over the development process.

During neighborhood meetings, residents have voiced a litany of concerns they would like to see addressed as part of the project. These include better schools, job development, and youth programs. Another concern is that rather than "building-up" the community,



Members of the Bronx Center Forum discuss plans for a new housing project in their neighborhood.

the project will "build-over" the downtown area, forcing out residents who may not want to relocate or who could not afford the higher real estate costs development would bring. These fears were expressed through a committee of residents, the No Que Damos (We Will Stay) Committee, which succeeded in halting design plans for a housing and development project, Melrose Commons, that would displace 350 residents and 80 businesses. The community is now working with city officials to redesign the complex.

According to Kahan, the Bronx Center project differs from previous attempts at revitalizing the area because it isn't looking for "gentrification" of the Bronx, or to entice middle and upper-income residents of Manhattan to the borough. Instead, its aim is to bring economic and social benefits into the community that flow directly to the people who are already living there. For example, the Steering Committee is fighting to ensure that construction of new facilities be done by local firms; a slated new police academy will provide training for paralegals; "clusters" of health and child-care facilities are planned where services are accessible and available at one site; and community banking schemes are planned to improve residents access to credit.

Genevieve Brooks, the deputy borough president agrees with Kahan that a holistic approach is needed based on short and long-term objectives. In the past, our "institutions did not realize that human infrastructure needs to be dealt with along with physical infrastructure," says Brooks. "Our job is to empower the people and to help them know what their rights are."

## INTERNATIONAL CONFERENCE ON LAND REGULARIZATION

From February 24 to 26 the Institut Francais d'Amerique Latine (IFAL) and the University of Mexico (UNAM) hosted a meeting of experts in Mexico City to review land regularization issues in developing countries. Case studies of Delhi and Bhopal, India; Bangkok, Thailand; Cordoba, Argentina; Lima, Peru; São Paulo and Recife, Brazil; Santiago, Chile; and Santo Domingo and Chalco, Mexico, were presented.

The meeting attempted to better define what makes up a successful regularization program and the main bottlenecks preventing their implementation. Land regularization, it was concluded, should be part of a housing policy package and seen as a tool for unlocking land markets and reducing distortions in markets such as rents, revision of regulatory frameworks, diversification of channels of production for serviced land, and housing finance.

Participants in the conference addressed the following issues:

- What is the scale of regularization in proportion with the problem?
- To what extent has it improved access to land by the poor?
- To what extent has it opened up opportunities in the city?
- Who benefits and who bears the cost?
- Is it matched by increased state responsibility and accountability for land supply for the poor or has it led to a reduction of the role of the state?
- What should actually be the role of the central and local governments in such programs?
- To what extent has it meant changes in wide urban policy (procedures, laws)?

- Are the efforts required proportionate to the scale of benefits?

Proceedings of the conference and a synthesis report are now under preparation in English, Spanish, and French. Lessons learned through the case studies will be available in an upcoming Urban Management Programme publication.

— Catherine Farvacque-Vitkovic

For more details contact: Coordinating Bureau, 7 Rue Santé Garibaldi, 33000 Bordeaux, France, Tél.: 33.56.99.15.86, Fac.: 33.56.99.15.85

## NEW DIRECTIONS FOR URBAN RESEARCH DISCUSSED IN CAIRO

Since June 1991, a global project involving leading urban researchers in Asia, Africa, and Latin America has been underway. The project, entitled "Urban Research in the Developing World: Towards an Agenda for the 1990s," is supported by the Ford Foundation in New York and coordinated by the Centre for Urban and Community Studies, University of Toronto. Its purpose is to review and reconsider urban research in light of massive changes in the urban landscape of the developing world.

Following an organizing meeting in Toronto in July 1991, twelve sub-regional workshops were held in Beijing, Jakarta, Dhaka, Delhi, Cairo, Dar es Salaam, Johannesburg, Abidjan, Ibadan, Santiago, Rio de Janeiro, and Mexico City during 1992. In each of the workshops, discussions were held on the past trends of urban research (1960 to 1990). Emerging urban problems were identified, and the future needs and priority areas for urban research in the 1990s were

discussed. Each group of researchers then prepared overview papers on urban research for each of the twelve sub-regions.

On February 14th participants met in Cairo for five days to discuss an urban research agenda for the 1990s. Among the approximately fifty people attending were twelve researchers who presented papers on urban research in each of their sub-regions and the priority areas for research in the 1990s. Six members of the project's international advisory panel presented a set of thematic papers. Also attending were representatives of a number of international agencies that expressed interest in hearing the sub-regional reports and discussing the urban research agendas to be established at the meeting.

The sub-regional and regional agendas for future urban research were presented by the researchers in Cairo. A list of these common items include:

- **Globalization** including the impacts of structural adjustment programs on cities.
- **Governance** including democratic representation and accountability, new forms of urban management, planning, and the nature of civil society.
- **Urban Poverty** alleviation and issues of equality.
- **Urban Economy** including the formal and informal sectors, labor markets, new technologies and readjustment.
- **Urban Social Structure** including new social groups, new grassroots organizations, gender, ecological movements, and children.
- **Urban Finance.**
- **Urban Environment and Sustainability** treated as a cross-cutting issue on the Latin American agenda.

The twelve sub-regional papers (covering Central and South America, West Africa, Francophone Africa, East Africa, Southern Africa, North Africa and the Middle East, India and Nepal, Bangladesh and Sri Lanka, South-

east Asia, and China) and nine thematic papers are now being edited and published.

The latter set of papers addresses the following: "Urbanization and Gender in the Developing World," "Globalization and Urban Development," "Traditional Institutions and Urban Development," "The Economics of Urbanization," "Children in the City," "Governance and Urban Development," "International Assistance and Urbanization in the Developing World," "Urbanization and the Environment" and "The Methodology of Urban Research"

— Patricia McCarney

For more details contact: Centre for Urban and Community Studies, University of Toronto, 455 Spadina Avenue, Room 426 Toronto, Canada M5S 2GB, Tel.: 416-978-2072, Fax: 416-978-7162

## Infrastructure Symposium September 1993

The World Bank and the International Finance Corporation will host an Infrastructure Symposium this September (dates to be announced) in Washington, D.C. The symposium will examine a variety of topics related to the growing role of the private sector in providing infrastructure. These include the enabling environment of private participation, infrastructure and capital markets, infrastructure and poverty, and infrastructure and trade. For information please contact Zia Kalim, Room S10-051, The World Bank, 1818 H Street NW, Washington, D.C. 20433.

We actively seek our developing country readers' input for this section. Our intention is to broaden our network among developing country city managers and their urban representatives.

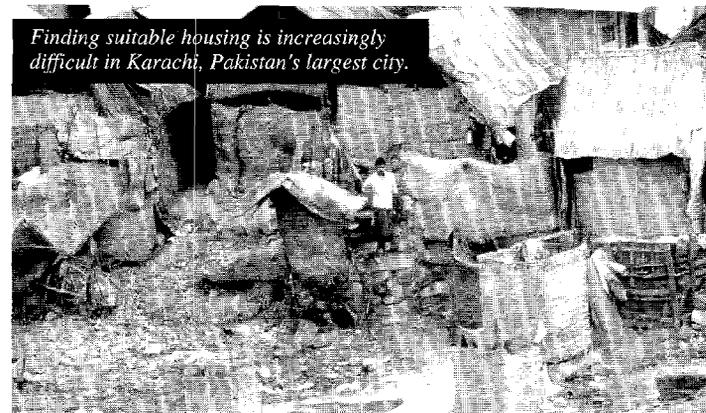
## KARACHI'S DEVELOPMENT PLAN (1986-2000)

Contact: Syed Mobu Ahmad (former KDA urban planner)  
C-5, Erum Villas, Stadium Road, Karachi-5, Pakistan.

A clear framework has been laid for the development of Karachi up to the year 2000, but achieving the development goals that have been laid out by the Karachi Development Authority (KDA) will not be easy. As Pakistan's largest city, Karachi is already hard put to provide adequate services and shelter to its residents, particularly to immigrants and refugees who keep flooding there. When its population explodes to more than 11 million by 2000, the city's problems will affect the entire national economy. KDA's urban plan focusing the development of underutilized and unused land is sound, but delays in the ambitious plan have led to inefficiencies, particularly in infrastructure investment and resource mobilization.

Most of the main transport corridors that underpin the urban plan are in place and are being used, except for the western corridor route, which will start being used once government defense land at Hawks Bay is sold and once KDA initiates coastal zone improvement schemes for the area. Still, western development will be hindered in the short term by insufficient water supply and a soft market for land development.

Further initiatives to strengthen the 1986-2000 plan include the expansion of the Karachi port, the development of Qasim port, the construction of Karachi northern and southern by-passes, an important link road, and several efforts focused at improving the rapid transit system and renewal of the central business district.



Finding suitable housing is increasingly difficult in Karachi, Pakistan's largest city.

## CREATING NGO NETWORKS FOR SOUTHERN AFRICA

Contact: David Barnard, PRODDER, P.O. Box 32410, Braamfontein 2017, South Africa, Tel.: 27-11-339-4451, Fax: 27-11-403-2353.

Since 1987 the Programme for Development Research (PRODDER) has been a clearinghouse and networking facility for the dissemination of information on current and completed development research to academics, development agencies, and nongovernmental organizations (NGOs). Created under the auspices of the Human Sciences Research Council, PRODDER has established an extensive database on development organizations in the Southern African region. Through its quarterly

PRODDER Newsletter and biannual PRODDER Development Directory (issued most recently in 1992), the program has reached a broad audience.

Last year the Independent Development Trust of South Africa awarded PRODDER a contract to set up an extensive database on the NGO sector in South Africa.

The program is inviting all interested parties, especially NGOs, to participate and contribute to the database, helping with the collection of information on a sub-regional, regional and national level.

## MINNESOTA GROUP EXTENDS HEALTH SERVICES TO KENYA

Contact: Dr. Michael Graf, MIHV Dagoretti Health Project, P.O. Box 43678, Nairobi, Kenya, Tel./Fax: 254-2-566122.

Minnesota International Health Volunteers (MIHV), a nonprofit, nongovernmental organization, is developing and supporting a full range of community-based preventative and curative health services for the Dagoretti Community on the outskirts of Nairobi, Kenya. The U.S. Agency for International Development, the Kenya Ministry of Health, and various private donors are also assisting in the effort. The community has organized Health Committees to represent the interests of the entire area. Two hundred Community Health Workers have been selected and trained, an outpatient clinic has been set up to provide comprehensive preventative and curative care, and a Board of Managers has been established to administer the clinic.

Appropriate health-related informational and educational materials are needed for the professionals, clinic staff, board members, and general public working for or interacting with the Dagoretti Community Health Project.

## MANAGING INVESTMENT IN BOTSWANA'S DEVELOPMENT

Contact: Botswana Development Corporation Limited, Madirelo House, Mmanaka Road, Private Bag 160, Gaborone, Botswana, Tel. 267-31-351811, Fax: 267-31-357852.

The Botswana Development Corporation Ltd. (BDC) is the government's main agency for commercial and industrial development. Established in 1970, BDC's mission is to identify investment opportunities in Botswana for exploitation by both local and foreign investors. To achieve this, the corporation provides investment advice, loans, share capital, and industrial plots and buildings to investors.

The Corporation has investments through 35 subsidiaries and 31 associated companies in all sectors of the economy except large-scale mining. The relationship between BDC and companies it has invested in is principally one of arms-length dealings.

All of the BDC's ordinary shares are owned by the government of Botswana. In line with its policy of divestiture, the corporation helps citizens of Botswana in directly acquiring shareholdings in BDC companies or from foreign owners willing to sell their shares. The corporation's interests are monitored through four divisions—Agriculture, Estates, Financial Institutions, and Industry and Services.

BDC also supports a few non-profit projects that contribute significantly to the country's economic and social development.

## Bangkok Slums: Review and Recommendations

by *Sopon Pornchokchai*.  
 Bangkok, Thailand, School of Urban Community Research and Actions, Agency for Real Estate Affairs, 174 Rama 3 Rd., Bangkok 10110, Thailand.

In this study on housing for Bangkok's urban poor, Sopon Pornchokchai analyzes the physical problems of the city's slums and the underlying social and psychological aspects of the community. He also discusses the question of land tenureship and the rental system.

The author dispels several myths about the causes of slum proliferation in the Bangkok Metropolitan Area. He sets out five new perceptions that should guide low-income housing solutions: 1) migration is not to blame for slum growth; 2) the majority of slum dwellers were born in Bangkok; 3) slums are growing, but slowly; 4) accelerated rural development has little effect on curbing in-migration to Bangkok and particularly on slum growth; and 5) upgrading and alternative housing arrangements are more realistic solutions to slum problems than eviction and resettlement programs.

The author calls for programs to deal with the physical appearance of slums, noting that they are more likely to be accepted if they are not eyesores on the urban landscape. In reviewing fringe land and its feasibility for housing the poor, the author notes that the poor resist moving to land subdivision projects not because of distance from the city, but because of the lack of drainage systems, proper electricity and water supply, and poor access roads. Ironically, they have access to these services in the inner city slums.

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## Elements of Urban Management

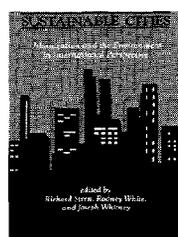
by *Kenneth Davey*.  
 Washington, D.C., Urban Management Programme Publication No. 11, UMP Coordinator, Technical Cooperation Division, UNCHS (Habitat), P.O. Box 30030, Nairobi, Kenya.

Summarizing a research program on the institutional framework of urban management, this paper synthesizes the findings of a series of case studies conducted in cities in Brazil, India, Malaysia, Mexico, Uganda, and Zimbabwe.

Each of the case studies (apart from that of the Philippines) analyzes urban government in the study towns in terms of six characteristics: 1) the structure and functions of urban government, 2) international organization and management, 3) the staffing of urban government, 4) urban government finance, 5) central-local relations, and 6) public, private, and community organization. Each study tries to assess the broad effectiveness of the local system in managing growth. Such systems have been examined by studying in detail the operation of water supply, refuse collection, and primary education services.

## Sustainable Cities: Urbanization and the Environment in International Perspective

by *Richard Stren, Rodney White, and Joseph Whitney (eds.)*.



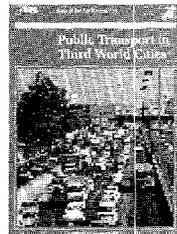
Boulder, Colorado: Westview Press, Inc., 1992.

This study examines the

relationship between cities and the natural environment in both the developed and the developing world. There are three sections: one on Europe and Africa, another on North and South America, and a third on Asia. Each is related by a single introduction written by one of the three editors. The chapters examine the meaning of sustainable development in a specific region, the growth and structure of urban systems, the effects of possible climatic changes on urban areas, the political environment within which cities operate, and the pressures caused by intense urban use of services and natural resources. Chapters conclude with policy proposals for increasing sustainability.

## Public Transport in Third World Cities

by *Alan Armstrong-Wright*.  
 London, HMSO Publications Centre, 1993.  
 ISBN 011-551163-6.



This book provides an overview of public transport issues in developing country cities.

It covers each of the common modes of public transport, together with some of the main variants such as trolley buses, paratransit modes, and busway transit in separate chapters. Additional chapters cover traffic management, fares and fare collection, financing issues, and the environmental impact of urban transport. The review is based on comprehensive studies of bus services, light rail transit, and metros in developing cities, and the examination of public transport in 65 cities. Reference materials are also used extensively. General works of reference, together with selected publications of broad interest, are listed in a bibliography.

## Resources

*Fragile Foundations: A Report on America's Public Works*. Washington, D.C.: National Council on Public Works Improvement, 1988.

"Infrastructure for the New Social Covenant," by William Morrish and Catherine Brown in *Urbanisme*. Paris: Syndicat de la Presse des Entreprises et des Professionnels, January-February 1993.

*Innovative Approaches to Urban Management, The Integrated Urban Infrastructure Development Programme in Indonesia* by Robert van der Hoff and Farian Steinberg (eds.). Rotterdam: Institute for Housing Studies, 1992.

"Infrastructure Sector Policy Review," by Christine Kessides et al. Washington, D.C.: Transportation, Water, and Urban Development Department, The World Bank (forthcoming).

"In Our Own Backyard—Principles and Strategies for Effective Improvement of the Nation's Infrastructure," National Research Council. Washington, D.C.: National Academy of Sciences (forthcoming).

*Issues for Infrastructure Management in the 1990s*. Discussion Paper #171 by Arturo Israel. Washington, D.C.: The World Bank, 1992.

*Issues of Infrastructure Development, A Synthesis of the Literature*, by Raisuddin Ahmed and Cynthia Donovan. Washington, D.C.: International Food Policy Research Institute, 1992.

"Urbanisation, Infrastructure and Besieged Growth Potential" and "Public-Private Level Cooperation in the Provision of City-Level Services," by Mulkh Raj. New Delhi: Indian Housing and Urban Development Corporation, 1993.

Below is a list of urban events and training courses culled from *The Urban Age's* current files. We regret that more events from developing countries are not listed. If you would like your event to be included, please send announcements to the Editor, *The Urban Age*, Rm. S10-108, The World Bank, 1818 H Street NW, Washington D.C. 20433

## Conferences



**Owerri, Imo State, Nigeria**—May 24-27, 1993. **International Conference on Waste Management and Environmental Education in Nigeria.** For more details contact: Godson Adindu, Rural-Urban Services Integrated Group, No. 4 Arugo Street, Ikenegebu Layout, Nigeria

**Düsseldorf, Germany**—June 7-9, 1993. **Travel in the City—Making it Sustainable.** For more details contact: Landeshauptstadt Düsseldorf, Umweltamt, Postfach 10 11 20, D-4000 Düsseldorf 1, Germany, Fax: 49-211-899-4775.

**Eindhoven, The Netherlands**—June 16-18, 1993. **Urban Environment in Developing Countries: Futures, Ideas, Directions.** For more details contact: Secretary of Building Habitat and Urban Management International, Faculty of Architecture, Eindhoven University of Technology, P.O. Box 513, 5600 MB Eindhoven, The Netherlands, Tel.: 31-40-473283, Fax: 31-40-452432.

**Accra, Ghana**—June 22-24, 1993. **International Seminar on the Building Industry.** For more details contact: W.S.S. Adjabeng, Seminar Coordinator, Property Investment Consultancy, P.O. Box 12953, Accra, Ghana, Tel.: 233-21-227575, Fax: 233-21-712710.

**Houston, Texas**—July 14-17, 1993. **Sister Cities International Conference.** For more details contact: Sister Cities International Conference, 120 S. Payne St., Alexandria, Va, 22314 U.S.A., Tel.: 703-836-3535, Fax: 703-836-4815.

**Utura, Abia State, Nigeria**—July 23-28, 1993. **Development and the Environment.** For more details contact: Bob Chiedozie Ogu, School of Environmental Studies, Abia State University, P.M.B. 2000, Okigwe, Abia State, Nigeria.

**Mexico City, Mexico**—September 20-22, 1993. **The Environmental Management and Technology Conference & Exhibition.** For more details contact: Tower Conference Management Co. 800 Roosevelt Road, Building E, Suite 408, Glen Ellyn, Il., 60137-5835 U.S.A., Tel.: 708-469-3373, Fax: 708-469-7477.

**Helinski, Finland**—September 27-October 2, 1993. **Cities for Tomorrow: Directions for Change.** For more details contact: Douglas Gordon, The General Secretary, Helinski, Finland, Tel.: 358-0-1488-8412, Fax: 358-0-1488-8412, Fax: 358-0-1488-6672.

**Cape Town, South Africa**—October 18-21, 1993. **XXth World Congress of the International Union of Housing Finance Institutions (IUHFI).** For more details contact: Cilla Taylor/Ammie Wissing, Conference Planners, P. O. Box 82, Irene, 1675 South Africa, Tel.: 27-12-63-1681, Fax: 27-12-63-1680.

**Brisbane, Australia**—October 21-23, 1993. **Australian Tropical Health and Nutrition Conference.** For more details contact: Wendy Gardiner/Gail Cohen, Tropical Health Program, The University of

Queensland Medical School, Herston, Road, Herston, Queensland 4006, Australia, Tel.: 61-7-365-5408, Fax: 61-7-365-5599.

**Washington, D.C.**—October 21-23. **Urban Waterfronts 11 "Learning from Each Other: Bays, Lakes, and Rivers."** For more details contact: The Waterfront Center, 1536 44th St. N.W., Washington, D.C., 20007 U.S.A., Tel.: 202-337-0356, Fax: 202-625-1654.

## Education Programs and Courses

**Boston University School of Public Health**—Seventh Annual Certificate Programs—*Economie et Gestion des Ressources dans les Programmes de Sante*, June-July, (offered in French only), *Financing Health Care in Developing Countries*, September 16-December 11, 1993. For more details contact: Financing Health Care in Developing Countries, Boston University School of Public Health, Center for International Health, 53 Bay State Road, Boston, Ma. 02215 U.S.A., Tel.: 617-638-5234, Telex: 200191 BU UR, Fax: 617-638-4476.

**Oxford Brookes University's School of Planning**—MSc. and Diploma programs are offered in *Urban Planning in Developing Countries* and *Environmental Assessment and Management*. For more details contact: Graduate Admissions Secretary, Oxford Brookes University School of Planning, Gipsy Lane, Headington, Oxford OX3 0BP, U.K., Tel.: 0865-819450, Fax: 0865 819559.

**Historic Windsor, Inc.**—*Accessibility and Historic Preservation*, June 24-25, 1993, Chicago, Ill. For more details contact: Historic Windsor, Inc., Main St., P.O. Box 1777, Windsor, Vt., 05089-0021 U.S.A.

**Research Triangle Institute**—*Urban Management Training*, September 13-October 21, 1993. For more details contact: Ms. Hazel Ryon, Urban Financial Management Training Program, Research Triangle Institute, P.O. Box 12194, Research Triangle Park, N.C. 27709-2194 U.S.A., Tel.: 919-541-6495, Fax: 919-541-6621.

**RIPA International**—*Course 13. Registry Management in Government*, June 21-August 20, *Course No. 14. Advanced Management for Tax Officials*, July 5-September 10, *Course No. 16. Management of the Environment*, August 9-27, 1993. For more details contact: RIPA International Ltd., Endsleigh House, 22 Bedford Square, London WC1N 3HH, United Kingdom, Tel.: 071-580-7138, Fax: 071-580-7140.

**Asian Institute of Technology**—*Urban Development Through the Land Market*, July 5-17, 1993. For more details contact: Prof. Ray Archer, Human Settlements Division, Asian Institute of Technology, G.P.O. Box 2754, Bangkok 10501, Thailand, Tel.: 66-2-516-0110/44, Fax: 66-2-516-1418.

continued on page 16 ►

## Urban Calendar

Continued from page 15

**Management Sciences for Health**—*Urban Health: The Global Challenge*, August 23-September 15, 1993. For more details contact:

**6** Management Training, Management Sciences for Health, 165 Allandale Rd., Boston, Ma., 02130-3457 U.S.A.  
Tel.: 617-527-9202, Fax: 617-965-2208.

**University of Wales**—MSc. courses are available in *City and Regional Planning, Urban Planning in Developing Countries, Transport, and Technical Change and Regional Development*. For more details contact: Ms. C. Trevett, Admissions Secretary (UA), Department of City and Regional Planning, University of Wales, P.O. Box 906, Cardiff CF1 3YN, United Kingdom.  
Tel.: 0222-874000, Fax: 0222-874845.

**Centre for African Settlement Studies and Development (CASSAD)**—offers the following courses: *Workshop on Urban Waste Management and Affordable Waste Management Technology*, August 23-27, *Techniques of Environmental Impact Assessment (EIA) and the Preparation of Environmental Impact Statements (EIS)*, September 20-24, 1993. For more details contact: CASSAD, No. 3, Ayo Adekunle Close, New Bodija Estate, P.O. Box 20775, U.I. Post Office, Ibadan, Nigeria, Tel.: 022-712727, Fax: 022-414536.

**Pratt Institute Center for Community and Environmental Development**—*Pratt Community Economic Development Internship*, October 1993-June 1994. For more details contact: Ron Shiffman (Director), Graduate Center for Planning and the Environment, Pratt Institute, 200 Willoughby Ave., Brooklyn, N.Y., 11205 U.S.A.,  
Tel.: 718-636-3486, Fax: 718-636-3709.

**International Centre for Earth Construction**—Offers specialized training in: *The Preservation of the Earthen Architectural Heritage, Economic Construction and Local Building Materials, The Technology of Compressed Earth Blocks*, a certificate course in *Advanced Studies on Earthen Architecture* and a Diploma course in *Building Practice, Architecture and Culture*, course dates to be announced. For more details contact: Ms. Marina Trappeneirs, c/o CRATerre-EAG, BP 2636, 38036 Grenoble Cedex 2, France, Tel.: 33-76-40-14-39, Fax: 33-76-22-72-56.

**International Institute of Rural Reconstruction**—Offers a training course on *Regenerative Agriculture*, October 1-29, 1993. For more details contact: The Director, Division of International Training and Outreach, IIRR, Rm. 38, Elena Apt. R. Salas St., Ermita, Manila, Philippines, Tel.: 58-26-59, Fax: 632-522-24-94.

## Newsletters

A selected list of newsletters and journals carrying information on urban development issues.

BBSAWS-Sudan Newsletter  
Babiker Bedri Scientific  
Association for Women Studies  
P.O. Box 167  
Omduraman  
Sudan

DISASTERS: PREPAREDNESS  
AND MITIGATION IN THE  
AMERICAS  
Pan American Health  
Organization  
525 23rd St. N.W.  
Washington, D.C. 20037-2895  
U.S.A.

HEALTH ACTION  
AHRTAG  
1 London Bridge St.  
London SE1 9SG  
U.K.

IBAM NEWSLETTER  
Brazilian Inst. of Municipal  
Administration  
Largo IBAM No.1, 22282  
Rio de Janeiro  
Brazil  
Fax: 021-537-1262

INTERNATIONAL CENTRE  
FOR INTEGRATED  
MOUNTAIN DEVELOPMENT  
(ICIMOD) Newsletter  
Publications Unit  
ICIMOD  
G.P.O. Box 326  
Kathmandu, Nepal

INITIATIVES  
ICLEI Newsletter  
International Council for  
Local Environment Initiatives

World Secretariat  
8th floor, East Tower, City Hall  
100 Queen St. West  
Toronto, Ontario  
M5H 2N2 Canada

JOICFP NEWS  
Hoken Kaikan Bekkan  
1-1, Sadohara-cho, Ichigaya  
Shinjuku-ku, Tokyo 162  
Japan

LA OTRA Bolsa de Valores  
Tlaloc 40-3, Col. Anáhuac  
CP 11370, México, DF  
MEXICO

URBAN ECOLOGIST  
P.O. Box 10144  
Berkeley, California  
94709  
USA

SAFE MOTHERHOOD  
Maternal Health and Safe  
Motherhood Programme  
Division of Family Health  
WHO  
1211 Geneva 27  
Switzerland

SOCIAL WEATHER BULLETIN  
Social Weather Stations, Inc.  
Room 312 Phil. Social Science  
Center  
Commonwealth Ave.  
Diliman, Q.C.  
Philippines

VILLES AFRIQUE  
IAGU  
BP 7263  
Dakar, Sénégal

VOICES FROM THE CITY  
WASH Information Center  
1611 N. Kent St. Room 1001  
Arlington, Va. 22209, U.S.A.

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