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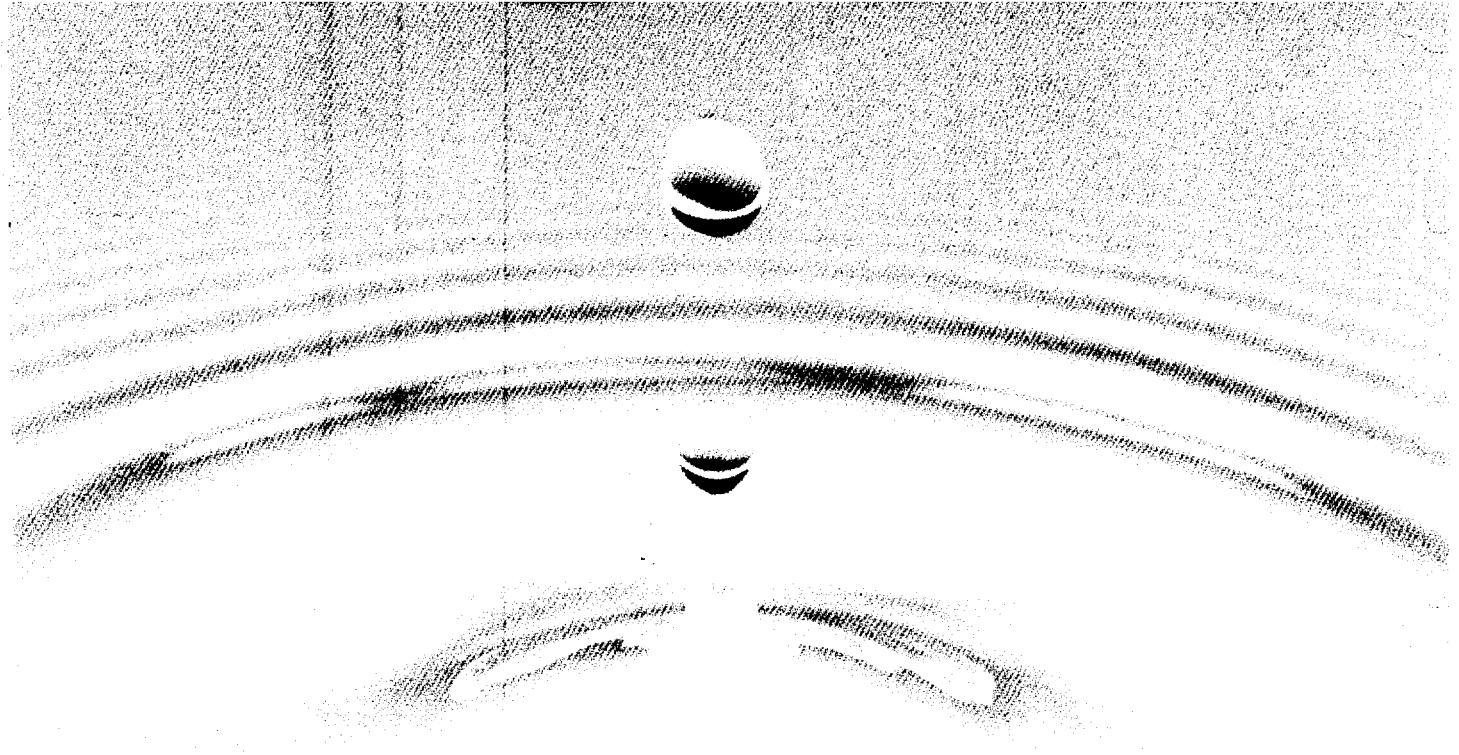
# UrbanAge

THE GLOBAL CITY MAGAZINE

WINTER 1999

# 21717

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## THE FUTURE OF WATER

CALCULATING THE  
 TRUE COST HOW TO  
 PAY FOR IT WHO  
 HAS ACCESS, AND  
 WHO DOESN'T WHY  
 CITIES NEED TO  
 RETHINK ~~THEIR~~

### FILE COPY

also: **Fighting urban juvenile crime - Housing the poor in Southeast Asia**

## EDITOR'S NOTE

**F**loods, droughts, contamination and reckless extraction—these are the natural and man-made catastrophes that remind us daily of our very fragile connection to, and control over, water. Hurricane Mitch, which devastated Tegucigalpa, Honduras in October, is a case in point. Many of the people killed or made homeless in the city lived on hillsides that were subject to heavy flooding.

These stories make news. As do the statistics about the one billion people in the world who do not have access to taps, toilets or sanitary latrines. Or reports that in Taiz, Yemen, water arrives in homes only one day in every eight.

Less newsworthy but equally important is the emerging revolution in the way we approach policy-making and the management of water. In the 1990s, the international water and sanitation community created a new vision: that the use of appropriate technologies and community participation are essential components of successful water supply and sanitation.

This vision brings with it a number of expectations. That centralized authorities retain control over policy and regulation, but devolve construction, management and maintenance services to independent contractors who, in turn, are accountable to communities and households. That appropriate water and sanitation technologies be adapted and adopted, often by "alternative" providers. And that the responsibility for public health be re-invested in private bodies and local community organizations.

How will this vision affect the urban poor? Should we pay for water and, if so, how? What are the advantages of private sector participation in the management of water and sanitation services? Is there a way to prevent administrative leaks? These are some of the questions we explore in the Special Water Report.

Juvenile crime globally is on the rise. In Britain and the United States, recent well-publicized crimes committed by children have strengthened national inclination for retribution. But, once imprisoned, children have little access to education or opportunities for exercise, and are often subject to sexual and physical abuse, even solitary confinement. Our feature article by Roger Graef presents some interesting arguments for dealing with juvenile offenders in non-traditional ways. Citing academic and social research, he contends that incarceration for juveniles has a way of compounding and crystallizing criminal tendencies. Several U.S. cities now provide alternatives—early intervention, education, community policing and a lot of common sense. They are having an effect, and are worth looking at.

In the 1980s, Manuel Villar made billions of dollars while building housing for the poor in The Philippines. In the 1990s, he turned his energies to politics. Now, from his platform as a Congressman and Speaker of the House of Representatives, he is in a position to create housing finance policies that will benefit a new generation of Filipino home owners. This is a remarkable story of using good business practices to help the poor.

We hope that you find the magazine increasingly interesting, and that our coverage of important issues such as water, juvenile crime and housing is helpful as you explore the best choices for your city's future. We also wish you, the reader, a prosperous and peaceful New Year.

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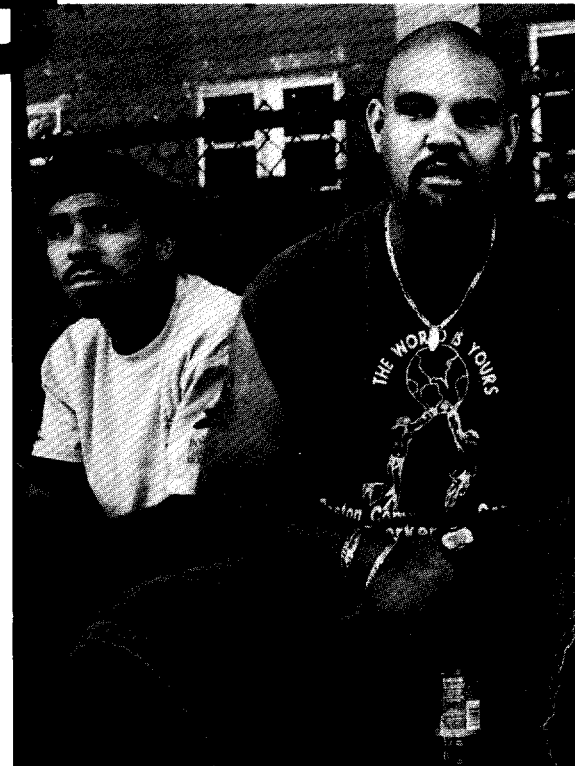
# UrbanAge

THE GLOBAL CITY MAGAZINE

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that can arrest its way out of crime.”**

—THOMAS WYNDHAM, POLICE CHIEF,  
FORT WORTH, TEXAS



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## IN THE WAKE OF HURRICANE MITCH

International relief experts are counting the lessons learned from Hurricane Mitch, which killed more than 11,000 people in Central America and set back development in Honduras by decades. Among the hardest hit places was the Honduran capital, Tegucigalpa, where more than a dozen neighborhoods were erased by flood waters or landslides.

A specialist at the Pan American Health Organization makes these points about doing a better job with relief next time:

International aid groups tend to withdraw their help once an emergency is over, yet the needs in devastated areas are ongoing.

Some groups dispatched supplies to Central America immediately, not waiting to learn what specifically was needed. As a result, sometimes the wrong

medicines were sent. Also, some medicines were close to their expiration date or were labeled in languages other than Spanish. Wait for instructions before rushing aid.

Some groups automatically dispatched food and clothing, but money is often more valuable. Incoming materials require precious

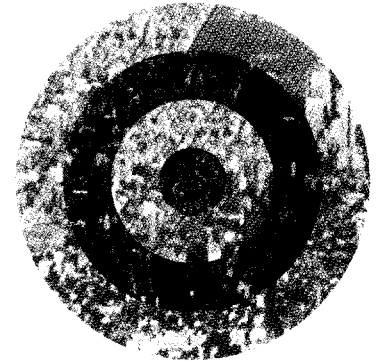
local manpower to sort, label and ship them around the country. By contrast, money allows local officials to buy exactly what is needed and to spend and invest in the local economy. When in doubt, send money.

Local officials busy with relief efforts have to attend to inquiries from donors and others. Next time, an NGO or NGOUN team might be formed to collect information on the country's needs and pass it to donors, the press and other governments, relieving local officials of this burden.

According to a World Bank official, developing countries need to pay more attention to reducing losses from natural disasters if sustainable growth is to be possible. Poor countries, she noted, are more vulnerable to such events, with, for example, some people only able to afford to live on hillsides subject to flooding.

But she adds, the knowledge and technology are now available to avoid traumatic losses. Populations can be prevented from settling in disaster-prone areas, and citizens can be notified in advance of what to do and where to go in case of a disaster. Improved land use planning, zoning regulations and building codes as well as risk maps, produced with the help of remote sensing devices, and warning systems e.g., TV, radio, newspapers can also make a difference.

Post-disaster reconstruction can also build in measures to make countries more resistant to future calamities, she says. For example, if a bridge in a vulnerable area collapses, it should be relocated or rebuilt more strongly.



## INTERNATIONAL CITY DESIGN COMPETITION

FIVE ARCHITECTS are going to have their work cut out for them. Once chosen as finalists to compete for a new US\$100,000 prize, they will have to put on paper a new vision for a 12-block area of New York City now covered by roadways, rail lines, tunnels and ramps. The section on the west side of Midtown Manhattan bounded by the Hudson River and Eighth Avenue, between 30th and 34th Streets, has been named the first focal point in a new international competition to help cities develop innovations in architecture and planning. The contest, sponsored by the Canadian Center for Architecture, will take place every three years in a different major city.

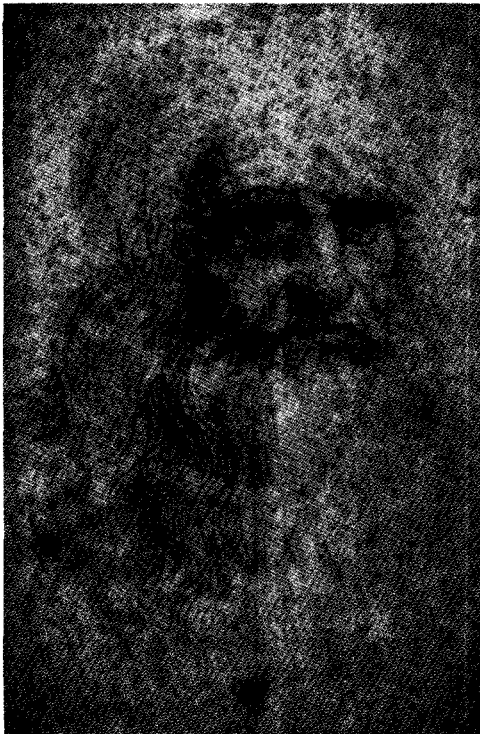
"Many developers are horrified by this site, because of all the roadways and tunnels," Phyllis Lambert, founding director of the Canadian Center in Montreal, told the *New York Times*, "but that's what's so good about it. Because of the existing infrastructure and the riverside location, the site is connected to the rest of the city and beyond. We want to see how architects might turn it into a place for people."



# RENAISSANCE ART FUELS COMMERCE

IN THE FLORENTINE RENAISSANCE, wealthy patrons secured their reputations by investing in art. That same opportunity—and with the same art—will be offered to modern business people when the Bank Credito Italiano launches “Leonardo” warrants on international money markets. This investment opportunity was orchestrated by Giunti, an art publisher, to fund production of the first complete collection of Leonardo da Vinci’s drawings and sketches. These works have been published individually in limited editions, but the costs required to produce the full collection—given that the artworks are owned by individuals and institutions around the world—have until now, been prohibitively expensive.

Like many other bond issues, the initial investment in the Leonardo warrant (in this case, 25 million lire, or about US\$14,000) will bear interest over the four years of its maturation. Unlike other bonds, however, it



will offer investors the opportunity to own all or part of a fascinating art collection. For example, an investment of 2.5 million lire secures Leonardo’s treatise on painting held by the Vatican and described by art historian Lord Clark as the “most important document in the entire history of art.”

Giunti is confident of the return to investors, pointing to previous Leonardo facsimiles it has published such as the “Atlantic Codex,” which now changes hands for 40 million lire—a significant return on the initial asking price of 3.9 million lire. This suggests that any of the complete collections that

are not immediately snapped up by investors—998 sets will be produced, handbound in leather and inlaid with gold—can be sold on the open market at a considerable premium.

This new bond issue is unlikely to grab the attentions of granite-hearted bond traders in London and New York due to the modest scope of the enterprise. Nevertheless the venture is more than just a quest to produce the ultimate coffee table book. It represents an important and wholly innovative approach that could allow other cities to use their cultural resources to trigger economic returns—a concept that would have made perfect sense to the original Renaissance patrons.

## Crime Drives Johannesburg Stock Exchange Out

IN NOVEMBER, the Johannesburg Stock Exchange (JSE) announced that it is going to move from its central downtown location to Sandton, 10 km north, which is slowly becoming the commercial hub of the Johannesburg area. A combination of inner city decline and relentless crime led to this decision. Over the past 10 years, large and small



businesses have been leaving the old center for satellite business nodes to the north of Johannesburg. The legacy of apartheid urban planning has legislatively entrenched urban sprawl and its associated inequalities and inefficiencies. These policies have resulted in disproportionate levels of safety in some areas while fostering insecurity in others. Johannesburg is popularly referred to as the country’s crime capital; in fact, it’s one of the most violent cities in the world. Daan Grobler, the JSE’s acting president, was quoted in *The Financial Times* as saying that the rise in crime, especially muggings and car hijackings, was one of the reasons that helped persuade the Exchange to leave its premises rather than renew its lease. A survey conducted in the area in 1997 found that the majority of victims of violent crimes live in townships, informal settlements and the inner city, as opposed to wealthier suburbs. Many white professionals regard the central business district as a no-go area despite government attempts to tackle crime nationwide.

# NEIGHBORHOOD PARK IN HAMBURG

**H**amburg's St. Pauli quarter is one of the most famous red-light districts in the world, replete with sex shops, cabarets and crime. It's also home for a dizzying mix of people—strippers and cabaret dancers, Turkish shop owners, dropouts, beggars, children and young professionals, retired dock workers, alcoholics and drug addicts—contributing to the area's vitality and diversity.

An eclectic neighborhood, perhaps, but a neighborhood nonetheless—as the growth and development of “Park Fiction” has demonstrated.

In the early 1990s, a local citizen's group came together to oppose a plan to build an apartment block on a nearby vacant site. St. Pauli is three to five times more densely built up than the rest of Hamburg; the empty lot was one of a very few open spaces in the area. The group proposed turning the area into a park for all of St. Pauli's citizens to enjoy.

The idea took firm hold. Soon, a 15,000-square-meter facility was envisioned, part of which would be built on the roof of an as-yet-unbuilt school sports hall. The park would be closed off to street traffic, have a *boules* alley, benches, plants, art, places for children to play, artists to work, night workers to relax.

Planning the park has drawn the community together, as a core group of volunteers—including a social worker, an artist, a landscape designer, a school teacher, an architect and a cook—has held “open days,” interviewed residents about their ideas for the park, elicited and shared opinions. Children, for example, have been encouraged to come to a trailer set up as an information center at the edge of the park; there, they can draw or make clay models illustrating their ideas for the park's design.

The park has already begun to serve as a recreation area and neighborhood amenity

**Planning the park has drawn the community together as volunteers have interviewed residents about their ideas for the park.**

where residents have held parties and open days. Neighbors take turns in clearing the trash; volunteers plant, garden, build benches and platforms.

Many conflicts must be resolved before the park can be completed. Aside from issues of financing and jurisdiction (the parkland is on the border of two Hamburg districts, thus necessitating coordination with two borough authorities as well as with the city authority), are issues of cooperation and shared vision. For example, St. Pauli is full of cars in the evenings, especially on weekends. If roads are blocked off to create the park, this will result in a shortage of parking spaces and a rerouting of traffic.

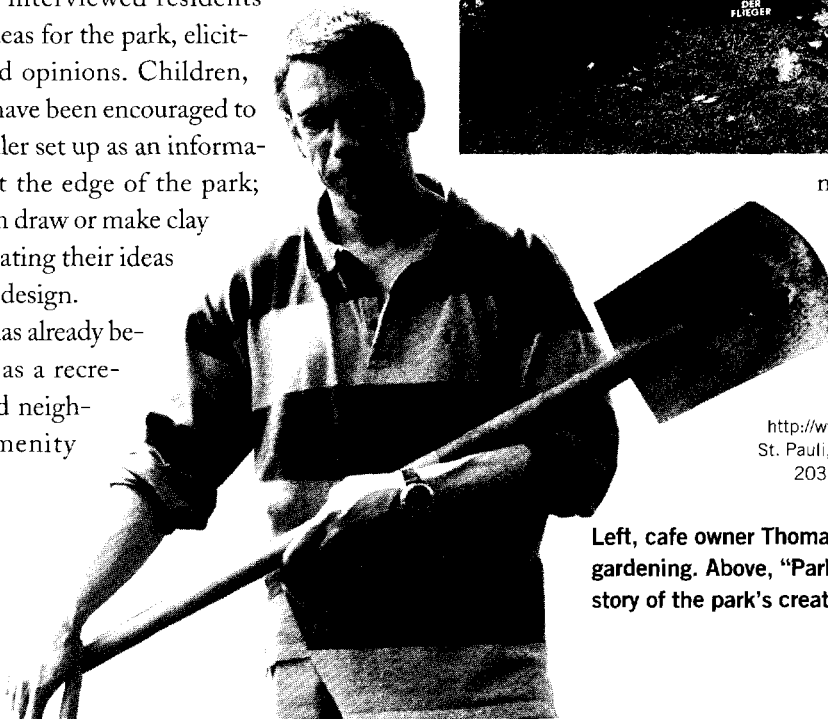
The disparate inhabitants of St. Pauli are negotiating and planning to resolve such conflicts. Through their engage-



ment in Park Fiction, they have learned the importance of an active local citizenship, willing to fight for things like parks and open spaces.

Contact: PARK FICTION Planungscontainer  
Pinnaasberg 81, 20359 Hamburg. Web site:  
<http://www.geocities.com/CapitolHill/4955> or the GWA  
St. Pauli, Sabine Stövesand, Hamburger Hochstrasse 2,  
20359 Hamburg; tel: 319-3623; fax: 317-96495.

**Left, cafe owner Thomas Ortmann helps with the park's gardening. Above, “Park Fiction” participants film the story of the park's creation.**






**Standard & Poor's David Raily, left, with Russian Finance Minister Mikhail Zadornov**

**RATING RUSSIA** Standard & Poor's Ratings Services recently signed an affiliation agreement with EA-Ratings, a Moscow-based rating and credit consulting firm. The agreement is Standard & Poor's first in Central and Eastern Europe, and marks an important step in the expansion of its global network of local rating services. "Recent troubles in global emerging markets underscore the need to provide investors with a comprehensive understanding of credit risk factors in volatile and rapidly changing economies," notes Leo C. O'Neill, S&P president and chief rating officer.

Opportunities to develop domestic credit ratings in Russia should expand in the wake of the current economic crisis, which is causing a profound and widespread rethinking of business practices and the nature of institutions responsible for tax and governmental fiscal matters, budgetary expenditures and financial management. Observes Alexei Novikov, executive director of EA-Ratings, "Under almost any set of economic policies likely to evolve at the federal level, transparency will now be critical for companies, banks, and regional and local governments who wish to borrow. Since international borrowing is expected to be seriously limited in the near term, domestic debt financing could be more attractive."

EA-Ratings is an independent, private, for-profit credit rating agency established in 1997 to provide objective credit risk analysis in the Russian and CIS domestic markets. EA-Ratings' founder, the Institute for Urban Economics, is widely recognized for its pioneering and authoritative work on a broad range of urban and regional economic issues in Russia and the CIS. 

Web sites for the major international rating agencies:  
 Fitch IBCA: <http://www.fitchibca.com>  
 Moody's Investors Service: <http://www.moody.com/moodys/mdyindex.htm>  
 Standard & Poor's: <http://www.ratings.standardpoor.com/>

IGOR ZOTIN / IFA-TASS

**LETTERS TO THE EDITOR**

YOUR WINTER 1997 ISSUE, "Feeding the City," is very topical and revealing. City managers and urban/regional planners in developing countries like Nigeria need to reassess their priorities by finding ways and means to formally recognize and incorporate the informal sector—which provides the basic food requirement of our cities—into their city and regional physical and economic development plans. The incessant harassment of this vital sector under the guise of environmental sanitation only aggravates the vicious circle of deprivation in our cities. The informal sector not only sustains cities' basic food requirements, especially amongst middle- and low-income earners, it also provides employment opportunities for a large segment of the urban population. Ignoring this vital sector is ignoring one of the vital life lines that sustains growth and development in developing country cities.

AMINU WAZIRI GUMAU  
*Lecturer*  
*School of Environmental Technology*  
*The Federal Polytechnic*  
*Bauchi State, Nigeria*

**URBAN MANAGEMENT**

The 1999 Institute for Planning and Development Practitioners  
**INNOVATIONS IN CAPACITY BUILDING FOR URBAN MANAGEMENT**  
**12 through 23 July 1999**

The purpose of this Institute is to provide a forum for practitioners involved in urban management issues around the developing world to learn about new ideas and share their experience under the guidance of prominent experts in the field. Themes include:

- **Center-local fiscal relationships**
- **Financial management for urban development**
- **Land management policies**
- **Delivery of urban services**
- **Community participation and governance.**

In addition to activities on the USC campus, participants will visit local organizations in Los Angeles and spend two days in Tijuana, Mexico.

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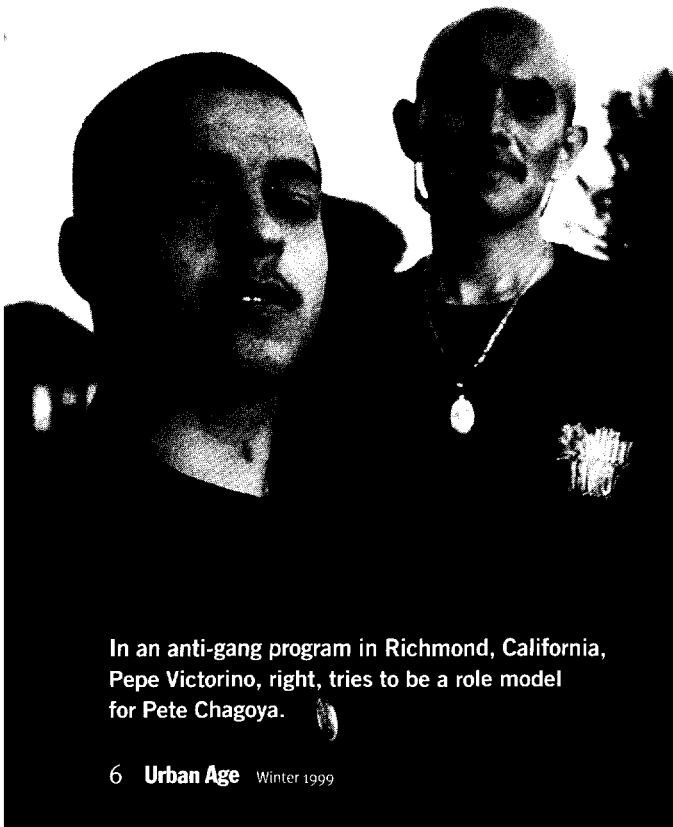
# CRIME AND PUNISHMENT

Fear engendered by the rise in juvenile crime has caused the pendulum to swing from reform back to retribution. Prisons hardly seem to work, but some innovative city programs show promise. by Roger Graef

**IN 1990**, prisoners rioted in Strangeways, one of Britain's largest prisons. Their three-week siege drew national attention to the dreadful state of British prisons. I had been observing the police for more than a decade, and a newspaper asked me to write about why judges send people to prison. I interviewed 14 judges. Astonishingly, they all agreed—prison was needed for a small percentage of offenders to protect the public but was largely useless as a form of rehabilitation. Unfortunately, they didn't know what else to do.

Appalled at this waste of public money and human life, I set out to find better ways of dealing with crime—especially by juveniles. Research shows clearly that while most youngsters commit crime while growing up, only a small fraction become chronic offenders. If we could find ways to turn them into useful citizens, we would certainly increase community safety. So for the past eight years, I have toured European and North American cities in search of practical examples of working successfully with persistent juvenile offenders that could be applied elsewhere.

My search was both encouraging and depressing. It was inspiring to find unexpected and imaginative examples, like the restaurant outside Paris staffed and run entirely by former young offenders learning new skills as part of their probation sentences. Or the Healing and Sentencing Circles used by aboriginal communities in northern Canada, New Zealand and Australia. These engage family members and friends of both offenders and victims to use what is known as "reintegrative shaming" to challenge offending behavior and devise ways of ensuring it does not happen again.



In an anti-gang program in Richmond, California, Pepe Victorino, right, tries to be a role model for Pete Chagoya.

But it was discouraging to quiz criminologists and officials about good practice in neighboring cities and countries and discover how little sharing of information goes on across local and national borders and among professional and academic disciplines.

Worse still, while evidence determines guilt or innocence in court, the use of evidence in assessing criminal justice policy is deeply flawed. For example, most crime statistics refer not to crimes actually committed, but only to offenses reported to the police and to the tiny proportion of actual convictions. That means an increase in cases reported to police may not mean more crimes have been committed, but rather that public confidence in police handling of such cases has increased.

Most depressing of all was the realization that what passed for debate about crime, punishment and community safety was really, in terms of defenders of the status quo, a dialogue of the deaf. When it comes to the debate about prison, alternative programs are challenged for statistical proof of their success. Yet no such test is applied to prison, from which half to two-thirds of ex-prisoners return within two years after another conviction (and even more juvenile offenders).

The rise in juvenile crime and violence and media attention to individual cases has resulted in a lowering of the age of criminal responsibility in Britain and in a number of American states and, in the latter, increasing use of both adult prison and, in extreme cases, the death penalty. Ironically, this punitive approach coincides with the centenary of the founding of the children's welfare court in Illinois, which regarded youth offenders as more in need of care than punishment. The rise in juvenile crime has been blamed on the welfare approach itself, rather than the wider changes in modern life that may have contributed to it. Now the pendulum has swung back to retribution.

Sadly, facts and analysis are not enough to move those who believe in the simplicity of prison as a "solution" to crime, including juvenile crime. Politically, such easy solutions play well with the electorate, fed up with rising crime. The appeal is obvious, despite the expense. By locking young offenders up behind bars, one need not be involved in the complex work of addressing the causes of their crimes. Out of sight, out of mind.

Governor George W. Bush, Jr., in Texas, newly reelected and considered a leading candidate for president, is one of a number of conservative politicians driven to explore alternatives to prison simply to stop the hemorrhaging of public money spent on locking up more and more people for longer and longer sentences. Once they do the numbers—made worse by so-called "three strikes and you're out" legislation—they start looking for different answers.

Although those committed to punishment remain indifferent to outcomes, politicians and officials concerned about public safety need to recognize the truth. Even for the modest number of chronic juvenile offenders caught, convicted and pun-



Gilda Muskwinsky, shown at the gravesite of her murdered daughter, took part in a Texas program that offers a face-to-face meeting with offenders.

ished, the system's interventions may actually make things worse, not better, in terms of their committing future offenses.

British studies of a group of London children over several decades by Donald West and David Farrington of the Cambridge Institute of Criminology show that having a parent or older brother convicted before a child is 10 is the strongest predictor of future offending. Then comes harsh and erratic parenting, poor mental and physical health, school failure and learning difficulties, poor housing and frequent moves, one or both parents unemployed, a history of substance and alcohol abuse in the family, and sexual abuse and/or domestic violence. In sum, children who grow up in poor, antisocial, violent and neglected environments are likely to be violent themselves. That may not be rocket science, but finding ways to address these problems demands a more complex approach than simply trying to catch them and lock them up for as long as the law allows.

## ELIMINATING JUVENILE KILLINGS IN BOSTON

**BOSTON** is a case in point. At the end of the 1980s it was a city plagued by youth gang turf wars that terrorized the residents of districts like Roxbury and South Dorchester. The lethal cocktail of drugs and a plentiful supply of guns sent up from the South produced a spate of juvenile killings. The demoralized police force, burdened by a history of corruption and racial conflict with black residents, seemed incapable of gaining control of the violence.

But a coalition was formed by law enforcement agencies and parts of the city government and community, and it managed to eliminate juvenile killings altogether in a few short years. The Boston coalition became a national model for other cities suffering from the same rise in juvenile homicide. This multiagency approach was led by prosecutors from the city, state and federal district attorneys' offices who were no longer willing to sit back

**THE CRIMINAL JUSTICE SYSTEM'S INTERVENTIONS MAY ACTUALLY MAKE THINGS WORSE, AS FAR AS YOUTHS COMMITTING FUTURE OFFENSES.**

and wait for cases to come to court—i.e., wait for crimes to be committed.

Boston changed things on at least two levels. The turf wars between justice agencies—most notably between police and probation—had meant little or no shared information or coordinated action. Curfews for individuals ordered by the court had been ignored because police had no knowledge of court orders that might have been issued against juveniles they stopped on the streets. This allowed crime to go undetected on a massive scale.

The coalition used federal agents to track the supply of guns and act against the dealers. Local criminologists teamed up with special anti-gang units in the police and probation office to analyze the pattern of killings and identify the perpetrators. The coalition then held meetings with gang members on parole or probation to tell them that heavy federal penalties now faced anyone involved in killings—a warning that produced a truce in most areas of the city.

Meanwhile, other agencies were brought in to work with victims, local residents and youths in what was called the Safe Neighborhood Initiative. Since most juvenile crime happens before or after school, local police, probation and social service representatives began meeting with a local prosecutor to share information about who was causing trouble in school or on the streets—and decide as a group what could be done before things got worse. Although truancy is not a crime, it puts youths at much greater risk, so police who previously would never bother with such “soft” concerns, began sweeping the streets during school hours for truant youths and returning them to their school or family.

Other key players in the coalition are the black churches, led in Boston by the Rev. Eugene Rivers, now a national figure in America for his crusade to get black communities more involved in the fate of their young people. Since his church was the scene of a killing during a gangland funeral, he has mixed a tough approach, turning recalcitrant offenders over to the police, with a ministry that offers other youngsters a better way of life. He is also engaged in “adopting” dozens of needy black children from an early age to give them the support they would otherwise lack.

**Brutal Punishment** The abuses that punitive treatment of juvenile offenders can lead to were illuminated in a recent Amnesty International report on human rights violations in the U.S. justice system. According to the report, “Children in custody have been subjected to brutal physical force and cruel punishments, including placing them in isolation for lengthy periods. Many children are incarcerated when other action could or should have been taken. Children are often held in facilities that are seriously overcrowded and cannot provide adequate educational, mental health, and other important services.

“A growing number of children are being tried as adults in the general criminal justice system and are subject to the same punishments as adults. Children are also held for months in jails before they are tried. There, they may be denied access to education and adequate opportunity to exercise. Thousands of convicted children are sent to prisons where they are not separated from adult prisoners, putting them at serious risk of physical and sexual abuse.”

The 65-page report, *Betraying the Young*, is available from Amnesty International, Publications Department, 322 Eighth Avenue, New York, New York 10001, USA; tel: 212-807-8400.

## TWENTY LEVELS OF PROBATION

**IN FORT WORTH,** Texas, police chief Thomas Wyndham has no doubt about what direction his city needs to go. He’s been a law enforcement officer for more than 30 years, in places like Los Angeles as well as Texas, and now he is sure “there’s not a city in the country that can arrest its way out of crime.” Although Texas locks up—and executes—more people than any other state, it also sees young offenders as good kids who have made mistakes.

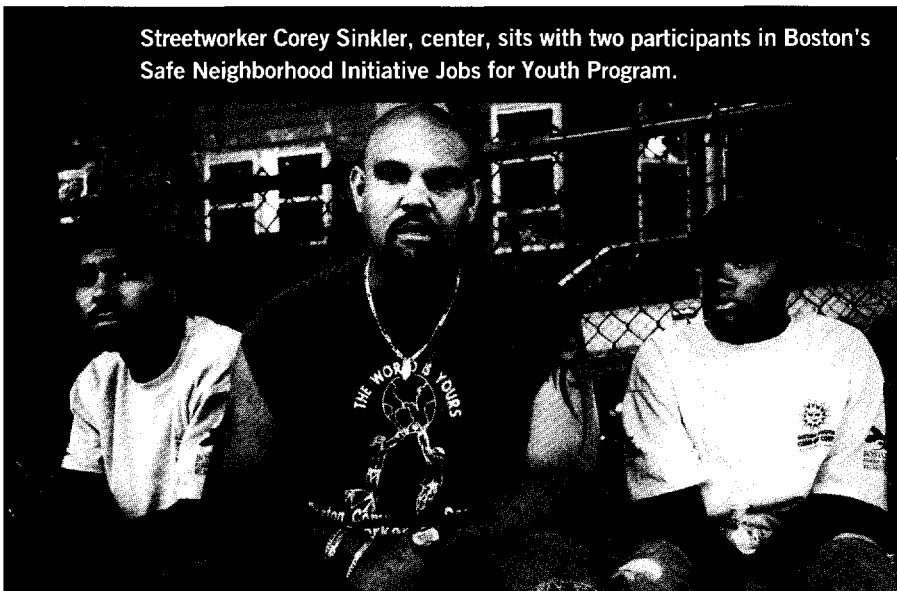
Fort Worth goes to such efforts to keep youngsters out of prison that it has some 20 levels of probation to offer the courts before judges resort to locking kids up.

Among the most imaginative is the Youth Advocate Program, which addresses the wider needs of young offenders. Their work is often part of more punitive sentences like electronic tagging—offenders wear small radio transmitters so their movements can be tracked—and curfews. Youth Advocates are older people recruited from the community, trained and paid \$7 an hour to spend more time with a young offender than any probation officer could possibly manage. They take them to school, to court, to community service, as well as to more pleasurable activities like the beach or bowling, providing the kind of attention and support a good parent might. This mentoring role is vital for youngsters, many of whose parents are in prison or on drugs, or simply working too hard to pay enough attention.

Research by Mark Lipsey of Vanderbilt University of different surveys of rehabilitation programs used for 40,000 young offenders shows that the best form of rehabilitation is a job. The least effective forms are punishment and nondirected therapy that does not address offending.

**RICHMOND,** California, is an industrial suburb just across the bay from San Francisco, but worlds away economically. The median income of its Iron Triangle neighborhood is one-third that of the surrounding counties.

Streetworker Corey Sinkler, center, sits with two participants in Boston's Safe Neighborhood Initiative Jobs for Youth Program.



# "THERE IS NOT A CITY IN THE COUNTRY THAT CAN ARREST ITS WAY OUT OF CRIME." —THOMAS WYNDHAM, POLICE CHIEF, FORT WORTH, TEXAS

There are no fewer than 70 gangs among the many ethnic groups of immigrants who moved north from Central and Latin America hoping for work in what is now a largely depressed city. But Richmond's approach to gangs largely ignores law enforcement and addresses the children at a much younger age. Its Head Start program picks up needy kids at risk as young as four, providing essential skills to prepare them for school.

At Lincoln Elementary, where 98 percent of the kids are so poor they get government food stamps, the school provides a hot breakfast as well as counselors on contract from social service agencies who meet with groups and befriend children suffering from violence. All staff are trained in mediation and conflict resolution, so no dispute is allowed to get out of hand and escalate to real violence after school. Any child missing school for a day or two is visited at home by one of the counselors, skilled at engaging alienated parents in their child's education.

The local health center, Familias Unidas, also recognizes the wide needs of the many Latino and Asian families whose children often end up in trouble. Their definition of "health" is broad and imaginative, based on the perceived and expressed needs of their

local catchment group. When the staff asked local gang members what would keep them out of trouble, the response was "a safe place to go after school and on weekends." So the health center provided a teen drop-in center run by local youth workers who have themselves escaped from the gangs.

These examples and the many others I have seen in cities around the world—Chicago, Miami, Marseilles, Durham, Belfast, Salt Lake City, Philadelphia—offer evidence that the apparent contradiction between public safety (the rationale for the punitive approach) and the young offender's needs (the basis of the welfare model) can be reconciled. Indeed, far from being in conflict, as the current debate about soft and hard approaches to crime suggests, the experiences of cities like Boston, Richmond and Fort Worth suggest that to achieve the former, it makes sense to address the latter—including young people's own need to be protected from each other. **[E]**

ROGER GRAEF is a filmmaker, writer and criminologist working in London. Information about the projects in this article can be found at: <http://www.pbs.org/lawandorder/>

## MAKING CITIES WORK

The Institute for Housing and Urban Development Studies (IHS) is an international education institute offering post-graduate education, research and advisory services in the fields of Housing, Urban Management and Urban Environment. Since the institute's establishment in 1958, more than 4,000 urban professionals from 120 different nations found their way to IHS classrooms to take part in a post-graduate diploma course, a Master Programme or a Ph.D. Programme.

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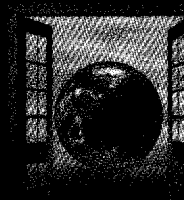
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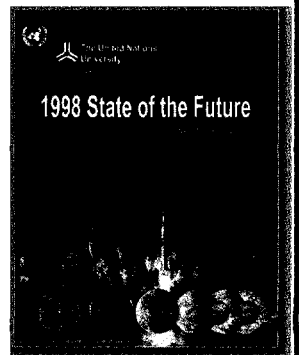
The book focus on 15 global *issues* and 15 global *opportunities* distilled from hundreds of trends and developments identified by an international panel, actions and policies to address each issue and opportunity plus a range of perspectives from around the world on actions and policies.

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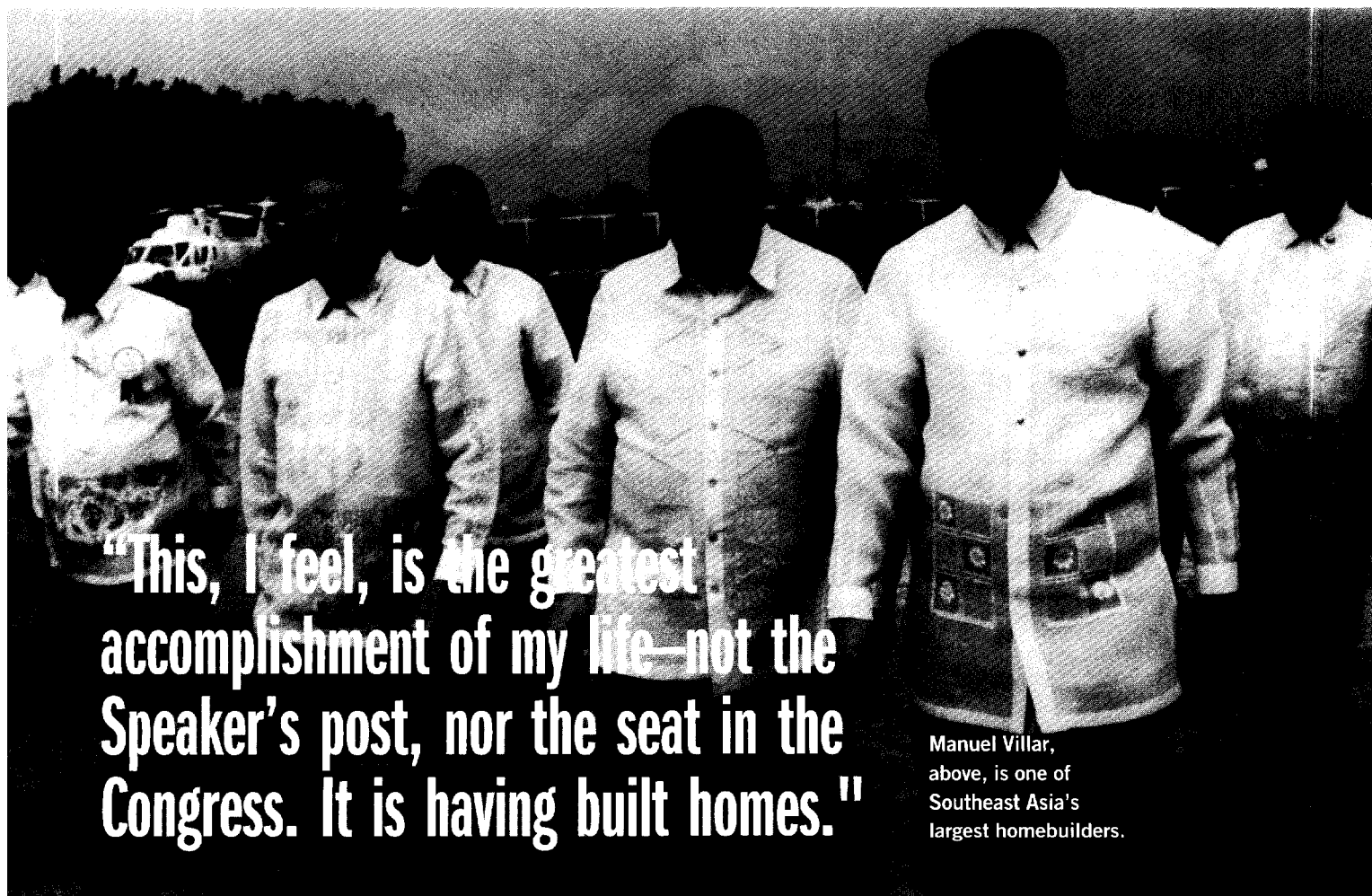




# Manny Villar

## HOMEBUILDER FOR THE FILIPINO POOR

Manuel Villar made millions selling low-cost homes to the poor in the Philippines. Then he entered politics and rose to become Speaker of the nation's House of Representatives. Now he's trying to do something about the nation's shortage of over 3 million homes. **BY PATRALEKHA CHATTERJEE**



**"This, I feel, is the greatest accomplishment of my life—not the Speaker's post, nor the seat in the Congress. It is having built homes."**

Manuel Villar, above, is one of Southeast Asia's largest homebuilders.



TRADITIONALLY, PROPERTY DEVELOPERS in the Philippines have made their money from the rich—from the skyscrapers, plazas and luxury condominiums that dot the skyline of Makati, the country's financial hub in Manila. But not Manuel B. Villar, one of the largest homebuilders in Southeast Asia. He has made millions, even billions, by catering to the needs of the poor.

Villar started his business supplying sand and gravel to construction sites. By the time he was 27, he had built and sold 100 houses and made his first million pesos. Ask him why he got into low-cost housing, and the answer is matter of fact. "Because it was the sector of the industry I could afford to get into." But soon it became a "fulfilling task to help low-income families have their own homes."

The Philippines went through a severe economic depression after opposition leader Benito Aquino was assassinated in 1983. As the country lurched and stumbled, Villar began doing what many considered preposterous at the time. He began buying land by the hectare. Villar's strategy was to buy up small and irregularly shaped spaces that big developers could not sell. He subdivided them into small plots and offered buyers not only the land, as was the practice in the Philippines, but also the house to be built on it. Villar realized that building on pockets of land within major projects would bring down the costs of access roads, power and water lines, and other infrastructure. He was building on a mass scale, so his prices plummeted further. Villar's offerings proved a very attractive proposition to those looking for budget housing.

Today, Villar's company, Camella & Palmera (C&P) Homes is the largest private low-cost housing developer in the Philippines. It operates in different regions throughout the country. In addition to its core business of providing low-cost housing to the poorer segment of the population, it is expanding its products to include higher value homes that cater to the growing middle class.

**Smaller houses offset rising land prices** For this market, a strategic move has been to offer homes that feature less floor space so as to mitigate the effects of escalating land value. Where previously the company offered homes with floor areas of 60 square meters, today it also markets 20-square-meter floor area homes. These houses bear names like Cassandra, Isabelita and Katrina, and are located in metro Manila and the provinces. The cheapest houses are "row houses"—basically a single room with a toilet and kitchen, costing around US\$4,500. For \$10,000, you can get a house with a 32-square-meter floor area. One of the current popular C&P models is the Katrina. Each unit of this "twin home" consists of three bedrooms and 45-square-meter floor area and sells for \$23,000; a six-bedroom version costs \$46,000. Villar also sells bigger, more expensive houses—up to 74 square meters—costing approximately \$82,000.

How can the poor finance the purchase of Villar's houses? Many of the buyers obtain subsidized housing loans from the government through the PAG-IBIG mutual fund. The fund is a mandatory savings scheme for employees with matching employer contributions. Individuals can borrow money against their accounts at reasonable rates. The loan usually covers most, but not all, of the cost of the house and lot. C&P homes also provide in-house financing to potential buyers and can help them arrange bank loans.

Villar's success has fueled competition in the affordable housing sector in the Philippines. In an article on Villar in 1995, *Asiaweek* pointed out that even developers of upper and middle-class housing in the Philippines such as Ayala Land had begun courting the lower middle bracket Villar has made his own. In addition, points out Joey Dacia of ASP Realty Corporation, a Manila-based real estate firm, low-cost housing developers sprung up in the late '80s, attracted by the prospect of profits, rising demand and a greater awareness among Filipinos of the need to own rather than rent a house. To date, however, these late entrants to the low-cost housing sector have yet to attain the scale of Villar's operations.

A key strength of Villar's business is his emphasis on creating communities. He notes, "Today, our mass housing projects create big communities in their locations. Neighboring areas benefit from their developments—not only in the appreciation of land value but also through creation of economic activities in the area." In this regard, Villar refuses to use prefabricated housing material. He knows he could build faster that way but points out, "Building houses is a socially intensive business. If we go assembly line, many people will lose their jobs."

**VILLAR REFUSES TO** use prefabricated housing material. He knows he could build faster that way, but points out, "If we go assembly line, many people will lose their jobs."

**Entering a larger arena** In 1992, Villar decided it was time to shift from business to politics. He felt that the current crop of leaders was interested in politics for its own sake, while the need of the hour was more exports and jobs. He won a seat in the Congress on his first try. In May 1995, he was reelected with the most votes in the nationwide balloting. And in July 1998, on the opening of the 11th Congress, 171 of the Congress' 221 members voted for Villar as Speaker of the House of Representatives.

In his new role, Villar would like to push through housing reforms. These could have a far-reaching effect in a country that faces a shortage of over 3 million dwellings. He has many ideas, especially with regard to housing finance, including how to develop the secondary mortgage market, float bonds and make housing finance sustainable. "But all depends on prevailing interest rates, the general economic condition and the political will of the government," he says.

Villar has pushed for infusion of new capital into the National Home Mortgage Finance Corporation in the Philippines. So far as models of housing finance go, he believes the ideal continues to be the housing mortgage system in the United States, where Ginny Mae and Fannie Mae bonds (representing mortgages) are traded in the secondary mortgage market. "This allows great liquidity and fast turnabout of capital," he explains.

Within Asia, Villar is highly impressed by the housing model in Singapore. Most people in Singapore—the most crowded country in the world, with 4,360 people per square kilometer—live in high-rise public apartments. Because of a compulsory savings program—the Central Provident Fund, whereby savings from salary are supplemented by a matching contribution from the employer—most Singaporeans own their own homes. Asian cities facing an acute housing crisis, he believes, can learn a lot from both the Singapore and U.S. models.

Villar is concerned at the way many cities in the region are developing. "Urbanization can be good only if development is well planned. It should take into account the needs of industry, transportation, residential enclaves, commercial districts and so on. For instance, I think, ports should not be near cities, as transportation will be choked. Industrial estates should provide housing facilities to forestall traffic problems." But the prime hurdle is the quality of governance. Asian cities, Villar believes, face a crisis of governance. "You can see the chaotic development in most Asian megacities. There are exceptions of course, like Singapore. But for most cities, there is simply no planning in the development."

Despite his success, 49-year-old Villar remains his quintessential restless self, and continues to dream. He would not only like to be the biggest homebuilder in

the world, but also a "model for Filipinos." Whenever he is asked how he would like to be known, he says, "I would like to be known as the man who provided the most number of homes for the Filipinos. I realized I could alleviate poverty through success in my own business—by generating more jobs. This, I feel, is the greatest accomplishment of my life—not the Speaker's post, nor the seat in the Congress. It is having built homes." [E]

PATRALEKHA CHATTERJEE is Asia correspondent for Urban Age and a New Delhi-based journalist who specializes in development issues.

## Urban Age profile

### Manuel Villar

**DATE AND PLACE OF BIRTH:** 1949, Manila, the Philippines.

**CURRENT PROFESSION:** Director, Camella & Palmera (C&P) Homes, the largest private low-cost housing developer in the Philippines and Speaker of the House of Representatives.

**EARLY ENTREPRENEURIAL INSTINCTS:** After college Villar started a seafood business. One day he was virtually wiped out when a restaurant did not pay him. It was then that Villar chanced upon the Private Development Corporation of the Philippines and, on the spur of the moment, applied for a job as a financial analyst. His application was successful and within one year he recouped his business losses.

**CAREER HIGHLIGHTS:**

**1996** featured in *Forbes* magazine's list of Filipino billionaires.

**1998** elected as Speaker of the House of Representatives.



SPECIAL REPORT

# FUTURE OF WATER

**clean valued  
accessible  
managed**

# SHOULD WE PAY FOR WATER? AND, IF SO, HOW

Water is too complex—and vital—a resource to be left to the mercy of uncontrolled market forces. But some form of market valuation must be found if water users are to be encouraged to increase the efficiency of their use. **BY JOHN KALBERMATTEN**

**M**ANY COUNTRIES are fast approaching the point, if they have not already reached it, when there will simply not be enough fresh water to meet all the unrestricted demands from the various sectors—municipal water supply, industry and irrigation—that feel they have a priority right to this raw material. For instance, to produce a pound of beef takes seven pounds of grain; this grain in turn takes 7,000 pounds of water. This same amount of water, if treated to potable standards, is enough to meet one person's basic needs for about six months. Which would be the better use, in a drought-stricken African country?

The fact that water resources allocation is complex and contentious is an argument for dealing with the matter sooner rather than later—we do not have too many years left to get the answer right.

When customers complain about the price of water, what they're really decriing is not the cost of the water itself, but the cost of treatment and delivery. The raw material, water, is free. It's there, in the river, for the taking by anyone. Having access to raw material at no cost is in fact the cause of much of what ails the water supply and sanitation sector. It leads to the—false—impression that it is much cheaper to expand abstraction and production than to make better use of existing supplies. The availability of water as a free resource, and the related view that wastewater is something to be disposed of rather than reclaimed for use as an additional resource, leads to an inefficient allocation of both water and financial resources.

The introduction of fees and charges for the use of all fresh water can be an

important stimulus to the efficient use of resources and to better environmental protection. It will also provide a valuable source of revenue to ensure service to the absolute poor, whether slum dwellers or subsistence farmers.

So we are faced with a classic dilemma. On the one hand, additional charges are essential to provide adequate revenue for the sector and allow services to be extended and properly maintained for sustainability. On the other, these same charges are beyond the means of many of the people most needing the services. Therefore, we need a better way to bridge the technical, financial and institutional gaps that prevent the extension of conventional services to low-income users. Fortunately, solutions to that dilemma are becoming increasingly clear.

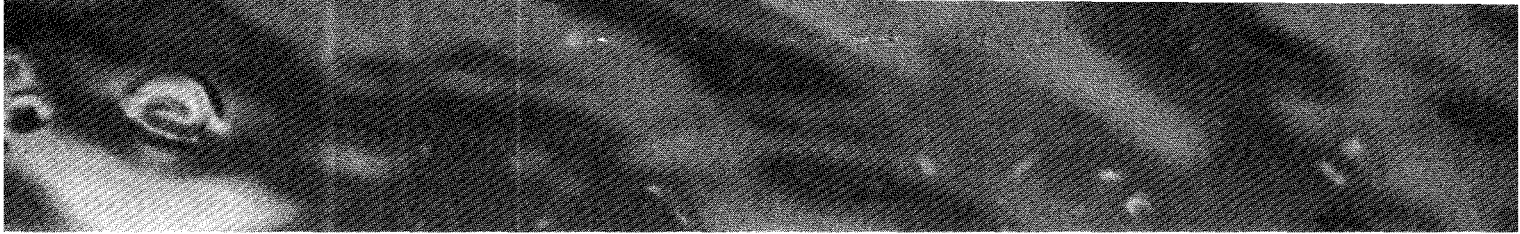
## Reduce costs to extend service

THE FIRST ELEMENT of a sustainable solution is to reduce the costs of service. We have known for years that this can be

accomplished by, for one thing, doing away with unrealistic standards. That means not designing distribution systems for high residual pressures or for fire-fighting capability in areas with single-story shacks that rarely have water at any pressure—and which are inaccessible to fire trucks in any case. Another way of reducing costs of service is by providing conventional sewerage for population groups unable to pay for the water needed to operate sewers—and even less able to finance adequate disposal facilities. We also know that families can receive service that is far better than what they have now, even if not ideal, through a mixture of public standpipes and public connections, and through low-cost sanitation facilities. Designing on this basis can reduce the costs of distributing water by as much as 40 percent, and by similar or greater amounts for sanitation—undermining the excuse that it is too expensive to extend service to low-income areas.

## Recover costs

HAVING EXTENDED the service, some way has to be found to recover the cost. Public utilities usually give up trying to control the mass of illegal “spaghetti connections” that seem to spring up overnight in many slum and squatter areas. But some recent experiences show that communities themselves can be the most efficient controllers, buying water wholesale from the utility, distributing it and recovering the cost themselves. In this way, management costs are lowered—and remain within the community. The sys-



tem is affordable because the cost of this public water supply is often only a fraction of the cost people were already paying vendors.

Withdrawal of external funding, or provision of funds only against demonstrated progress in improving performance, would impose much-needed discipline on this situation. It would force service providers to recover their costs from consumers and minimize unaccounted-for water. With such discipline, payment for raw water utilization would become more feasible, since a habit of realistic payment for services would have been established.

**Subsidies: An unresolved problem**

OF COURSE, there will always be people who are destitute—jobless, disabled, dis-

placed by political upheavals (which may include slum clearance)—and who genuinely cannot pay for water and sanitation, even if provided by conventional means. The traditional response has been to provide them with water at a subsidized rate (for example, “lifeline tariffs”). However, the United Nations Development Programme’s 1998 human development report has called for such subsidies to be phased out since, all too often, they do not benefit those intended: the urban poor often do not have any service at all, and so do not receive the subsidy.

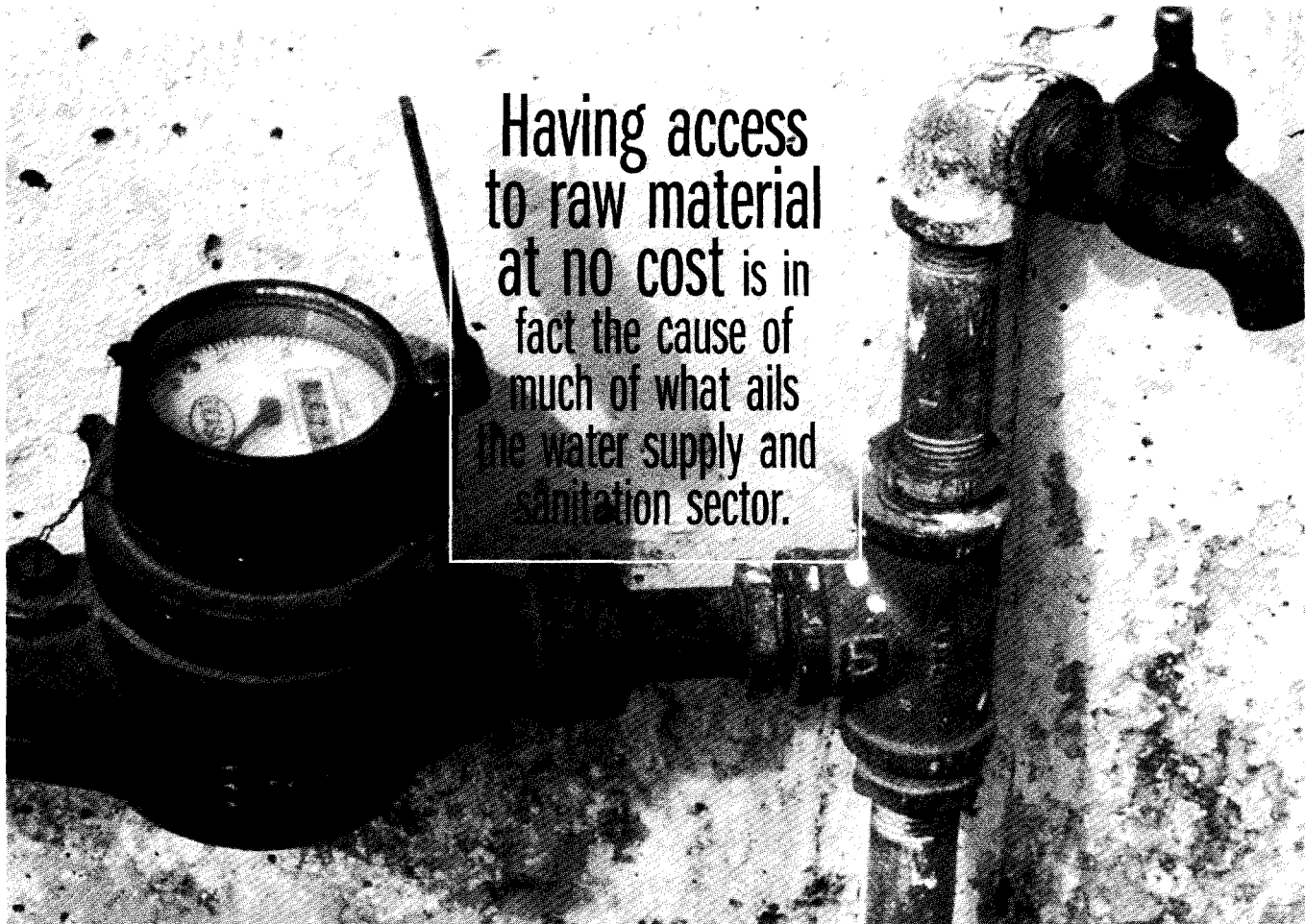
In fact, the present trend toward privatization is likely to end all such subsidies. In the absence of effective regulation (a real risk in most developing countries), privatization is likely to result in efficiency gains and better service for those

who already have service or who can afford to get connected to the existing system. The urban poor will again be overlooked. For this problem, there are no easy solutions.

IN THE FINAL ANALYSIS, this much is clear, even if all the logistics and politics have not yet been determined:

- If we want good water supply service, we have to pay for it.
- If low-income users are to benefit from service, technologies and methods that lower the cost of service must be used.
- If we want water to be sustainable, we also have to pay it. [E]

JOHN KALBERMATTEN is a former water and waste adviser of the World Bank and is now a consultant.



Having access to raw material at no cost is in fact the cause of much of what ails the water supply and sanitation sector.

WORLD BANK PHOTO

# DELIVERING WATER TO MEXICO CITY

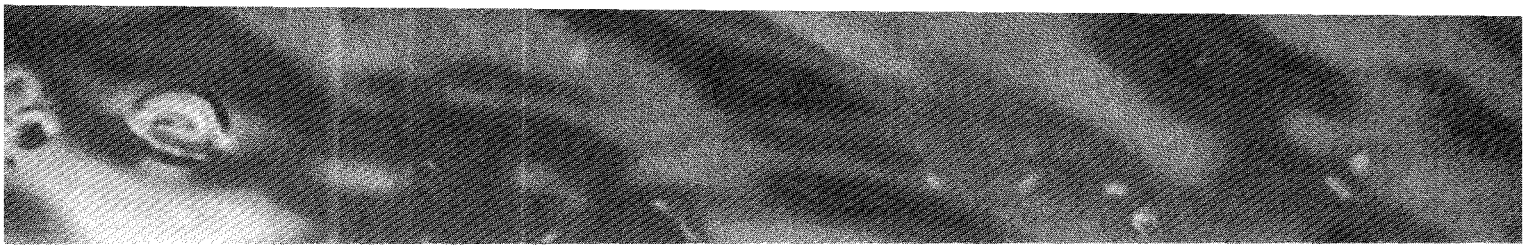


Mexico City's water system leaks in more ways than one. Despite feats of engineering, the city cannot meet the needs of an ever-growing population. But it's trying.

**G**ETTING DRINKING WATER to the inhabitants of one of the world's largest cities poses almost every imaginable problem, and making that water safe to drink only complicates matters. The aquifer that lies under Mexico City is bountiful and provides about 70 percent of the water needed by the capital. But the underground water supply cannot keep up with the demands of the population of the city proper, which has nearly tripled to 8.5 million in the last 45 years. The other 30 percent of the city's water is brought in from the Lerma and Cutzamala river systems from as far away as 120 kilometers and pumped 1,000 meters over a pass to reach the Valley of Mexico, a huge basin 2,500 meters above sea level.

Even all these engineering feats can't meet the capital's thirst for water. Although 98 percent of Mexico City homes have running water, that still leaves some 400,000 people without domestic hookups, says Juan Carlos Guasch, deputy director of the city's hydraulic department. The eastern section of the city, a fast-growing working class area, is prey to constant water shortages. "It's like a chess game, sometimes there's no water here, other times there's no water somewhere else," said Elvira Peña Martínez, a 27-year resident of the Ixtapalapa neighborhood in eastern Mexico City. From May to August of this year, she and her neighbors had no water coming out of their taps. The east-





ern section suffers water shortages for several reasons: it lies beyond the city's aquifer, the wells nearby are inadequate and water pumped in from sources to the west beyond the Valley of Mexico is either consumed or lost in leaks before it reaches the eastern end of the city.

Even when water does flow through the pipes in Ixtapalapa, it's repugnant and sometimes contaminated. "It is not potable water," Peña says. "It is yellow with a lot of sediment, it looks like tamarind juice." Worse than the color—which comes from a high level of minerals—are the contents. Peña has seen little worms in the water at her house. Samples of water from Ixtapalapa have contained fecal matter that could cause digestive tract problems ranging from colic to salmonella and cholera, according to Roberto García, a biologist and researcher for Mexico's opposition Green Party. In Mexico City, 100 percent of the city's tap water is disinfected, but even so 585 people per 100,000 residents died of infectious intestinal illnesses in 1995, the national statistical institute (INEGI) reports.

Getting enough water and making it safe to drink for the residents of Ixtapalapa are one and the same. "The problem of water quality is very related to water scarcity," says García. Scarcity of water causes the Mexico City water authority to draw water from inadequate sources. Overexploitation of the aquifer forces drilling ever deeper, to depths of 300 meters, to extract rusty-colored water laden with manganese and iron. Seeking water from sources outside the Valley of Mexico automatically means bringing in unsafe water, because 68 percent of underground and surface water sources throughout Mexico are contaminated, according to INEGI.

Community organizations were formed last year in Ixtapalapa to demand steady and safe water service. The district government is filing complaints with the

city water authority on their behalf, says Jesús Rebollo, an employee of the Attention to Citizens' Module, a service created by the Mexico City Assembly, which is for the first time controlled by politicians from the National Action Party (PAN).

Mexico City's water authority is working simultaneously on several fronts to increase and improve the capital's available water supply. In the eastern region, the hydraulic works department is drilling wells and is treating wells that already exist to make the water they provide potable, says Guasch.

No less than 37 percent of Mexico City's water is lost through leaks in the distribution system, so repairing leaks is

collects fees for only about 300 of every 1,000 liters of water that enter the distribution system, says Guasch. He estimates that the fees charged for water add up to about 50 percent of the cost of supplying and delivering the water. Other specialists say they cover only 15 percent of the cost of water brought from Cutzamala.

In 1992, the city began to install meters to measure water consumption and charge according to use. Today, however, more than 20 percent of the consumers still do not have meters and pay a flat fee for water regardless of how much they use. Not only are these residents underpaying, they have no incentive to conserve water. By the same token, there is no control over how



**"The problem of water quality is very related to water scarcity."**

another vital program. Water is abundant at the western edge of the city, but by the time it reaches Ixtapalapa, the leaks have drained much of it off. "We repair 50,000 leaks a year, but without any methodology to recover the flows of water," Guasch says.

A major building project to tap more water in the Cutzamala river system is under way; it will increase the water supply by 8 percent. Even when this costly project is built, it will provide less water—5 cubic meters per second—than the amount lost through leaks—12 cubic meters per second. "If we repaired the leaks, it would end our [water] deficit," Guasch says, referring to the needs of Mexico City proper. But, he adds, there would still be a shortage in the greater metropolitan area.

Mexico City's system for collecting payments for water is a major obstacle to enhancing the water supply. Mexico City

much water is consumed in the city. In addition, some industries do not pay because they have their own unregulated wells, says García. And some users are simply not charged.

The city's master plan for potable water to the year 2010 sets the goal of increasing the number of bills sent out and collections made so that all users are covered. Meters are being installed and work is under way to bring in more water from the Cutzamala. Perhaps most important, for the first time the private sector has been given contracts to set up the billing systems and install meters.

But even if all the leaks, physical and administrative, were sealed, the greater metropolitan area of Mexico City would still be crying out for more water. In the long run, only water conservation and water treatment and reuse can quench the thirst of one of the world's most populous cities. [E]

THE FUTURE OF WATER

# THE GLOBAL PRIVATIZATION BAILLOUT OF WATER SUPPLY!

They did it with the airlines, railroads, electricity and telecommunications. Now federal, state and municipal governments around the world are positioning themselves to privatize their water systems. For many cities, changing the government's role holds enormous potential, but there is resistance in some quarters to what is perceived as private sector overreach. **BY PENELOPE J. BROOK COWEN**

**P** RIVATE SECTOR PARTICIPATION is a general term covering a broad variety of options for involving the private sector in service provision. This may range from service contracts—by which the private sector provides specific technical services such as pipe repairs or meter reading—to management contracts and leases—under which the private sector takes on responsibility for the overall operation and maintenance (O&M) of a water and sewerage system—to concessions—through which, in addition to O&M, the private sector takes on overall investment responsibilities for the improvement and expansion of water and sanitation services. These options differ in their allocation of risks and responsibilities between the public and private sectors, their complexity and their duration, but all involve a partnership between the government and the private sector.

Governments' motivations for seeking private sector participation in water and sanitation vary. They may be looking to secure sustainable improvements in the efficiency with which services are delivered—often after years of failing to attain this through public sector projects focused on training and the upgrading of management systems. They may be looking for new sources of finance for needed investments in network rehabilitation and

expansion, or for new water and sewage treatment facilities—looking both for greater efficiency in the design and implementation of investments, and for relief for national and municipal budgets. Or they may be looking for ways to make service providers more sensitive to customer needs and preferences. Often, their motivations are a mix of some or all of these. Private sector participation can answer all of these goals.

COUNTRIES AND CITIES that have implemented private sector contracts have in many cases seen significant improvements in service efficiency and responsiveness, as well as more rapid expansion of services to households formerly forced to rely on poorer quality or more expensive informal services. Buenos Aires in 1993 granted responsibility for operations, maintenance and investment in water and sanitation to a private sector consortium, Aguas Argentinas. Within the first two years of operation, production capacity expanded 27 percent, an additional 500,000 people received water services, an additional 400,000 received sewerage services and response time for repairs fell from over a week to just two days. More recently, Aguas Argentinas has begun to work with local communities and non-governmental organizations to find innovative ways to expand services more rapidly and affordably into informal settlements.

Not all attempts at private sector involvement in water and sanitation have been as successful as the Buenos Aires case. In Caracas, Venezuela, an attempted concession failed to attract any bids; this was due, at least in part, to both a failure to establish good working relationships among participating municipalities and a



## TOP FIVE PRIVATE SPONSORS, BY REGION, 1990-97

Number of projects

Company	East Asia and Pacific	Europe and Central Asia	Latin America and Caribbean	Middle East and North Africa	Sub-Saharan Africa	Total	Total investment in projects with private participation (1997 US\$millions)
Suez Lyonnaise des Eaux, France	11	7	6	2	2	28	16,153
Vivendi, France (formerly CGE)	4	3	3	0	3	13	5,275
Aguas de Barcelona, Spain	0	0	6	0	0	6	9,072
Thames Water, UK	4	1	1	0	0	6	1,375
SAUR International, France	1	1	0	0	3	5	38

Source: PPI Project Database in the Private Sector Development Department, The World Bank

political commitment that was perceived as weak. In Tucuman, Argentina, a concession arrangement collapsed because of the unwillingness of the government to stand behind promised tariff increases. And in Guinea, a lease arrangement that has had some success in improving service quality is hampered by a lack of credible provisions to extend affordable connections to a very low-income population. In each of these cases, the government failed to provide credible and secure arrangements for striking a balance between a fair rate of return for the private operator and appropriate protection of consumer interests.

The success of private contracts in delivering benefits to consumers depends—first and foremost—on a high level of political commitment, the design and quality of the private sector contract itself, and the institutional arrangements a government puts in place to support that contract. It also takes rigorous management, a high degree of technical skill, careful attention to the concerns of stakeholders—from employees and unions to commu-

nity organizations—and transparency and fairness. Finally, it means listening to prospective private sector investors to find out their concerns about the local environment and their ideas about what is possible.

Private sector arrangements are based on partnership between the public and private sectors. Establishing a good partnership means defining and preparing for the government's future—as well as current—roles and responsibilities. A critical aspect of this process is putting arrangements in place for monitoring and regulating private contracts so they are perceived as competent and independent of political or industry pressures. Another aspect is determining exactly what risks and responsibilities the government will retain once the private sector contract is in place—and how it intends to manage them.

Developing country governments can realize great benefits from private sector involvement. Planning is needed at every stage to ensure the greatest possible benefits. This planning begins with developing

strategies in the water and sanitation sector that take full advantage of the potential for private sector involvement; building consensus in favor of appropriate policy, regulatory and institutional reforms; designing and implementing specific reforms and transactions; and—finally—developing government capacity in the design and execution of private infrastructure arrangements and in the regulation of private service providers.

There are no blueprints for a successful engagement with the private sector to improve water and sanitation services—and no substitutes for careful preparation, political commitment and early attention to the broader regulatory and institutional framework that will support and sustain a partnership with the private sector. Where these features are present, strong benefits can flow to consumers in the form of better, more responsive, more cost-effective services. [E]

PENELOPE J. BROOK COWEN is a senior private sector development specialist with the World Bank.

# THE MYTH SURROUNDING WATERFRONT REDEVELOPMENT

Revitalization of the waterfront has been a principal feature of urban development over the last 30 years. The herd mentality of city planners and developers has given rise to generic models of success that ignore local characteristics. Opportunities exist for more experimental approaches that accommodate a wide range of uses and users and that adapt their form to the uniqueness of their place and topography.

**O**VER THE LAST TWO DECADES, cities as diverse as Barcelona, Baltimore, Bangkok and Buenos Aires have attempted to reclaim their waterways. City officials and developers have radically restructured abandoned and underused urban waterfronts; transforming their physical layout, function and use. In the 19th century the waterfront was a place devoted to commerce and industry. A post-war shift away from the manufacturing economy to the informational and service economy (leisure, recreation and tourism) led to the emergence of a wide array of new uses for waterfronts—from parks and walkways, restaurants and casinos to mixed-use and residential projects.

The obsolescence of the port began in America during the late 1950s. The rest of the world followed suit in the 1960s and 1970s. Advances in transport technology—the intercontinental jet aircraft, the automobile and the railway—weakened the dominance of the city port as principal transport center. Maritime passenger traffic rapidly disappeared, eliminating the need for liner berths and terminals. At the same time, the emergence of containerized shipping forced many ports to relocate further away from the city where land was in abundance—enabling quick and inexpensive access and construction of railroads and highways. The combination of large plots of derelict land in the heart of cities with the rapid growth in the service sector industry made waterfront redevelopment an obvious and valuable opportunity for city planners and entrepreneurs.

Programs for renewal and rebuilding first began in major North American cities such as Boston, Baltimore, St. Louis and

Toronto in the 1960s and '70s. These were followed in rapid succession by projects in Europe—the Docklands in London and Liverpool, the Vieux Port in Marseilles—and on the other side of the world, Darling Harbour in Sydney and the Victoria and Alfred Waterfront in South Africa.

Baltimore's Inner Harbor is often cited as one of the best and earliest examples of waterfront revitalization. The first development was the Charles Center which arose from a public-private initiative. The city bought the land, cleared it and sold plots to developers who constructed 400,000 square meters of new retail space, 300 apartments, a hotel, science museum and aquarium. Impressive as all this was, the waterfront lacked a focus, it had no center to draw people and was only used by the public for special annual festivals. In the late 1970s a project to enhance the leisure and tourist components was spearheaded by the Rouse Company, a national shopping mall and

commercial property developer. The result was Harborplace, a lively market occupied by food stalls, specialty shops, a gallery and cafes. It became the catalyst that made all the other attractions perform, drawing hundreds of people day and night for 12 months of the year instead of the previous 6-month season.

But that was 16 years ago. The aging Inner Harbor attraction sorely needs a US\$20 million facelift to upgrade the building's operating systems and modernize the market spaces. On top of the physical deterioration, Baltimore has another little secret. The senior vice president of Rouse, Robert Minutoli, admits that visitors to Harborplace are no longer local residents, they are mostly tourists and conventioners. So while the area continues to attract a number of tourists, it has failed to address the city's more immediate problems such as arresting white flight, suburban sprawl, inner city crime and unemployment.

Cities have drawn from each others' experiences, and that is a good thing. U.S. Supreme Court Justice Louis Brandeis once dubbed this phenomenon "the laboratory of the states." That is, a system where state governments, cities and municipalities are given free rein to experiment with various kinds of legislation, programs and financing. In theory this initiates a process of trial and error that ultimately uncovers optimal forms of governance. Similarly in urban development, the pitfalls and triumphs of pioneering cities around the world quickly become textbook case studies for city officials and other important observers.



In Providence, Rhode Island, Waterfire was crucial in bringing people to the downtown waterfront.

SANDOR HODO

But while Brandeis' formula has rhetorical appeal, it has not worked as smoothly as he might have envisaged in waterfront redevelopment. In their enthusiasm to import ideas from abroad, cities have tended to adopt generic models of success without taking into account local characteristics and conditions that contribute to those successes. The result is a homogenous group of buildings—aquariums, convention centers, museums, shops and restaurants—that prove remarkably similar the world over.

Rino Bruttomesso, director of The Cities On Water Centre in Venice, suggests that “if the scope of waterfront redevelopment is limited to refurbishing them and turning them into copies of the same model—based on the presence of commercial structures—then the result is debatable.” Developers need to identify opportunities that are specific to their city rather than replicate the experience of others. It can be a process not just of economic reinvention but also of cultural/artistic endeavor and social invigoration. Living spaces, says Bruttomesso, should be given a central role. The aim is to join the city with the waterfront through different activities—residential, office, retail, entertainment—and open

spaces so that city residents, not just visitors, enjoy the area.

THE WATERFRONT offers the opportunity to create an urban environment that may not be experienced in other parts of the city. It is a place for experimentation and innovation. Rotterdam, for example, decided against complete commercial development of the docklands. Instead, the city government renovated substandard housing and built new low-income housing on the abandoned docks outside the central port area. In Providence, Rhode Island, conceptual artist Barnaby Evans created Waterfire—a kind of *son et lumiere*—which has dramatically transformed the downtown waterfront area, filling the beautiful but previously empty spaces with people. The installation is composed of bonfires which burn on metal braziers in the middle of both the Providence and Woonasquatucket Rivers. The spectacle is accompanied by a world music soundtrack that can be heard for miles as people stroll, talk and simply stare at the flames. “It’s a social as well as a spiritual experience” says Evans. “Getting Americans out of their cars, walking and talking together on the streets” has been a principal motivation.

Another example of bringing a creative solution to a local problem can be found in Bangkok. After years of pollution and neglect, Bangkok is beginning to view its waterfront as an asset. Private ferries and long boats carry passengers along the canals and the Chao Phraya River. New restaurants, hotels, housing estates and shopping areas have sprung up along the banks due to the increased traffic. There may be instances where the ports can be given an ecological function—creating an environment that might sustain local fishery, wetlands and native bird life. Such measures have been taken to clean the river Thames in London; as a result, salmon and other fish have returned.

For waterfront redevelopment to succeed, city governments must be prepared to finance infrastructure that may not give a dollar return for some years to come. This is obviously a tall order in times of fiscal austerity and shrinking government responsibilities. More conservative approaches are likely to be “one size fits none”—banal urban landscapes that deprive the city of any individual character. City officials must be receptive to new ideas and encourage a creative, flexible and entrepreneurial environment for developers and other partners. □

# THE PIPES AREN'T LEAKING BUT THE WATER'S GONE

Huge amounts of water disappear from city systems due to theft, inadequate metering and poor billing practices. Controlling such commercial leaks can not only reduce water losses but increase utility revenues.

**L**EAKY PIPES WILL OCCUR in any water supply system over time, and cities spend a lot of money patching them. But there is another—potentially much larger—type of loss that can ultimately cost cities and their utilities much more.

Water disappears from city systems around the world from theft, inadequate metering and inaccurate billing. Studies in several cities consistently show that as much as 70 percent of the losses result from customers siphoning it off or utilities failing to manage it properly—so-called “commercial losses.” Controlling those losses can result in a better use of existing supplies and an increase in revenues to finance expansion and improvement of the systems.

Some water is simply stolen by people who make illegal connections to the system. Other losses stem from practices of the utilities—poorly maintained customer files, improperly read meters, lack of meter maintenance and testing, and inadequate billing and collection procedures. In many cases, there is no incentive to identify or control the losses because utility managers are not held accountable for the cost of the water, and city administrators concern themselves primarily with physical leaks.

One study of Bogota, Colombia, showed increases in losses between 1975 and 1990 that cost the utility over US\$440 million—42 percent of the utility's total income for the period. In Tblisi, Republic of Georgia, a recent study found that the amount of water entering the system per person, while substantially higher than

levels in New York City, was not enough to avoid rationing. Most of the water was disappearing without a trace.

Utility revenues go up when cities control commercial leaks. Managing water more effectively can also reduce, or at least postpone, the need to build new capacity into the system. Overall consumption usually goes down and, as a bonus, when water consumption is reduced, sewage flows generally go down as well.

Experts say the first step in controlling commercial leaks is to make a solid assessment of the situation and to look at the numbers from the standpoint of business efficiency. This may require the assistance of outside advisors, since utilities may not have the expertise to do a reliable analysis or provide accurate data.

Standard measurements include door-by-door inventories of consumers, tabulations of which connections are metered and how well the meters are functioning, and determinations of whether the meters are suitable for accurately measuring the level of water being consumed. For instance, a consistent change in the amount of water used by a company—whether up or down—may require a corresponding change in the size of the meter to ensure accurate measurements.

Other steps include periodically updating the consumer census, setting up procedures to add new customers or modify consumers' files, identifying appropriate

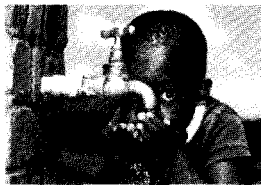
rates to charge, revising billing systems for maximum revenue and closely monitoring the installation and maintenance of meters.

Cities that have aggressively attacked the problem report considerable benefits. Singapore, for example, brought the percentage of lost water due to physical and commercial leaks down from 10.6 percent to 6 percent in six years. Singapore water officials ensure that there are meters on all outlets, and the devices are replaced every four to seven years. Controls are in place to prevent tampering, and the entire water distribution network is swept for leaks once a year. The city discontinues service if bills are not paid on time, but the rate of nonpayment is only 0.3 percent of users.

Residents of Murcia, Spain, did not have water available throughout the day in the late 1980s when the city administration discovered that as much as 44 percent of the city's water was being lost. Billing was also slow; at times it took 90 days after a meter was read to produce a bill. Over the next six years, a stringent billing system was put into place. Once all users were accounted for, unmetered users were brought into the system, and meters were upgraded. Billing time was reduced to nine days, and the percentage of lost water was reduced to 23 percent. Service has been extended to 100 percent of households, water is available at all times, and pressure has been stabilized. Remarkably, the city was able to reduce water rates by 4 percent over the same period.

No city can stamp out leaks entirely—whether physical or commercial. However, with the right plan to identify and understand the problem, most commercial leaks can be plugged.

*Reduction of Unaccounted for Water. The Job Can Be Done!* By Guillermo Yepes is available from the World Bank Water Help Desk, tel: 202-473-4761; e-mail: [whelpdesk@worldbank.org](mailto:whelpdesk@worldbank.org).

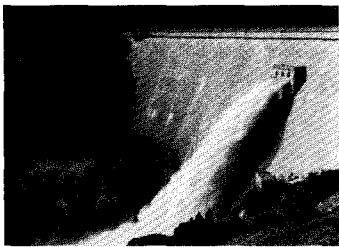


# STATE OF THE ART

NEWS, PRODUCTS AND INNOVATIONS

**Americans Using Less Water** New statistics challenge the assumption that water use inevitably increases along with economic and population growth. Americans' use of water declined by 9 percent from 1980 to 1995, even as the U.S. population was growing by 16 percent. This amounts to a decline in the use of water of about 20 percent per person, Dr. Peter H. Gleick, director of the Pacific Institute for Studies in Development in Oakland, California, told the *New York Times*.

For many decades, water use in the United States far outstripped population growth.



Now experts see Americans gradually shifting away from trying to capture more water toward more efficient use and conservation. A good example is dams. America has lost its appetite for dam building. "The best sites have all been taken, and building is too dear; the fashion now is to remove dams," argues *The Economist*. Industry and agriculture have also become more frugal with water. Industry has turned to recycling, other water conservation measures and

new technologies, and industrial expansion itself has slowed down. Industrial use—apart from water used to cool power plants—fell 35 percent to the lowest level since record-keeping began in 1950. In the West, the depletion of underground water and rising pumping costs have led farmers to employ less wasteful methods of irrigation. The average amount of water used per acre of irrigated land fell by 16 percent.

The U.S. experience may benefit developing countries, where increasing population and rapid industrialization are expected to put pressure on water supply. Gleick told the *New York Times* that these countries might be able to exploit U.S. gains in water efficiency and skip America's earlier, wasteful stage. "Their steel industry will never use as much water as our old steel industries," he said.

**CORRUPTION**, which is rampant in many transitional and developing countries, has not been formally recognized as one of the main reasons for the failure to provide sustainable water and sanitation. A discussion group on "Corruption in Infrastructure Provision" is being set up so that the issue can be openly discussed, debated and researched. To become a member of the proposed group send your name, profession and postal address in an e-mail to: [abdulrk@psh.brain.net.pk](mailto:abdulrk@psh.brain.net.pk).

Contact: Abdul Rehman Khan, 36, G-II, Hayatabad, Peshawar 25100, Pakistan.  
Tel: 92-91-817-138/816-766.

*The World Health Organisation recommends a minimum of 80 liters of water per person per day for cooking, cleaning, drinking and personal hygiene.*

*Approximately 300 major river basins and many underground aquifers cross national boundaries.*





# STATE OF THE ART

NEWS, PRODUCTS AND INNOVATIONS

## Water Treatment Kiosks

Clean drinking water is in short supply in many cities. Water production cannot keep pace with the demands of burgeoning populations, and residents are forced to rely in part on rainwater and wells. Old or deteriorated water networks frequently result in burst pipes and leaks. Repairs can take years. Bottled water is popular, but the poor cannot afford it. Might not the solution be small water treatment plants installed all around a city?

Enter the water treatment kiosk, a device designed to be installed in hospitals, schools, bus stations, places of worship and other locations that provides good quality drinking water to the various consumers. The treatment kiosk avoids contamination from the distribution system by treating water at the point of consumption. It can combat excessive iron concentrations or salinity in well water and eliminates the need for expensive bottled water. The kiosks, sold by Aqua Technique in Paris, are compact, container sized and can be connected immediately to local networks or bore holes. They are autonomous, equipped with their own power generator for use in case of power failure. They use an advanced technology—ultrafiltration—and include, as options, iron removal and desalination units. The kiosk's dimensions are 6.1 x 2.5 x 2.6 meters, and its weight (without the ultrafiltration unit) is 400 kilograms. A seven-meter container can be converted into a water treatment kiosk. Kiosks consist of two separate compartments accessible by double doors at each end. The walls are insulated and soundproof.

Aqua Technique touts decentralized water treatment as having two advantages. One, both the installation and maintenance of kiosks can be self-financing with the support of local water traders operating as franchises to collect income. Two, the number of kiosks can be increased over time.

Contact: Aqua Technique, Parc de l'Île, 15/27, rue du Port BP 727 92007, Nanterre Cedex, France. Tel: 33-1-4614-7173; fax: 33-1-4614-7169; e-mail: Aquatech@club-internet.fr

## RESOURCES

### Periodicals

*Urban Water*—a new journal will be launched early in 1999 to focus on water-related and water-based systems in the urban environment. The editors are seeking reviews (8,000 words) and research papers (5,000 words). Contact: Prof. C. Maksimovic, Imperial College, UK. E-mail: c.maksimovic@ic.ac.uk; Web site: <http://www.mailbase.ac.uk/lists/lcsewera/1998-11/0001.html>; <http://www.elsevier.com/inca/publications/store/6/0/1/3/4/8/index.htm>

*Waterlines* magazine focuses on low-cost water and sanitation. Quarterly. Annual individual subscription: £16. Contact: Subscription Manager, Intermediate Technology Publications Ltd., 103-105 Southampton Row, London WC1B 4HH, UK; e-mail: [subscriptions@itpubs.org.uk](mailto:subscriptions@itpubs.org.uk); fax: 44-171-436-2013; tel: 44-171-436-9761



*Some 700 million people are infected each year by diseases caused by contaminated water.*

### Books

*Alternative Solutions for Water Supply and Sanitation in Areas with Limited Financial Resources.* Lyonnais des Eaux, 72 avenue de la Liberté, 92753 Nanterre cedex, France. Tel: 33-1-4695-5000; Web site: <http://www.suez-lyonnaise-eaux.fr>; <http://www.suez-lyonnaise-eaux.com>

*Good Sewers Cheap? Agency-Customer Interaction in Low-Cost Urban Sanitation in Brazil.* Gabrielle Watson, Water and Sanitation Division, World Bank, Washington, DC, USA, 1995.

*Institutions, Organizations and Viable Water Services: A Capacity Development Model for Drinking Water Provision and Production.* James J. Hukka, Tampere, Finland, 1998.

*Managing Water Resources for Large Cities and Towns.* Report for Beijing Water Conference. UNCHS (Habitat), Nairobi, 1996.

*Private Sector Participation in the Water Supply and Wastewater Sector, Lessons from Six Developing Countries.* Daniel Rivera, World Bank, Washington, DC, 1996, pp. 49-50.

*Urban Water Management: French Experience Around the World.* Paris, Dominique Lorrain, ed., Hydrocon Editions, Paris, 1997.

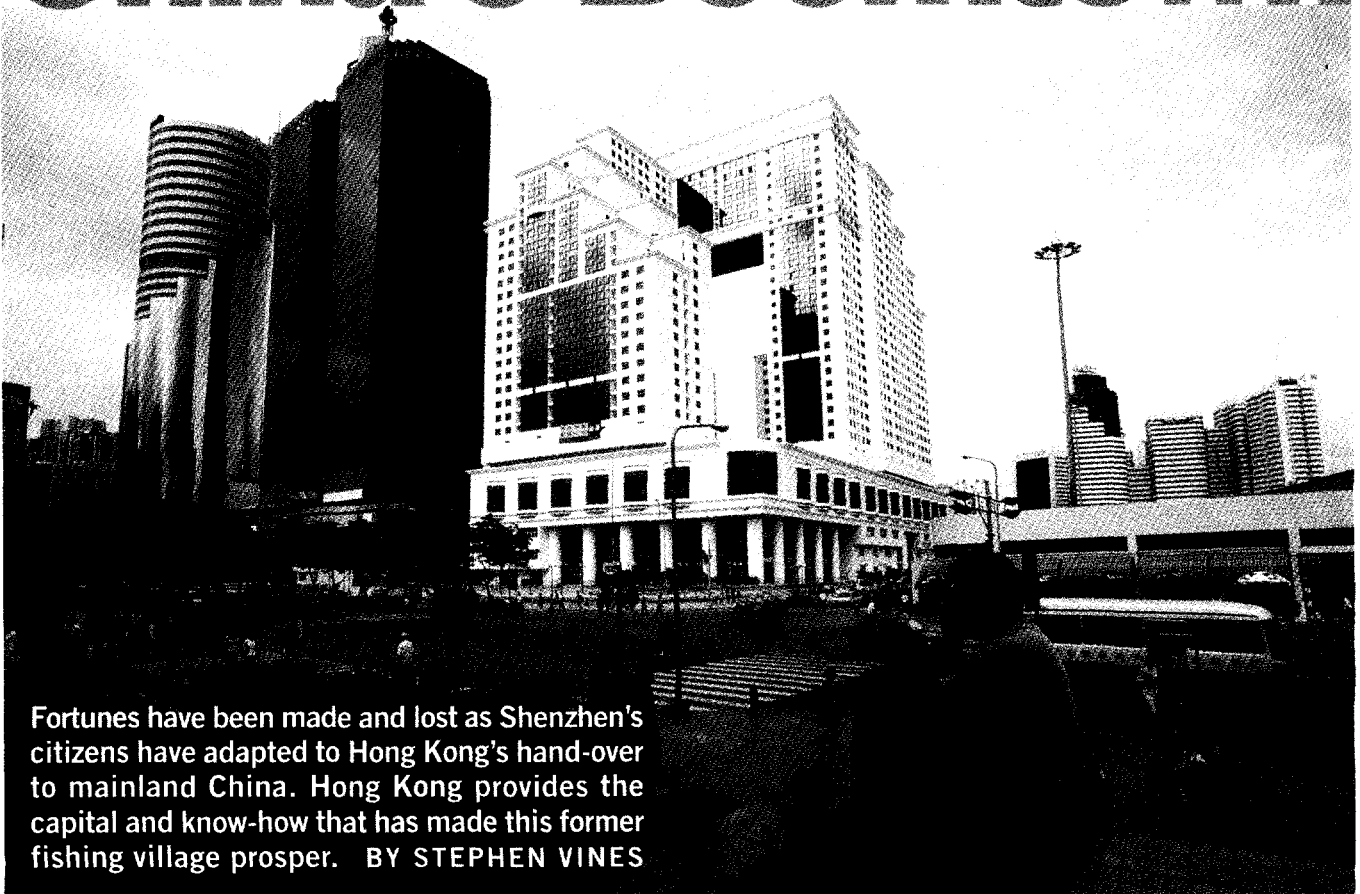
### Organizations

*International Association on Water Quality,* Duchess House, 20 Masons Yard, Duke Street, St. James's, London SW1Y 6BU, UK. Tel: 44-171-839-8390; fax: 44-171 839-8299; e-mail: [info1@iawq.org.uk](mailto:info1@iawq.org.uk)

*Stockholm International Water Institute,* SE-106 36 Stockholm, Sweden. Tel: 46-8-736-2078; fax: 46-8-736-2022; e-mail: [dave.trouba@siwi.org](mailto:dave.trouba@siwi.org)



# Shenzhen China's Boomtown



Fortunes have been made and lost as Shenzhen's citizens have adapted to Hong Kong's hand-over to mainland China. Hong Kong provides the capital and know-how that has made this former fishing village prosper. BY STEPHEN VINES

The lights have been turned off on the electronic clock that towers over the footbridge connecting the buzzing Chinese border town of Shenzhen with Hong Kong. In the run-up to July 1, 1997, it counted off the days, hours and minutes until Hong Kong was to rejoin the Chinese mainland in "glorious unification." On the other side of the bridge, in Hong Kong, an electronic sign promises the former British colony a "more beautiful future." Strangely, the same promise has not been made

to the citizens of Shenzhen. Maybe this unconsciously reflects the sense of anticlimax and disappointment that has come a year after the hand-over, as many of the promised benefits of unification have failed to materialize.

Expectations were very high indeed. In 1996, the casino-style Shenzhen stock market soared to dizzying heights on the back of rumors that Hong Kong people would flood across the border and buy property—not to mention swallow up vast amounts of products made by Shenzhen-listed companies. Like many of the rumors that have swept this volatile stock exchange, the Hong Kong rumor helped some people get rich while others got badly burned. “The market was very hot in 1996,” recalls Zhang Jie,

**SHENZHEN PRESENTS A VISION** of an infinitely more prosperous China, where the rule of law is taking hold, where high technology is moving center stage, where the market economy is strong but the state still retains control, and where authoritarian rule remains intact with little sign of challenge.

manager of the China Securities Co., one of the biggest stockbrokers in Shenzhen. “You couldn’t move downstairs,” she says, pointing in the direction of a large hall on the ground floor where stock prices flash up on electronic scoreboards and computer trading terminals blink furiously. “They dream of getting rich, but it’s impossible for everybody to get rich,” she continues. Zhang is referring to the so-called “small fish” investors, who pour their savings into the stock market. Yet this is precisely the dream that has lured almost 4 million people from all over China to this frenetic special economic zone (SEZ). Established in 1980 under the guidance of the late Deng Xiaoping, this was China’s laboratory for experimenting with the market economy.

Supported primarily by investment from Hong Kong, this once tiny fishing village has developed into one of China’s most prosperous cities. In fact, the economy has grown each year at a breathtaking average of 34 percent since the SEZ was established. Back in 1979, the biggest building in Shenzhen was four stories high; now, a 68-story office tower, the King of Prices Building, looms over a tightly packed mass of skyscrapers. The per capita gross domestic product of Shenzhen is some US\$3,000. That’s about four times higher than the national average. Wages are anything from double to four or five times higher than elsewhere in China. And it shows: look at the local people with mobile phones clasped to their ears and fake designer clothes on their shoulders. They might just as well be inhabiting a dif-

ferent planet from their fellow citizens in the Chinese heartlands.

Shenzhen is rich because Hong Kong is richer and providing the capital and know-how to make the SEZ an economic powerhouse. “The way I look at it,” says Kenneth Tse, who runs the Hong Kong-controlled Yantian container port, the largest of Shenzhen’s three ports, “this is all part of the southern China region. Hong Kong is the jewel in the crown, but the boundary between Hong Kong and Shenzhen is losing significance. The political boundary is still there, but as an economic region, it is one entity.” Asked whether there is resentment among local people about being under the thumb of Hong Kong bosses, he replies: “I wouldn’t be surprised if some people had strong feelings.” But

resentment is not the word he would use. “We bring management expertise,” he explains, “and people recognize this and say: ‘Hey! They’re bringing new ways of doing things. If we learn from one another, we can work as a team.’” The trouble is that Hong Kong people are on the A-team and everyone else is, at best, struggling to get onto the B-team. “Hong Kong people are very proud,” says a young female university graduate from Jilin who works for a computer printer manufacturer. “They look down on us.”

“There’s been no relaxation of the border,” notes Zhou Xiaoming, deputy director general of Shenzhen’s Bureau of Foreign Investment. “In fact, things have gotten even stricter. I’ve heard some

complaints about this, but the idea is to protect the Hong Kong government from interference by mainland Chinese.” Zhou does not mention the other side of the coin: the supposed need to protect Shenzhen from the “spiritual pollution” and political liberalism of Hong Kong. In fact, the spiritual pollution has already seeped over the border. Those who can speak Cantonese—a minority, since most of Shenzhen’s population is from the non-Cantonese-speaking North—have their radios and TVs permanently tuned to the lively Hong Kong stations where comment is free and the news infinitely more interesting than the stodgy diet dished up by Central Television. As for other vices—primarily of a sexual nature—it is arguable whether Shenzhen’s

widespread prostitution, business corruption and crime are influenced by Hong Kong or are the sort of home-grown variety common in border towns everywhere.

The hookers mix freely with vendors of pirated goods and the highly skilled pickpockets, who—for obvious reasons—do not advertise their presence. Despite the sleaze, Shenzhen is increasingly turning into something much more than a backyard of cheap labor for prosperous Hong Kong or the home for countless “second wives” of businessmen and managers who flood back and



**Consumption and communism are not a contradiction in Shenzhen—even if Deng’s influence is fading.**



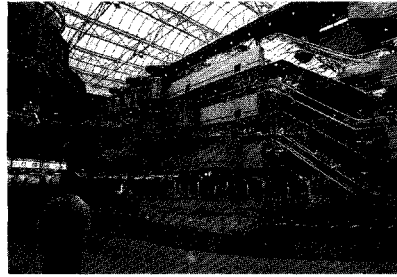
forth across the border. In many ways, Shenzhen, with all its manifest shortcomings, is emerging as the prototype the leadership in Peking would like to see develop throughout the nation. Shenzhen presents a vision of an infinitely more prosperous China, where the rule of law is taking hold, where high technology is moving center stage, where the market economy is strong but the state still retains control, and where authoritarian rule remains intact with little sign of challenge.

Shenzhen is also home to almost a third of those in China holding a doctorate. In a city where the average age is 27, as many as 10 percent are estimated to be graduates; by contrast, less than half a percent of the Chinese population as a whole has been through higher education. The aim is to transform Shenzhen into one of China's main high-tech centers.

As matters stand, Shenzhen is already responsible for half the nation's information technology output. The old factories turning out garments and assembling electronic goods are rapidly being replaced by high-tech industries, which now account for 35 percent of output. The emphasis on high-tech is also a pragmatic response to an outflow of investment toward neighboring areas to the north of the SEZ. "Shenzhen is becoming expensive," Zhou

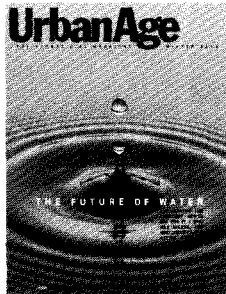
concedes before explaining that local government is having "to work very hard" to attract investors because neighboring areas are matching the tax breaks and other benefits offered by the SEZ. "In the future, the SEZ will focus on the development of high-tech and finance industries," says Cai Yu, a division chief at Shenzhen's State Planning Bureau. "The SEZ will still exist at the beginning of the next century," he explains, "but by then its policies will be no different from those pursued in the rest of the country."

In the center of town stands one of the few billboards in China still emblazoned with the image of the late paramount leader, who almost single-handedly brought Shenzhen into being: "Adhere to the Basic Policies of Deng Xiaoping for a Hundred Years," proclaims the big character slogan under Deng's picture. While the likeness of Deng has begun to fade, the background of the picture has been repeatedly repainted to reflect Shenzhen's ever-changing skyline. Like a metaphor for the whole idea of economic reform as experienced in Shenzhen, the billboard seems to tell us that the genie of the free market has escaped from the bottle, eclipsing the luster of the leaders who let it out in the first place. [E]



**Futuristic malls and office complexes underscore Shenzhen's prosperity.**

STEPHEN VINES is a correspondent for The Independent in Hong Kong. This is an abridged/edited version of an article that appeared in the July 1998 issue of New World magazine. © New World.



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# One Love Education FOOD

Production of food has traditionally been a rural preoccupation, but mayors around the world increasingly need to understand and support the vast and complex distribution system that supplies their cities.

A SERIES OF DEVASTATING FIRES that nearly destroyed several central market buildings in Accra, Ghana, during the middle 1990s marked the beginning of an important educational process for Nuno-Amartiefio, then mayor of the city. The fires spurred his administration to investigate moving some of the markets to more suitable locations. What Nuno-Amartiefio subsequently discovered was a powerful web of economic and political relationships involving food that reached from the central government, through regions surrounding the city and down to the small stalls where food is sold.

The production, distribution and protection of food has traditionally been perceived as a rural preoccupation. Around the world, mayors like Nuno-Amartiefio increasingly realize that the food production system—from farmers toiling along rows of crops far from the bustle of the city to the transporters and sellers who eventually make it available for sale—requires understanding and support from within the city. Otherwise, Nuno-Amartiefio concludes, “the cities themselves run the risk of overrunning and consuming the very source of their physical well-being and future prosperity.” Providing food “clearly should be priority number one,” he says.

A large man with a ready laugh, Nuno-Amartiefio recently ended his four-year term as mayor and now runs a consulting firm in Accra. He was a featured speaker at an international gathering of agricultural scientists in Des Moines, Iowa, to present the World Food Prize to Badrinarayn Ramulal Bulewara of India.

The US\$250,000 award annually commemorates outstanding achievement in food production or management. This year’s conference focused on the impact that rapid global urbanization will have on future food requirements.

Nuno-Amartiefio told *Urban Age* that most mayors focus on what happens to food once it arrives in the city, but their perspective should expand to include how it is produced and how it reaches the city. “There is a fair amount of staple food grown,” he said. “The problem is the infrastructure necessary to deliver it into cities and how the people of the cities manage it once it is there.”

## An epiphany born of fire

NUNO-AMARTIEFIO’S EPIPHANY came when he embarked on a project to modernize Accra’s markets, some of which are 130 years old. Maintained by the city administration and located in some of the busiest neighborhoods, they often compete for space with newer businesses. The markets were crowded with both shoppers and sellers who often spill onto adjacent streets. “These roads become impassable and are choked with traders, hawkers, customers, passing cars and stationary lorries unloading their goods,” he said.

The series of fires were the catalyst for his administration to begin studying a plan to improve the administration of the markets and to move them to locations better suited to a city that has tripled its population over the past 25 years. Having analyzed the problem as one of safety, land use and traffic administration, Nuno-Amartiefio thought he had a solution.

But he had not anticipated the extensive financial, social and political relationships that existed within the market system. Among the most formidable groups were the “market queens,” usually women, who are elected by commodity traders to supervise and regulate trade in that commodity, and who work with city administrators to operate the markets. They protect the traders’ interests, help settle disputes, bring young traders into the business and “generally ensure discipline in the market.” Nuno-Amartiefio also discovered that the market queens extended credit to small farmers who were unable to obtain bank financing. Thus market queens were often able to control prices at the point of production as well as at the point of sale.

The city slowly began to regain control of the markets after very difficult and extended negotiations. Two of the 50 official markets are already under a new system. After being relocated, they will be managed by boards of directors and financed by banks and insurance companies, which will provide the buildings. “There is a recognition that this is an important function within the city and that it must be handled efficiently and equitably,” Nuno-Amartiefio said.

### Farm to market to home

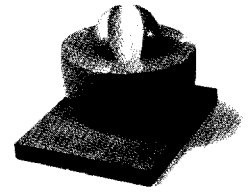
WORKING ON THE MARKETS taught Nuno-Amartiefio “a lot about the nature of food, that it relies on a very complex system to get it into the city and into the houses of the residents.” He began examining, for instance, how the city’s growth was encroaching on surrounding farmlands while at the same time siphoning off young people who would otherwise have become the next generation of farmers. Some 40 percent of the people of Accra are under 14 years old, he noted. He believes that two things—laws to create greenbelts around cities and greater access to bank credit for farmers—are important tools for improving the interaction of cities with rural areas.

Transporting food from remote farming areas also poses problems for cities’ supplies, he added. As mayor, he had begun working with the central government to research the construction of farm-to-city transportation corridors. At present, he said,



“There is a fair amount of staple food grown. The problem is the infrastructure necessary to deliver it into cities and how the people of the cities manage it once it is there.” —Nat Nuno-Amartiefio

**Sowing The Seeds Of Success** The agricultural experts who gathered recently in Des Moines, Iowa, were there to honor a “seedsman” from India who helped his country avoid famine. Badrinarayn Ramulal Bulewara, recipient of the 1998 World Food Prize (pictured at right), not only created a large seed company in his native country, but brought missionary zeal to a personal campaign of education for small farmers. Over a period of 20 years, he improved and expanded his company’s seed offerings in many basic foodstuffs, from okra to wheat—significantly contributing to India’s return to self-sufficiency in basic foodstuffs.



As a young man, Bulewara saw that the majority of Indian farmers did not use seeds as well as they might, primarily because they were not able to read even simple instructions on a package. After starting a seed firm in 1964, he not only put his efforts into providing good, clean seeds, but he took it upon himself to travel from village to village, explaining the proper way to plant and nurture the crops. Bulewara’s work, the Food Prize officials said, “not only helped deliver much of the Green Revolution to India, but it can be said that he truly helped sow the seeds of freedom through increasing food security.”

Over the past 10 years, Food Prize recipients have included scientists and policy makers who have been responsible for vital but often unsung accomplishments, from developing ways to sterilize plant-eating insects to increasing rice production or guiding national programs aimed at feeding the poor.

This year the conference turned its attention to the implications for food producers posed by the phenomenal growth of urban centers—a doubling of the urban population in the developing world by 2025; an even more dramatic rise in Africa, from 310 million to 804 million, with a projection that Lagos will become the world’s third largest city with some 24 million people by 2015; and a shift toward urbanization so drastic in Asia and Latin America that the rural population will actually shrink while the population as a whole continues to grow.

“Obviously much of the work of farmers is aimed at feeding people in urban areas,” said the conference organizer, Herman Kilipper. “But people in cities tend to look at food differently than people on the farms. It is time that they all understood a lot more about how connected their lives and work really are.”

local officials and police can stop trucks carrying food and levy fees and taxes for using the roads. These roadblocks, when combined with inclement weather and poor roads, can cause serious delays. Fully a third of the tomatoes destined for Accra spoil before they arrive.

The food supply would be more reliable and the cost of delivery would be lower if the central government helped secure the transit routes, he said. The road system itself should also be examined, he added, since it was originally designed to support the export of products rather than to supply cities. He believes a concerted effort on the part of the country’s cities could convince the central authorities to take steps to provide a better infrastructure for supplying food.

Nuno-Amartiefio urges that, despite their vast differences, cities and agricultural areas need to gain a greater understanding of each other and work to ensure their joint survival in a future where cities will increasingly dominate the world’s landscapes. [E]

**U**NDERNEATH THE UNITED STATES' long-running boom economy, a quiet revolution is brewing in its metropolitan regions—where 80 percent of Americans live. Fueling the revolution is weariness with lengthening automobile commutes, a growing interest in living in real neighborhoods and an awareness that a region can't have a sinking center city and poor schools without economic decline and a decrease in reputation.

The driving forces of sprawl that dominated development for 50 years still have the edge. Financial policies still favor spread-out suburban development and segregated areas for retail, residential and commercial/industrial activities. Looking for safer neighborhoods and better schools, people are still buying homes where cookie-cutter planning breeds a bland composite of housing patterns, interspersed with big-box discount stores and strip malls. Many people like it that way. "Edge cities"—major commercial centers—still spring up where cornfields or forests once stood.

On the other hand, voters in the 1998 fall elections sent a strong message about land use. After decades of growth that gobbled up forests and fields for new suburbs at a rate far outpacing population increases, some 200 state and local ballot measures aimed at conservation and more compact development got citizen approval.

From California to Florida, policies to support smarter growth—involving more than US\$7 billion—will underwrite urban revitalization and strategies for land conservation. One billion dollars was approved in New Jersey alone, where the state will preserve about half of all remaining undeveloped land. Republican Governor Christine Whitman condemned sprawl as "...eat-

ing up open space, creating mind-boggling traffic jams, bestowing on us endless strip malls and housing developments, and consuming an ever-increasing share of our resources."

Elsewhere in the country, 11 governors made regional growth planning a major focus in their "state of the state" speeches last winter. Maryland passed a law in 1997 that limited spending on roads, schools and sewers to the areas already planned for urbanization. In Tennessee, a dispute about annexation law evolved into a mandatory planning process for growth boundaries.

But if this is the leading edge of a revolution, many regions seem oblivious to it. Take Las Vegas, Nevada, currently the fastest growing region in the nation. Better land use or regional planning gets scant attention there. The most expensive federal transportation law in the

nation's history, the Transportation Equity Act for the 21st Century—more popularly known as "TEA-21"—was approved by Congress last fall. It adds fresh impetus for growth, providing for more highways and urban roads—confirming that the road-builders remain a powerful political force.

A closer look at the same law, though, reveals an unprecedented parade of communities petitioning for transportation choices. Despite the enormous costs involved, nearly 200 regions are officially listed as seeking funds to choose rail transit over more roads. Some regions, such as the Twin Cities in Minnesota, have put the brakes on further road expansion and will build a network of transit corri-

dors, so there will be choices as congestion increases.

On the political front, new coalitions are forming to force change in regional policies. In cities like Detroit, Milwaukee, Baltimore, St. Louis, and Gary, Indiana, coalitions of churches are pushing for tax sharing and a fairer distribution of investments for center cities and older suburbs. The Cleveland area now has an organization dedicated to reviving what are called "first suburbs"—older, working-class suburbs threatened with decline. Admittedly, these efforts

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## Business executives remind others that regions are the platform for worldwide economic competition.

encounter resistant politics and abundant suspicion from newer suburbs. Property rights advocates stand guard to protest sharing of tax revenues or restriction of land uses. An intense preference for the smallest, most localized government hinders regional action.

Corporate leaders no longer dictate the future of communities, but their influence can push mayors to look beyond city boundaries and past the next election. Business executives remind others that regions are the platform for worldwide economic competition. After more than two years of work on its Metropolis Project, the Commercial Club of Chicago—a partnership of nearly 300 companies—will urge the Illinois Legislature to sweep everything from land use and transportation to water and housing into a regional coordinating body. The new authority would finance major capital projects and have the power to redistribute tax revenue. Regional action on this scale in a nation where only two regional governments exist (Portland, Oregon, and Minneapolis-St. Paul, Minnesota) would be a truly radical development. The plan's goal is to ensure that the Chicago area remains the giant engine of the Illinois economy. The business community is saying that sprawl cannot continue unchecked and that a tax system that distorts the economy, traps the poor and encourages more traffic is dangerous to the region's future.

In Atlanta, a robust southern region legendary for long-term thinking about its future, signs of change are also evident. Decades ago, it invested in a larger airport, continuing its long tradition as a transportation center. It was early in introducing passenger rail (though not to its developing suburbs). And it captured the world stage in 1996 when hosting the Olympic games.

Over the past decade, no list of “best places to do business” or “best places to live” seemed to miss nominating the Atlanta region. But a lengthening shadow is looming over this “best place.” The U.S. Environmental Protection Agency (EPA) years ago warned that the region's air quality was out of compliance. Growth was scattered over several counties, and despite constant road-build-

ing, traffic grew ever worse, producing increasingly polluted air. In the summer of 1998, EPA lowered the boom, putting a freeze on federal funding pending a serious plan from Atlanta for making the air more breathable.

Even worse news was soon coming. The Hewlett-Packard Company last August cancelled a \$700 million expansion plan. Corporate executives said they had lost confidence in the region's future livability.

No one said big was bad, but a region now scattered along a 110-mile axis, burdened with the longest commuting times anywhere in America, could easily fall from Olympic heights to the terrain of a community struggling for basic livability. When the glow of world attention faded and the athletes and visitors went home, the Atlanta

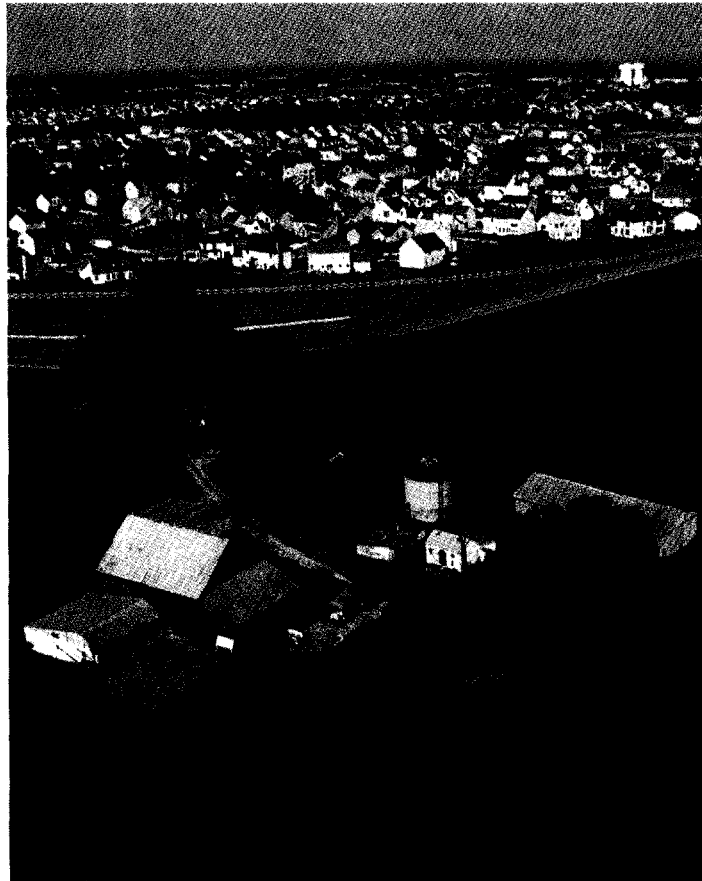
region reverted to the tougher agenda of restoring everyday livability, sustaining a climate for business investment and making an asset of its racial diversity.

The reality now dawning on Atlanta—as well as many other concerned regions—is that it faces a future in which businesses, and employees, will be increasingly “foot-loose.” With corporations merging and moving, entrepreneurs and businesses scan the map for more nurturing communities. Meanwhile, people with talents in high demand—scientists, computer engineers, finance experts—have become picky about places to live.

The revolution in regions may currently be quiet and slow, but the message is sinking in: success is not sustainable in places that do not offer high quality of life. Regions expecting to be listed as “best

places” in this new era will have found the formula for preserving their mobility and protecting their good air, water and recreational resources. They will sign a truce between cities and suburbs, between old and new, finding cooperation a better asset than conflict. [E]

CURTIS JOHNSON is a principal with the *Citistates Group*, a network of journalists and consultants focused on metropolitan regions.



# CITY INDICATORS

## WHAT CITIES DO WITH THEIR WASTE

**S**OLID WASTE DISPOSAL along with water supply, sanitation, electricity and telephone services are areas of critical concern in human settlements. Lack of adequate services most greatly affects the urban poor in terms of health, productivity, reduced income and quality of life. Deficiencies in these services manifest themselves most obviously in the form of pollution, disease and economic stagnation.

Solid waste disposal becomes an increasing problem for cities, where households have fewer possibilities for informal recycling or disposal. The removal of garbage rapidly becomes a matter of urgency. Even for cities with fully formed solid waste collection systems, waste disposal becomes increasingly problematic as less suitable or more remote sites must be found for landfill.

The Global Indicators Database has collected data on key indicators relating to solid waste disposal in cities around the world. These are (1) households receiving waste collection and (2) amount of waste produced per household by weight.

IN A NUMBER OF COUNTRIES, garbage is not collected on a regular basis, and the garbage that is collected is discarded in open dumps around the city. While few least-developed countries use formal incineration, a number recycle significant proportions of waste both formally and informally. In the major Latin American cities, three-quarters of waste goes to landfill and the rest goes to open dumps, with very little formal recycling. The data on waste disposal methods need to be treated with some care, as there are several possible definitions for domestic waste. At the household level, waste is all material left over from consumption, which may be recycled or incinerated on the premises, or

### SOLID WASTE COLLECTION AND WASTE GENERATION

Region	Households receiving waste	Waste generated (tonnes/person/yr)
Africa	36.2%	0.27
Arab States	64.9	0.28
Asia	67.0	0.29
Industrialized	99.4	0.51
LAC	84.8	0.30
Transitional	91.4	0.49
<b>All cities</b>	<b>68.7%</b>	<b>0.35</b>

### Development level

Very low	28.0%	0.20
Low	40.9	0.25
Medium	73.1	0.30
Higher	89.1	0.34
Developed	99.1	0.53

may be disposed off-site. At the public level, waste is the material that leaves the household, which may be disposed either formally or informally. Many cities have only included formal waste collection in their data, which may only be a small percentage of the total. Incinerated waste refers to waste burnt in formal incinerators, while recycling refers to formal recycling of paper, metals, etc. However, some cities have included informal disposal in their data.





**GARBAGE DISPOSAL METHODS BY REGION**

Number of Cities	Region	Waste to landfill	Waste to incinerator	Waste to open dump	Waste to recycling	Waste to other
87	Africa	16.89%	8.81%	63.37%	2.09%	12.22%
11	Arab States	37.89	5.00	32.11	12.50	19.29
42	Asia Pacific	25.44	7.08	46.19	11.44	11.54
33	Industrialized	56.26	26.52	0.69	14.79	2.61
32	Latin America	69.35	5.17	25.48	1.77	1.51
32	Transitional	37.07	6.72	48.75	11.94	3.42

Sanitary landfill is the preferred method of disposal in developed countries, but a number of cities in France, Scandinavia and East-Central Europe use formal incineration.

City	Waste to landfill	Waste to incinerator	Waste to open dump	Waste to recycling	Waste to other
Melbourne	95.0%	1.0%	0.0%	4.0%	0.0%
Dubai	95.0	0.0	0.0	5.0	0.0
Rio de Janeiro	4.5	0.0	0.0	5.5	0.0
Athens	85.0	0.0	10.0	5.0	0.0
Quito	82.5	0.0	10.0	7.5	0.0
Toronto	73.0	0.0	0.0	23.0	4.0
Prague	55.0	22.0	5.0	16.0	2.0
Addis Ababa	51.4	0.0	0.0	2.7	0.0
Moscow	50.3	2.9	0.0	43.1	3.7
Hanoi	50.0	0.0	20.0	5.0	25.0
Sana'a	46.0	0.0	49.0	5.0	0.0
Budapest	43.0	57.0	0.0	0.0	0.0
Lima	35.0	0.0	58.9	6.0	0.1
Metro Manila	34.0	0.0	41.0	10.0	15.0
Bratislava	28.0	71.0	0.0	1.0	0.0
Cairo	20.0	5.0	5.0	30.0	40.0
Shanghai	17.8	0.0	46.3	35.9	0.0
Stockholm	15.0	71.0	0.0	14.0	0.0
Duisburg	2.0	35.0	0.0	63.0	0.0
Luanda	3.1	33.5	60.9	1.6	0.9
Jakarta	0.0	24.6	61.6	9.9	4.0
Kampala	0.0	0.0	80.0	0.0	20.0
Asuncion	0.0	8.0	84.5	0.1	7.4
Rabat	0.0	0.0	90.0	10.0	0.0
Accra	3.0	0.0	97.0	0.0	0.0
Baku	0.0	0.0	97.4	2.7	0.0
Belize City	0.0	1.0	99.0	0.0	0.0
Riga	0.0	0.0	99.5	0.5	0.0
Abidjan	0.0	0.0	100.0	0.0	0.0
Ouagadougou	0.0	0.0	100.0	0.0	0.0
Sofia	0.0	0.0	100.0	0.0	0.0

**SOLID WASTE REPORT** A comprehensive collection of solid waste data for the East Asia and Pacific region has just been published by the World Bank. The report estimates that in 25 years solid waste in urban areas of East Asia will increase from 760,000 tonnes of waste per day to 1.8 million. Costs for waste management will almost double from US\$25 billion to \$47 billion by 2025. *What a Waste: Solid Waste Management in Asia* will be available in early 1999. Contact: Daniel Hoornweg, The World Bank Urban Development Sector Unit, East Asia and Pacific region; tel: 202-458-4731; fax: 202-477-1205. [E]



## Awards and Competitions

**First Jorge E. Hardoy Memorial Prize** for Best Paper by a Researcher from a Developing Country. Papers must contribute new insights into housing and the built environment in the developing world; text must be in English. Winner will receive US\$250. Qualifying submissions will be published in *Habitat International*. Papers must be received by June 30, 1999. Send four copies to: Willem van Vliet, College of Architecture and Planning, CB 314, University of Colorado, Boulder, CO 80309-0314, USA.

**1999 Exemplary Systems in Government Awards.** Nominations are being sought for exceptional achievements in the application of information technology that has improved the delivery and quality of government services. Contact: Wendy Francis, The Urban and Regional Information Systems Association, 1460 Renaissance Drive, Suite 305, Park Ridge, IL 60068, USA. Tel: 847-824-6300. Nomination form is available on the URISA Web site: <http://www.urisa.org>

**The Global Bangemann Challenge**, a nonprofit awards program initiated by the city of Stockholm and supported by the European Commission, aims to identify and promote useful information technology projects that help people reach new levels of prosperity, health and democracy. Web site: <http://www.challenge.stockholm.se>

**1999 World Habitat Awards.** Projects are being sought in both developed and developing countries that offer practical and imaginative solutions to current housing problems. Preliminary submissions are due July 1, 1999. Contact: Diane Diacon, Deputy Director, Building and Social Housing Foundation, Memorial Square, Coalville, Leicestershire, LE67 3TU, UK. Tel: 44-1530-510-444; 44-1530-510-332; e-mail: [bshf@compuserve.com](mailto:bshf@compuserve.com); Web site: <http://www.bshf.org>

## Education Programs

**Environmental Engineering Technician—Waste Management.** Two-year diploma program. Fanshaw College, Woodstock Campus, 369 Finckle Street, Woodstock, Ontario, Canada, N4V 1A3. Tel: 519-421-0144.

## On-line Resources

**Citistates Happenings.** The Citistates Group is a North American-based network of journalists, speakers and consultants who believe that successful metropolitan regions are today's key to economic competitiveness and sustainable communities. <http://www.citistates.com>

**United Nations Habitat 1998 Best Practices Database.**  
<http://www.bestpractices.org>

The on-line project site for the European Commission-funded **Health and Human**

**Settlements in Latin America** can be found at the following:  
<http://pisces.sbu.ac.uk:80/BE/SUDP/uhealth/latinam/>

## Print Resources

*Alternate Route: Towards Efficient Urban Transportation.* Clifford Winston and Chad Shirley, Brookings Institution Press, Washington, DC, USA, 1998.

*Chasing Rickshaws.* Tony Wheeler and Richard I'Anson, Lonely Planet Publications, Melbourne, Australia, 1998. E-mail: [info@lonelyplanet.com](mailto:info@lonelyplanet.com)

*Cities in Civilization.* Peter Hall, Pantheon Books, London, UK, 1998.

*Fixing Urban Schools.* Paul T. Hill and Mary Beth Celio, eds., Brookings Institution Press, Washington, DC, USA, 1998.

*The Future of African Cities: Challenges and Priorities for Urban Development.* English version. Catherine Farvacque-Vitkovic and Lucien Godin, The World Bank, Washington, DC, USA, 1998.

*Saving Buildings in Central and Eastern Europe.* International Association for Bridge and Structural Engineering Reports, Zurich, Switzerland, 1998.

*The Twenty-First Century City: Resurrecting Urban America.* Stephen Goldsmith, The Manhattan Institute,

Regnery Publishing Inc., Washington DC, USA, 1997.

*Urban Infrastructure Finance*. Royston A.C. Brockman and Allen Williams, Asian Development Bank, Manila, Philippines, 1996.

*The Work of Cities*. Susan E. Clarke and Gary L. Gaile, University of Minnesota Press, MN, USA, 1998.

## Urban Organizations

**Asia Pacific Cities Forum** is an action partnership promoting business citizenship in urban development. APCF, 2203 246th Place, NE, Redmond, WA 98053, USA. Tel: 425-898-9739; fax: 425-898-9649; e-mail: abadshah@msn.com; Web site: <http://www.apcf.org>

**The Building Research Unit**, Ministry of Lands and Human Settlement Development, Tanzania. Contact: Director, Building Research Unit, Box 1964, Dar Es Salaam. Tel: 255-051-74003/71971.

**Council for Urban Economic Development**, 1730 K Street, NW, Suite 700, Washington, DC, 20006, USA. Tel: 202-223-4735; fax: 202-223-4745.

**Hong Kong Institute of Asia-Pacific Studies**, the Chinese University of Hong Kong, Shatin, New Territories, Hong Kong. Tel: 852-2609-8780; fax: 852-2603-5215; e-mail: hkiaps@cuhk.edu.hk; Web site: <http://www.cuhk.edu.hk/hkiaps/homepage.htm>

**Institute for Transportation & Development Policy**, 115 West 30th Street, Suite 1205, New York, NY 10001, USA. Tel: 212-629-8001; fax: 212-629-8033; e-mail: mobility@igc.apc.org; Web site: <http://www.itdp.org>

**International Centre Cities on Water**, San Marco 4149, 30124 Venice, Italy. Tel: 39-41-523-0428; fax: 39-41-528-6103; e-mail: citiesonwater@iuav.unive.it; Web site: <http://www.iuav.unive.it/citiesonwater/>

**International Union for Housing Finance** is a nonprofit trade association focusing on international developments in housing

finance. IUHF, 111 E. Wacker Drive, Suite 400, Chicago, IL 60601-3704, USA. Tel: 312-946-8200; fax: 312-946-8202; Web site: <http://www.housingfinance.org/>

**International Urban Development Association** is an international not-for-profit association of public and private organizations, government agencies, businesses and individuals dedicated to promoting and improving urban and regional development. Nassau Dillenburghstraat 44 NL-2596 AE, the Hague, the Netherlands. Tel: 31-70-324-4526; fax: 31-70-328-0727; e-mail: intainfo@inta-aivn.org; Web site: <http://www.inta-aivn.org>

**Network-Association of European Researchers on Urbanisation in the South** collaborates with researchers throughout the world on issues and policy options related to urban development and urban-based projects. Fax: 33-5-5699-1585; e-mail: naerus@arxp.polito.it; Web site: <http://obelix.polito.it/forum/n-aerus>

## Media

**The Idea of the City**. First broadcast in 1996, this series of five 30-minute programs produced by the BBC examines the impact of urban life on human behavior and human values, and asks whether the information revolution will make cities obsolete or whether the world is moving toward a global megalopolis. Web site: <http://www.bbc.co.uk/worldservice/whatsnew/ideacity.htm>

**Port-au-Prince Haiti: Drop by Drop. The Challenge of Supplying Drinking Water**. This video is produced by Macumba International Inc. Distributed by The Multi Media Group of Canada. Tel: 514-844-3636; fax: 514-844-4990. [E]

To contribute to the *Urban Age* City Resource Guide, please send brief descriptions and contact information to Annabel Biles, fax: 202-522-2125; e-mail: Abiles@worldbank.org

## The Challenge for the New Urban Age: The Management of Cities



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For information and applications please contact Professor Lyndsay Neilson: Centre for Developing Cities, Faculty of Environmental Design, University of Canberra ACT 2601 Australia.

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Intensive and/or supplementary English language courses can be provided to support students whose primary language is not English.



## Conferences

**CHICO, CALIFORNIA**—January 11-15, 1999.

**Working at a Watershed Level.** Contact: Dr. Donald Holtgrieve, tel: 530-898-5780; fax: 530-898-6781; e-mail: holtgrieve@facultyp0.csuchico.edu; Web site: [http://www.csuchico.edu/~donald/January\\_course.htm](http://www.csuchico.edu/~donald/January_course.htm)

**NEW DELHI, INDIA**—February 8-10, 1999.

International Seminar: **Urban Infrastructure—Financing and Pricing.** Tel: 0091-11-469-1535; fax: 0091-11-464-1292; e-mail: dtudp@nda.vsnl.net.in

**BIRMINGHAM, UK**—March 25-26, 1999.

The Third International Research Symposium on Public Management: **Public Management—Dead or Alive?** Contact: Pat Clark, Aston Business School, Aston University, Birmingham, UK; fax: 44-121-333-5620.

**PRETORIA, SOUTH AFRICA**—April 5-9, 1999.

**Urban Planning and Environmental Management:** Third International Symposium. Contact: The UPE 3-PTA Symposium Organizer, Room 622, Box 6338, Pretoria 0001, Republic of South Africa. Tel: 27-12-337-4167/4172; fax: 27-12-337-4158/4340; e-mail: hneethl@gpmc.org.za or mvermaak@gpmc.ac.za; Web site: <http://upe3.up.ac.za>

**OTTAWA, CANADA**—May 16-21, 1999.

**Water Supply and Sanitation in Developing Countries.** Contact: Dr. Eric J.

Schiller, Course Director, e-mail: [mailto:schiller@genie.uottawa.ca](mailto:mailto:schiller@genie.uottawa.ca)

**ST. PETERSBURG, RUSSIA**—May 23-26, 1999. **Cities in Conflict.** Contact: Douglas Gordon, Suomi-Finland Housing and Planning, tel: 358-9148-8422; fax: 358-9148-2196; e-mail: douglas.gordon@ara.fi; or Vitali Andrienko, City of St. Petersburg, tel: 7-812-272-7892; fax: 7-812-279-6783.

**ABERYSTWYTH, UK**—July 9-11, 1999.

**Water in History: Global Perspectives on Politics, Economy and Culture.** Contact: Owen Roberts, Water History Project, Department of History and Welsh History, Hugh Owen Building, Penglais, Aberystwyth SY23 3DY, UK. E-mail: ogr997@aber.ac.uk

**STOCKHOLM, SWEDEN**—August 9-12, 1999.

Stockholm Water Symposium: **Urban Stability Through Integrated Water-Related Management.** Contact: Stockholm Water Institute, SE-106 36 Stockholm, Sweden. Tel: 46-8-736-2078; fax: 46-8-736-2022; e-mail: siwi@siwi.org; Web site: <http://www.sivi.org>

**CHICAGO**—August 21-25, 1999. **Urban and Regional Information Systems Association Annual Conference and Exposition.**

Contact URISA, tel: 847-824-6300; fax: 847-824-6363; e-mail: info@urisa.org; Web site: <http://www.urisa.org>

**DURHAM, UK**—November 22-24, 1999.

**Cities in the Global Information Society:**

**An International Perspective,**

international workshop sponsored by the Economic and Social Research Council. Contact: Elizabeth Storey, Centre for Urban Technology, Department of Town and Country Planning, Newcastle University, Newcastle upon Tyne, UK. E-mail: elizabeth.storey@ncl.ac.uk

## Educational Programs


**BIRMINGHAM, UK**—March 1-26, 1999.

**Governance, Partnerships and Poverty.** School of Public Policy, University of Birmingham, Edgbaston, Birmingham, B15 2TT, UK. Tel: 44-121-414-4969; fax: 44-121-414-4989; Web site: <http://www.bham.ac.uk/IntDev/>

**TORONTO, CANADA**—May 2-15, 1999. **Core**

**Course on Urban and City Management** covers regional growth and urban dynamics, municipal finance, private sector provision of public services, housing and land markets, urban poverty and urban environment. Contact: Mila Freire, the World Bank, tel: 202-473-9508; e-mail: mfreire@worldbank.org

**LOS ANGELES**—July 12-23, 1999.

**Innovations in Capacity Building for Urban Management.** Contact: Anna Sai, Practitioners Institute, School of Urban Planning and Development, University of Southern California, Los Angeles, CA 90089-0042, USA. Tel: 213-740-2332; fax: 1-213-740-2476; e-mail: Web site: <http://www.rcf.usc.edu/-pracinst> 

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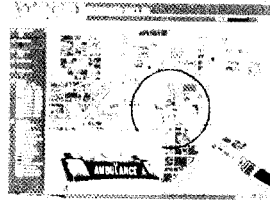


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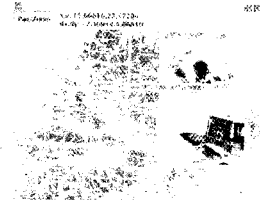
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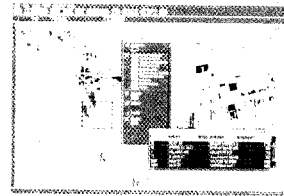
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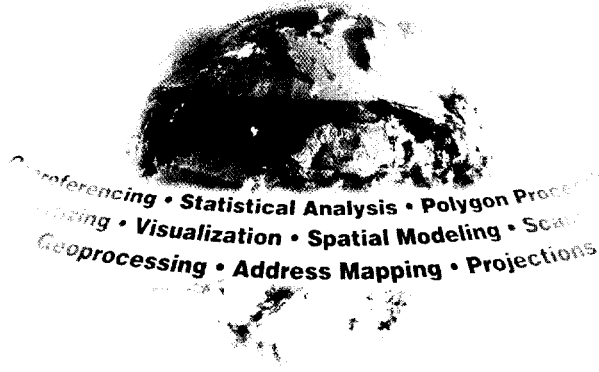
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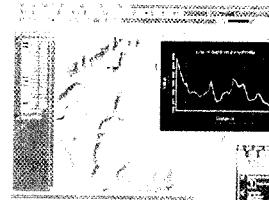


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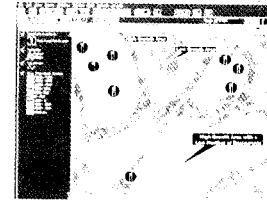


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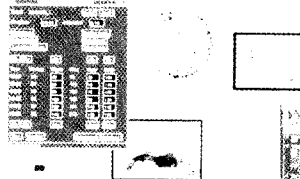
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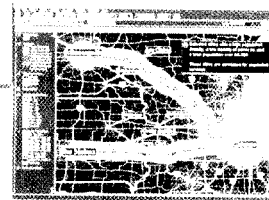
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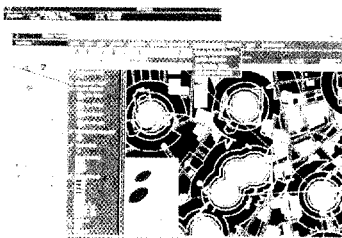


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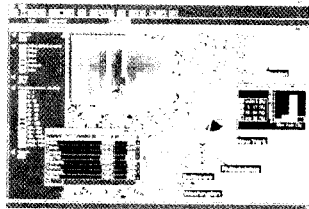
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