tomorrow's crises today

the humanitarian impact of urbanisation

Cover photo and caption: Members of a family in Dhaka, Bangladesh, living in one of hundreds of clusters of illegal slum settlements filling the city of more than 13 million people. Every year an estimated 500,000 people join the urban throng of Dhaka from the rural areas, where poverty, forces of the changing economy and natural disasters (mainly flooding) dispossess communities of land and push them towards the cities.
Image: Manoocher Deghati / IRIN 2007

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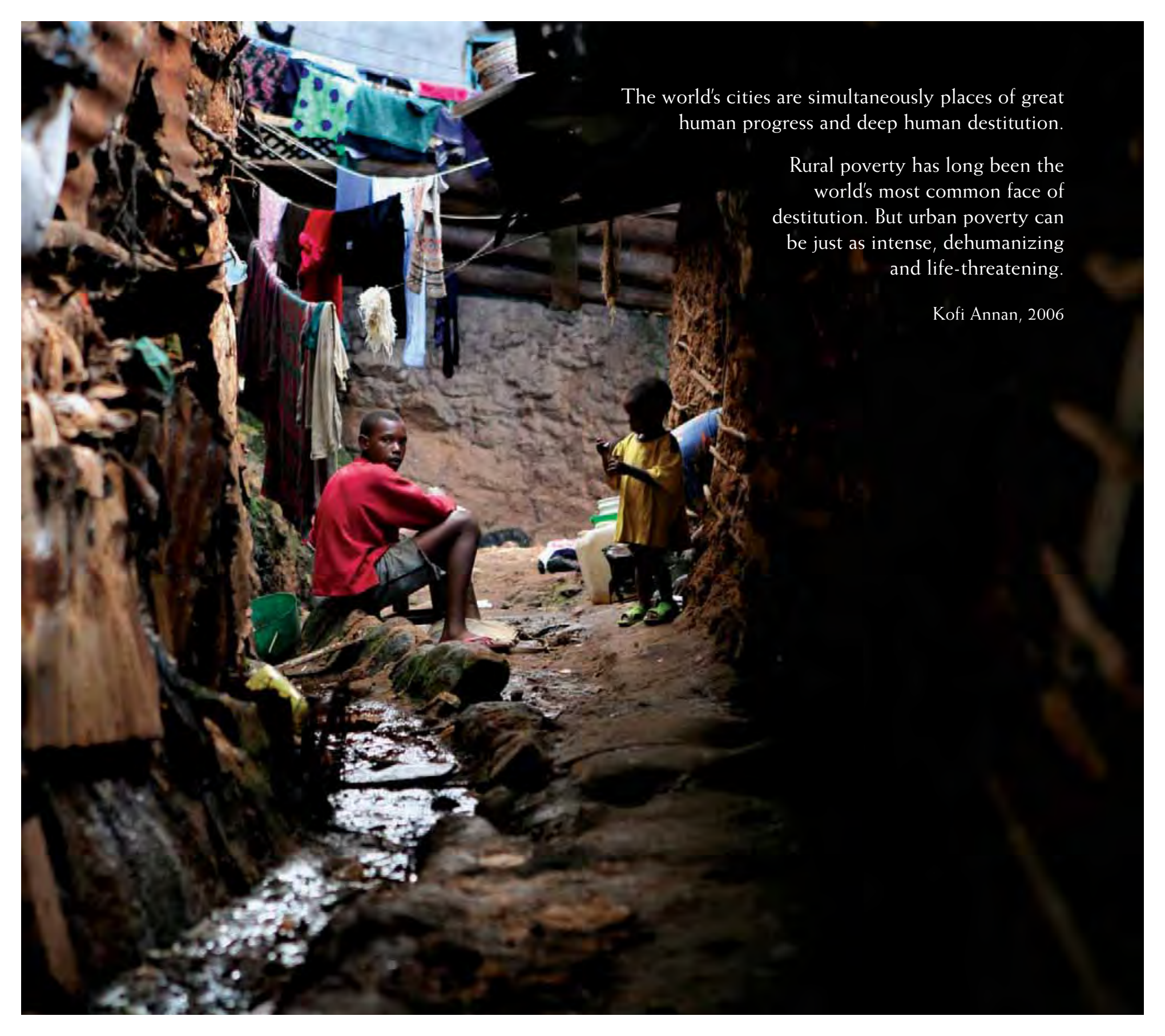
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The world's cities are simultaneously places of great
human progress and deep human destitution.

Rural poverty has long been the
world's most common face of
destitution. But urban poverty can
be just as intense, dehumanizing
and life-threatening.

Kofi Annan, 2006

Two girls in Mathare slum, Nairobi, Kenya.

Image: Manoocher Deghati / IRIN

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the humanitarian impact of urbanisation

Foreword

The arrival of *Homo urbanus* could be a cause for celebration: For the first time in history, half of humanity lives in towns and cities. However, of this three billion people, one billion have little to celebrate.

Imagine raising your family in an environment without clean water, adequate sanitation or a decent roof over your head. Worse, imagine coming home from work to find your home demolished, your possessions in the street and your children rummaging in the dust.

This is the life that one in six people lives out on a daily basis. Surrounded by skyscrapers and bright lights, the urban poor are condemned to eke out a living in a parallel universe where child mortality rates are higher, life expectancy is lower and crime rates are unacceptable.

Despite the fact that the poor are critical to successful urban economies everywhere, 72 percent of the urban population in Africa lives in slums, while in Asia, though the proportion is lower, the absolute figure is higher.

Only recently have world leaders paid attention to the crisis of slums. In 2000, one of the Millennium Development Goals, specifically Goal 7 Target 11, called for "improving the lives of at least 100 million slum dwellers". But the goal is far too modest. Already, since 2000, the population of slum dwellers has increased by the same figure. And it is estimated that 180,000 people are added to the urban population everyday.

If we continue with business as usual, by 2020 there could be as many as two billion slum dwellers.

We are living out tomorrow's crisis today, but the fact that slum dwellers suffer from urban penalties including problems of health and hidden hunger has barely registered on the international agenda. Even now, aid budgets prioritise rural needs and demands. Realising this, UN-HABITAT is working with all its partners, both within the UN and in the international community, to encourage greater awareness of the impending urban crisis.

This book shows the stark and unacceptable contrasts in cities and towns of the developing world. It follows in the tradition of seminal work by authors such as Charles Dickens, Emile Zola and Jacob Riis, who documented the appalling living conditions of the urban poor of their time and helped change attitudes.

Today, over a century later, this publication hopes to persuade you that tomorrow's crisis is already here and it is time to act.

Anna Tibaijuka
Under-Secretary-General of the United Nations and
Executive Director of the United Nations Human Settlements Programme (UN-HABITAT)
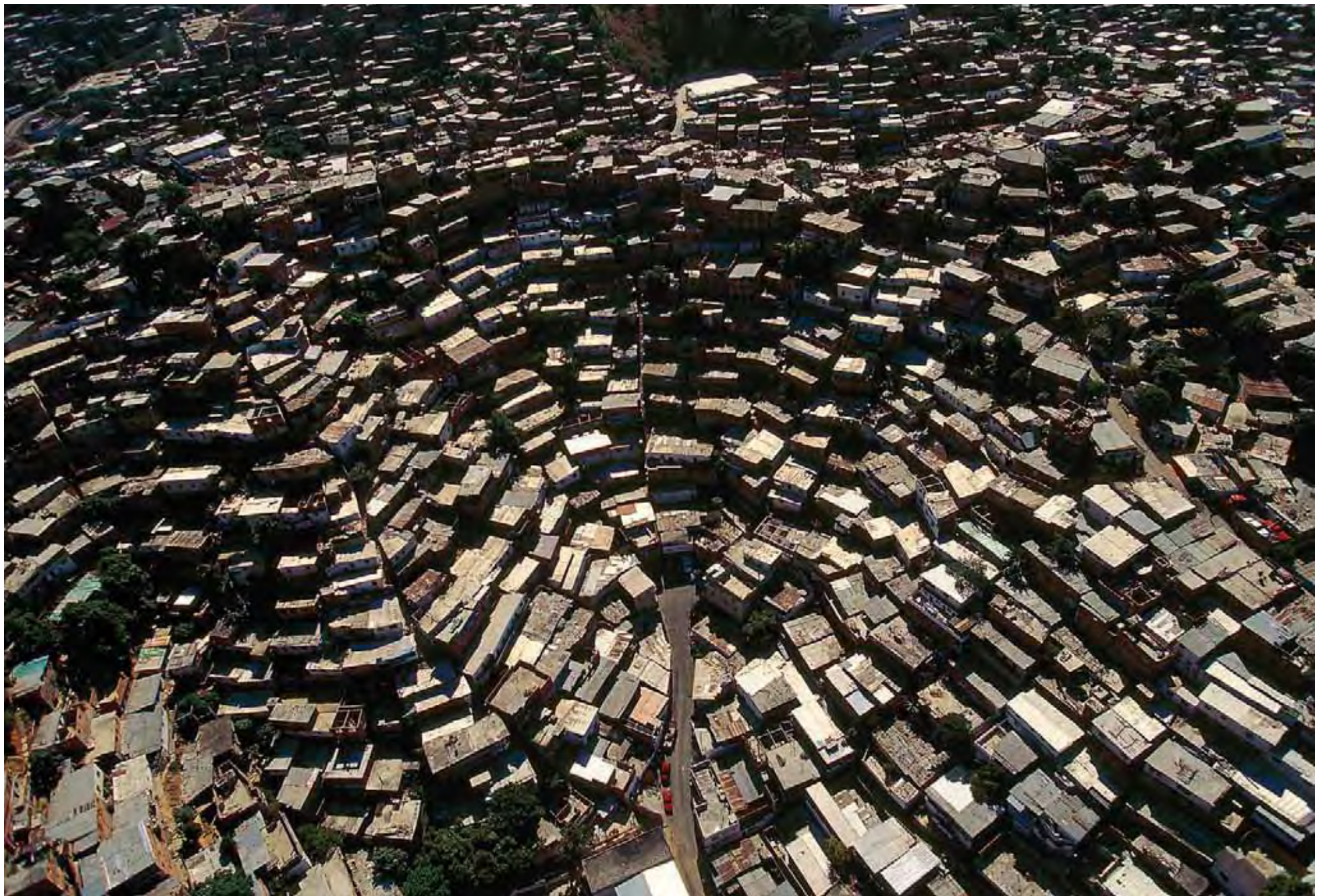
Barrios in Caracas, Venezuela. The city has grown enormously in the last 40 years, attracting people from all over South America, filling its narrow valley and climbing up the steep sides of the surrounding hills. These new districts, known as barrios or ranchos – slums – are home to more than 50 percent of Caracas's 3.8 million inhabitants. As in São Paulo or Bogotá, whole streets are privatised and controlled by private militias. "In this runaway process of urbanisation, the planet has become marked by the runaway growth of slums." (Mike Davis: Planet of Slums, 2006.)

city of darkness / city of light?
overview: tomorrow's crises today

"massive urbanisation means hundreds of already near-bankrupt cities trying to cope in 20 years with the kind of problems London or New York only managed to address with difficulty in 150 years." John Vidal, 2004

The UN Population Fund's 2007 World Population Report states: "Cities concentrate poverty, but they also represent the best hope of escaping it… The challenge is learning how to exploit [a city's] concentrated population."

Somewhere, sometime very soon, a baby will be born on the top floor of a city hospital or the dirt floor of a dark slum shack; a first-year college graduate will rent a cramped apartment in lower Manhattan or a family of five will finally concede their plot of farmland to an encroaching desert – or sea – and turn towards Jakarta or La Paz or Lagos in search of a new livelihood and a new home. The arrival of this family or graduate or baby will tip the world's demographic scales and, for the first time in history, more than half the world's population will live in cities.[1]

This tipping point signals social changes that are both wide-ranging and alarming. Cities have always been centres of creativity and economic growth, but the reality in today's urban environment is that millions endure a daily struggle for survival and a barrage of additional risks.

The hallmark of rampant urbanisation is the growth of slums. Characterised by hyper-congested, sub-standard housing; a lack of safe water and sanitation; low incomes; and physical and legal insecurity, these life-threatening slums deny even basic human dignity and are spreading like a fog through both big and small cities in the developing world.

Planet of slums

In the poorest countries of the world, slums make up between 30 percent and 70 percent of urban populations. Slums are not an exception or a pocket of poverty and deprivation within a city. In 2005, the estimate of the global slum population was one billion, with its ranks increasing by 25 million a year. Slum dwellers make up the majority of the urban population in Africa and South Asia.

More than half the world's poor will live in cities by 2035, according to some estimates, and in the next two decades more than 95 percent of population growth in the world's poorest regions will occur in cities. UN-HABITAT describes the process as the urbanisation of poverty: The locus of world poverty is dramatically shifting from the rural to the urban context; the battle to meet the Millennium Development Goals will be fought in cities more than the countryside as poverty has, indeed, come to town. According to author Mike Davis, we are all living in what is fast becoming a planet of slums.

Daily life in the worst slums ought to be considered a humanitarian emergency and be responded to urgently, as urban populations face both familiar and new city-specific threats from natural and manmade causes. In this sense, the urban poor are living through tomorrow's crises today.

A cold welcome

"A poor person who lives in a village needs a lot of guts to come to the city to improve their life," says Jockin Arputham, leader of the Slum Dwellers International organisation and a Mumbai slum dweller himself. The desperate courage of the urban poor is normally rewarded with hard indifference, as they compete with millions of other urban poor to find shelter and work while avoiding the attentions of at-best unwelcoming city authorities that would rather they did not exist.

Few newcomers find the opportunities they seek. Instead they normally encounter four major obstacles that soon divest them of any political and economic clout while reducing them to lives of chronic indignity and hardship.

First: the lack of housing. In absence of anything else, new arrivals set up shelters on the streets or in small pockets of public or private land between buildings and close to economic centres. More commonly they find space on city outskirts or disused areas of publicly owned land. These areas, such as flood plains, riverbanks, steep slopes or environmentally dangerous reclaimed land, are often risky.

Second: the absence of services and infrastructure. Slum dwellers often live without electricity, running water, a sewage system, roads and other urban services, let alone police support, schools, health posts or hospitals.

Third: the lack of property rights. As illegal or unrecognised residents, slum dwellers have no property rights to the land they live on, which makes it impossible for them to use land as collateral and gives them no security or access to capital. Linked to this, they are often denied voting rights and therefore have no political power or influence over their representation.

Fourth: employment, the lynchpin for potential prosperity and hope. Unlike urbanisation in industrialised nations, in which people flocked to the city as new industry and growth offered millions of new jobs, many of today's urban centres are growing despite low economic performance. Millions of urban poor are forced into menial, low-income jobs usually in the informal sector and scrape out a minimal existence that offers no security for the next day and barely meets the needs of today.

Finally, even nature seems to be against the urban poor. Often living on marginal, unstable and dangerous land and with no financial cushion or

Daily life in the worst slums ought to be considered a humanitarian emergency and be responded to urgently, as urban populations face both familiar and new city-specific threats from natural and manmade causes.

security, the urban poor are worst hit when natural disasters such as flooding, fire, earthquakes, landslides and cyclones strike.

This publication focuses on these and other aspects of tomorrow's urban crises today through the examples of ten selected cities.

And yet they stay

Over the last 50 years, the global population living in slums has risen from 35 million to one billion. This number could double in the next 30 years. Despite the cold welcome cities offer newcomers or home-born slum dwellers, in most cases they stay. Considering that the urban poor remain despite the appalling conditions they must endure, one hesitates to imagine the rural lives they left behind.

Many may have no choice: Experts are suggesting up to 30 percent of migrants arriving in urban centres are environmental refugees,

Not everyone wins in India's booming economy. Urban slums are a sharp contrast against symbols of affluence, as an economically dominant minority share city space with those who provide them cheap labour. Studies suggest that as economic globalisation advances, greater disparities between the rich and the poor become more apparent. Here, a woman in a Mumbai slum lives in the shadow of buildings housing multimillion dollar businesses.

Image: Jenner Zimmerman

Beach bungalows with sea views? A garbage-choked stream of effluent flows out to sea between corrugated toilet shacks in West Point, a slum area in Liberia's capital of Monrovia, in August 2007. The West Point peninsula, home to more than 75,000 people, is threatened by erosion on both sides. Most of its structures are built without any solid foundation, and half of them are simply erected on top of piles of compacted garbage. With the land eroding and the population growing, houses compete for space with the garbage covering the peninsula. Any open space is used as a toilet.

Image: Tugela Ridley / IRIN

Downtown Dhaka, Bangladesh. As urban centres become home to more and more people, modern cities are tyrannised by motor vehicles, the sales of which have risen exponentially in recent decades, far faster than urban planners' expectations. The resultant air pollution and congestion reduce the quality of life for all those living in cities and place a disproportionately high health burden on the poor, who are most susceptible to pollution-related illness and disease.

Image: Manoocher Deghati / IRIN

abandoning land that no longer supports their survival, thanks to environmental degradation, population pressure or climate change. Others are escaping war and civil conflict.

In fact rural-urban migration is no longer the main factor behind the growth of the urban poor population. Natural population growth of the existing urban poor will ensure that slums continue to grow rapidly even if all inward migration ended today.

The double-edged sword

Although cities are a concentration of "greed, inequity, poor planning and disrespect for human rights", as urbanisation expert Mike Davis frames it, they have the potential to be, and have been historically, powerhouses of socioeconomic growth and progress. Cities, large and

> ### "Cities concentrate poverty, but they also represent the best hope of escaping it … The challenge is learning how to exploit [a city's] concentrated population."

small, are at the heart of a fast-changing global economy – they are a cause of, and response to, world economic growth.

In addition to being a potential engine of economic prosperity, the city has the capacity to be an efficient means to distribute the maximum welfare to the maximum number of citizens at the lowest cost. Millions of people living in close proximity offer unprecedented opportunities in terms of securing good health; providing universal education, efficient housing, water and sanitation; and encouraging social development and social cohesion. The list could go on, and much has been written about the potential benefits of well-planned and properly governed cities.

For the poor in particular there could be strong, positive and under-exploited advantages. "The urban environment and the urban circumstance could make it possible to really have an incredible power for the poor," argues Helene Gayle, president of the nongovernmental organisation (NGO) CARE International. "If you are working on developing civil-society participation it is easier to do in urban centres simply for the fact that the people are congregated more. There is a lot that can be done with a more concentrated population, but the flipside of that is that negative forces can also easily organise in urban

populations." It is a double-edged sword that has led to a "city of light versus city of darkness" dialectic in analyses of the topic.

The UN Population Fund's 2007 World Population Report states: "Cities concentrate poverty, but they also represent the best hope of escaping it… The challenge is learning how to exploit [a city's] concentrated population." The report explores different ways to unleash the potential of urban growth so the urban poor and slums could be seen as unrealised national assets.

David Satterthwaite of the UK-based International Institute for Environment and Development (IIED) says, "This is absolutely right. A very large part of the economic value in any country is being generated in the urban areas. If you look at the most successful cities you will see that the informal economy is providing all sorts of goods and services for the formal economy – it's not as if the two economies are separate." Indeed informal-sector economist Hernando De Soto and others have long argued that the poor are sitting on massive amounts of 'dead capital' that could be released and put to work by interventions including land rights and financing mechanisms.

The economic catalyst

It is all about economics, analysts agree. There is no problem with rapidly growing cities if the growth is responding to economic opportunities; on the contrary it is a huge benefit. There are many rapidly growing cities that have been very successful. "Porto Allegre in Brazil is one of the fastest growing cities in the world over the last 50 years," says Satterthwaite, "yet because of good governance it has turned the rapid economic growth into a very strong benefit for most of its citizens. Additionally, you usually find the worst poverty in the slowest-growing urban centres – the urban centres whose economy is achieving no fizz at all."

In Africa, which has the highest urban growth rates, economic growth has not kept pace, argues Rasna Warah, editor of the UN-HABITAT publication State of the World's Cities 2006/7. The result is 'dysfunctional' or 'premature' urbanisation, without the economic growth needed to sustain growing urban populations. "Therefore, in the African

context, it's just led to the proliferation of slums, because the growth has not reached the whole urban population. The other thing is that it's led to greater inequalities and could therefore be the source of much conflict in the future," says Warah.

Unequal development

The contrasts of extreme wealth and poverty in cities are the easy subjects of photographers: the one-roomed mud hut towered over by a five-star hotel, or glittering malls where well-heeled shoppers buy imported luxury goods while the homeless sleep on the pavement outside. Queues of women wait for hours in the sun for the single slum standpipe to give them some water as others splash around in aquamarine swimming pools. National and international statistics on health, education and income suggest that cities are islands of opportunity and privilege in comparison with rural areas, but they often conceal severe inequalities within them.

According to the State of the World's Cities 2006/7, "Inequitable distribution of resources and anti-poor policies have led to a rising urban poverty, which impedes the sustainability of cities and impacts their economic viability." Even in rapidly industrialising 'miracle growth' countries such as China and India, urban poverty remains a persistent problem as national GDP rates have risen much faster than national poverty rates have fallen.

The forces of inequity may collide dramatically. CARE's Gayle warns: "There is a time bomb either way: The urban poor could be an incredibly powerful force for change given that they are closer to the organs of power and more visible to policy makers, but they could also be an incredible force for negative action given that in urban areas you tend to have more extremes and the disparities tend to be greater, so the potential for conflict and violence is also true."

A critical blind spot

Although the locus of poverty is moving to cities, development aid has been reluctant to move with it. For Rasna Warah, "there are huge islands of deprivation within cities, which are totally neglected by local authorities and the development agencies. It's a total blind spot."

IIED's former chief David Satterthwaite agrees: "The sad fact is that most donors have no urban policy." Most international NGOs have no urban policy either.

CARE chief Helene Gayle makes a blunt assessment of NGO urban development capacity: "The NGO community is dependent on outside donor funding [and] its priorities often depend on where donors have put their focus," with the result that "neither the NGO community nor the donor community has co-evolved in the direction of facing urban poverty as rapidly as urban poverty has occurred."

Chronic and severe poverty is already a pervasive feature of the new urban life. Despite tangible and visible evidence to the contrary, many governments continue to assume that poverty is mainly a rural phenomenon. According to UN-HABITAT, "a prevalent view among governments and the international development community is that urban poverty is a transient phenomenon of rural-to-urban migration and will disappear as cities develop." Evidence to the contrary is

"Inequitable distribution of resources and anti-poor policies have led to a rising urban poverty, which impedes the sustainability of cities and impacts their economic viability."

increasingly apparent, the agency says, and experts agree that an urgent shift in national and international poverty-reduction strategies is needed to tackle changing reality.

Governance is key

According to Jeffrey Sachs, director of the Earth Institute at Columbia University, the world's cities will have to succeed in three policy dimensions to ensure all citizens have adequate living conditions. First, in urban planning, such as carefully laying out water, sanitation, transport and public health systems, as populations are growing much faster than city infrastructure can adapt. Secondly, in having an urban development strategy tailored to specific circumstances. And thirdly, in good governance.

Beneath almost all aspects of urban development, poverty reduction and risk reduction are issues of governance. At the most basic level, good governance involves recognising the legal rights of squatters and people

View of an illegal neighbourhood on the northeast edge of Damascus, Syria, April 2007. Between four million and five million people, including more than half a million Palestinian and Iraqi refugees, live in Damascus and its surrounding countryside, making it by far the most inhabited region in the country. Up to 40 percent of all construction work in the city is illegal, built without planning permission as an extension of an existing structure or on vacant land without official approval.

Image: Hugh Macleod

In addition to being vulnerable to natural disasters, non-durable housing is susceptible to fire. Here, residents of Kibera slum in Nairobi, Kenya, sort through the remains of their shacks that caught fire during the night in June 2007.

Image: Manoocher Deghati / IRIN

living in slums and formalising these rights through land tenure, ownership, city zoning regulations and so on. Government has often been missing from urban planning, and the urban poor have been, at best, passive recipients and at worst, completely ignored, even in slum upgrading projects.

UN-HABITAT is among those exploring pro-poor financing to upgrade slums and lift the urban poor out of their poverty trap. The organisation promotes micro-financing, pro-poor home financing and multigenerational mortgaging, community funding and other innovative approaches. It remains optimistic, unlike some analysts in the sector, that with the right political will and resources, wide-scale improvements are possible for the urban poor and misery is not an inevitable outcome of urbanisation.

Back to the roots

Most urban development actors, however, are struggling to define their roles and to establish a more cohesive, active approach to urbanisation. CARE chief Gayle sees her NGO as a link between governments and communities: "We are not saying that we are marching on the halls of power within countries necessarily, but instead, really looking at how we help at the grassroots level to give people a sense of their own ability to engage and make their government accountable to them."

Supporters point to grassroots organisations, such as women's savings groups, as part of the solution. Some claim that the most important innovations at the moment are federations of slum and shack dwellers. These federations are now active in at least 20 nations, and they have shown innovation in developing low-cost housing projects, water and sanitation schemes, or enumerating and mapping settlements. Many have shown innovation in developing partnerships with local governments. In some countries, they have the support of the national government. However, most international donors do not fund these grassroots organisations or will not support them because they fall outside the normal modes by which donors provide funding.

Humphrey Otieno, chairman, and Samuel Njorogo, secretary, of the Nairobi People's Settlement Network (NPSN) were both born, and currently live in, one of the Kenyan capital's estimated 130 informal settlements. They are frustrated at the hesitance of the donors to support grassroots work: "How can you keep giving the government more money? They already have the resources – it's like adding a drop of water into the ocean. Why don't they just give the community groups and the federations a chance? If they gave us a period of one or two years, they would see a great result. We want to see action. We want to see tangible things. Why should the government be asking for donor funding if they are not doing anything?"

The ceaseless tide

One of the problems generally with the Millennium Development Goals and the target – to improve the lives of at least 100 million slum dwellers, or 10 percent of today's slum population, by the year 2020 – is that by that time, an estimated 400 million more people will have been sucked into the misery of slum life. The total global slum population is estimated to reach 1.4 billion by 2020. It is a rising tide resulting from a wide range of national and international factors that seem to be manufacturing poverty.

Many commentators conclude that if the flow is to be stemmed – or transformed – a fundamentally new approach is required. Projected population growth overall and of the urban poor suggests that the

"How can you keep giving the government more money? They already have the resources – it's like adding a drop of water into the ocean. Why don't they just give the community groups and the federations a chance?…"

MDGs directly or indirectly relating to slums can only be regarded as a minimum target and offer little in terms of tackling the roots of the problem. "If the majority of the future human race will live in cities, most of them will be poor by any standards given the current developmental trends," points out author Mike Davis. "Ultimately I believe over-urbanisation stems from economic inequality."

Cities present massive humanitarian needs that relief-style assistance cannot meet. Stakeholders, including the UN and NGOs, donors and governments, need to reassess their engagement with the urban poor and revise what they can do for the massive slice of humanity trapped in wretched poverty. There are short-, medium- and long-term
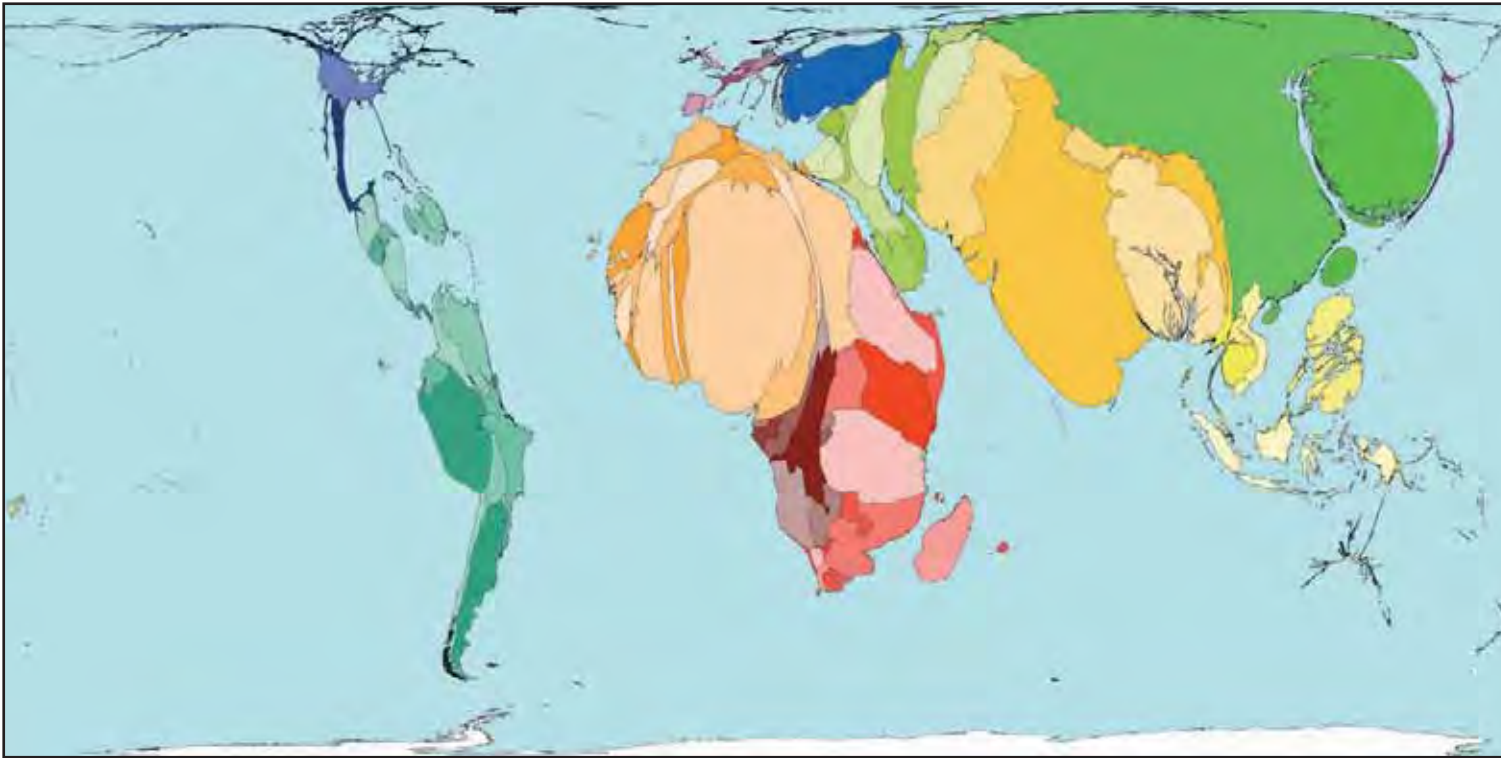
Slum growth

Over the period from 1990 to 2001, the population living in slums increased by 220 million. The largest growth was in Southern and Eastern Asia.

The biggest increases in population living in slums were in China, India and Nigeria.

Territory size in this map shows the proportion of all extra people to start living in slums between 1990 and 2001, that live in slums in that territory.
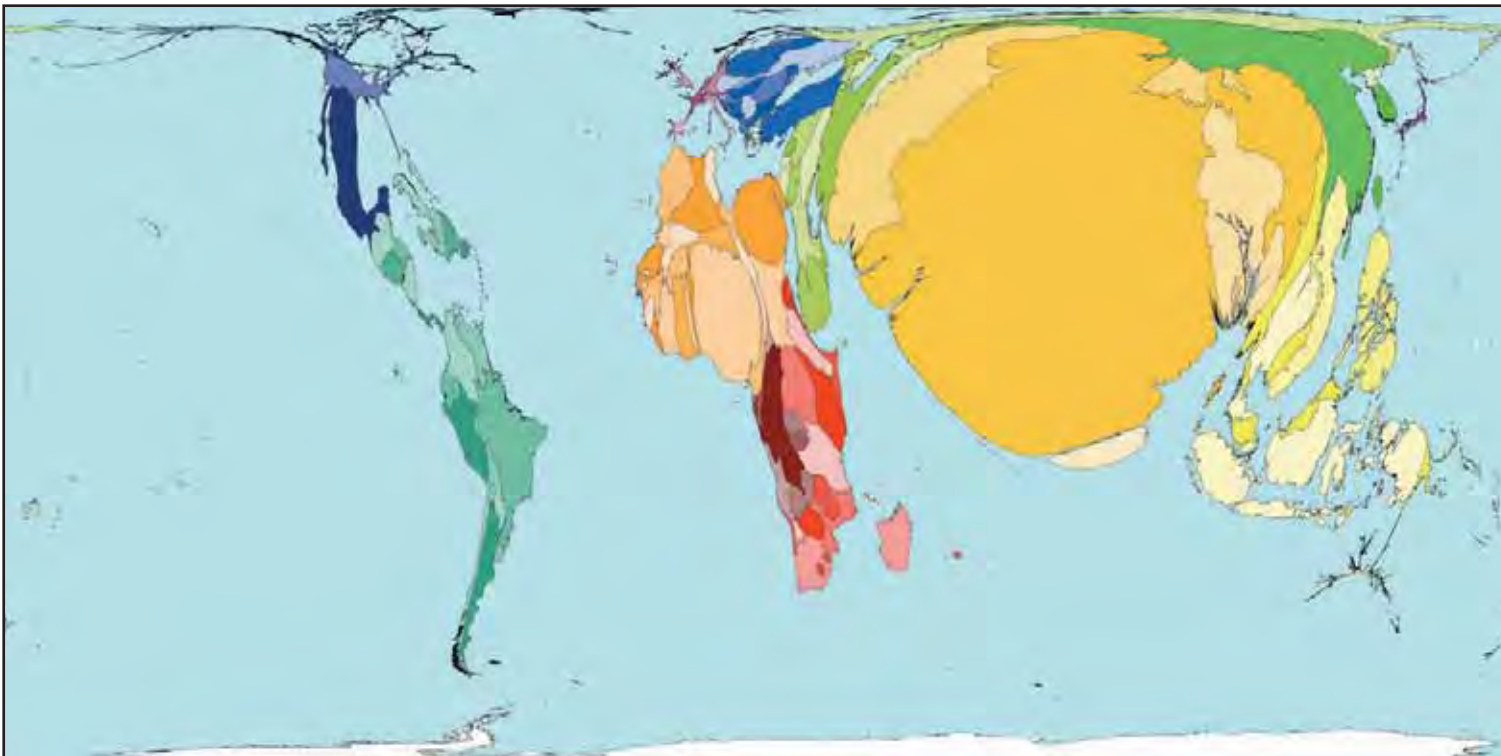
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Overcrowded homes

Overcrowding is defined here as when there are more than two people for each room in the house. Living in large groups is also connected to social and cultural norms. In India 77% of the population live in conditions that are considered to be overcrowded.

Territory size in this map shows the proportion of all people that live in overcrowded homes worldwide that live there.

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strategies required, both to meet urgent human needs now but also to prevent the expansion of these needs for the future. Some agencies and governments are active in the struggle, but many are still unengaged.

The situation today is that millions of city dwellers live on the very edge of survival, and the risks they face are no less severe than some situations described internationally as 'humanitarian emergencies'. Their circumstances also make them vulnerable to dangers, such as organised crime and epidemics, which have no equivalent in rural life. Finally, marginal locations and overcrowding make city slums sitting ducks for natural disasters and the negative impacts of climate change.

The appalling situation in these slums – where more than a billion people live already – is just a taste of things to come. Tomorrow's crises will be increasingly in the cities, and even today, millions of urban poor live in perpetual crisis. Their gruelling lives and the shocks they face show us a glimpse of the future, and are, in fact, tomorrow's crises today.

We are at a turning point that demands action. According to Satterthwaite, "The more we delay in making that turn, the worse the future looks."

An elderly woman in Mathare slum in Nairobi, Kenya. While most urban slums are characterised by an exponentially rising cohort of youth – many of whom are unemployed – the old also struggle to survive their last years in insecure, makeshift housing. Caught in the all-too-common poverty trap of the informal economy, many elderly have little to show for a lifetime of work, having raised families who are also caught in the same struggle.

Image: Manoocher Deghati / IRIN

The alarming story of water in India is not about government negligence towards the poor, nor the urban poor being singled out for marginalisation. In fact, many praise India's efforts to provide potable water to its fast-growing population, and it may be one of the few countries to come close to meeting the Millennium Development Goals in this sector. Instead, the story is more universal and entering a critical moment; a collision of supply and demand.

Image: Peter Essick / Getty Images

water insecurity
delhi: drinking the city dry

"You should come here early in the morning to see the long queues and the fights. Some women bring sticks to fight for the water. There is never enough," says Santi Singh, a Delhi slum dweller, describing a scene familiar to most unplanned settlements in cities throughout the developing world. The inevitable by-product of India's much-championed economic miracle is that an increasing number of urban and rural poor do not have adequate water or sanitation. "For us poor each year seems harder than ever. Nowadays we can only wash once every four days for lack of water," says Santi.

Cities of slums

Indian government maps are colour-coded to show the intensity of slum populations in certain cities. The intensity of slum concentration is represented by yellow turning to orange and then red for the highest density. For Bombay, New Delhi and Kolkata, most of these municipal maps are dominated by bright red and orange.

The 2001 census received reports from the 640 larger Indian cities on slums and represented the first effort to analyse slums as a population category. The definition used was "a compact area of at least 300 people or about 60 to 70 households of poorly built, congested tenements in unhygienic environments, usually with inadequate infrastructure and lacking proper sanitary and drinking water facilities." [1]

Even though the rate of urbanisation in India is among the lowest in the world, there are more than 250 million city dwellers. The population is well over a billion and is reckoned to overtake China in the next decades.[2] One in six people on Earth is Indian and experts predict that by 2020, about 50 percent of India's population will be living in cities. Already one in four in Delhi live in slum conditions while in cities such as Mumbai, the proportion in recognised slums in 2001 was a staggering 54 percent, according to government statistics.

Critics question government figures of 1.8 million slum dwellers in Delhi.[3] The real number of people in slums and unauthorised colonies, or 'jhuggi jhompris', is three million to seven million, they say. The catch for the urban poor is that unless they are officially classified as living in slums they rarely qualify for government services, including water and

sanitation. An estimated 550,000 people come to Delhi alone each year.

The long wait

On the southeastern periphery of the city, where Santi Singh lives in Kalianpuri, the water story is bleak. "When we fight we use our hands and legs and the police have to come to split us up. It's all about the water," explains Santi, a 40-year-old mother and long-term resident of the community of 10,000 huts, or 'jhuggis' in the slum. Her story is testament to India's dwindling water resources as well as the government's struggle to meet the fast-growing needs of the urban poor while meeting the expectations of the equally fast-growing middle class.

Santi, like others in Kalianpuri, migrated to Delhi in the 1970s. Women worked as cleaners in houses miles away. For the past two decades they have been told they would be relocated to an area with full facilities. "When we first came here, there was nothing. It was just open land they called jungle. But then five or six households pooled their money together and got one water pump to share. Then there was water but now it is all dry." People started installing their own hand pumps in 1982, most of them 12m to 15m deep. Ten years ago, all the makeshift houses in Kalianpuri had access to pumps but three or four years ago most dried up. A couple of deeper pumps still work but are picking up unclean water and even then availability is uncertain. "No one wants to build new pumps because the water table is still falling and the water is not clean, and putting in wells is too expensive," Santi said.

Most households in Kalianpuri rely on two tap-less water pipes flowing twice a day, for two hours at a time. Santi's stories of endless fights at the standpipes are echoed throughout India as women struggle to get their buckets under the pipes before the weak flow trickles to nothing.

Drying out

The Millennium Development Goals (MDGs) would require India to halve, by 2015, the proportion of people without access to safe drinking water and basic sanitation. The government suggests India could achieve complete access to water and sanitation in the next decade or so in urban and rural areas if current funding continues. However, access alone is only one aspect.

Santi's stories of endless fights at the standpipes are echoed throughout India as women struggle to get their buckets under the pipes before the weak flow trickles to nothing.

The 2005 World Bank report, Bracing for a Turbulent Future, agrees India may theoretically meet the MDGs but raises issues of the reliability, quality, financial and environmental sustainability, and affordability of water.[4] In most cases, supply is erratic and the report cautions against complacency in light of increasing scarcity due to groundwater depletion, environmental degradation and climate change. The report states that unless dramatic changes are made – and soon – by 2025 three out of five aquifers in India will be critically low and by 2050 demand for water will exceed all available supply.

Urban supplies

The government claims 90 percent of Indians enjoy access to safe drinking water; the Bank says the number is nearer 40 percent, leaving an estimated 650 million without clean water. According to the Center for Civil Society in Delhi, about 10 percent have no access to piped water supply and 30 percent receive a very small supply through standpipes. Even officials admit the total distribution losses from the Delhi network of about 9,000km of water mains, some of which are 40 to 50 years old, is about 40 percent. The average is 10 percent to 20 percent in other developing countries; these losses are due to leaking pipes as well as unauthorised connections.

Although the official per capita availability of water in Delhi is still the highest in India, the overall inadequacy is due to inequitable distribution and leaking pipes. The cruel irony of being poor in Indian cities is that without a municipal supply, the poor spend disproportionately more on water. Commercial suppliers make a killing as they freely extract what they want from private wells and sell it to those not served, or served poorly, by the city.

Iniquitous distribution

"They will never share," says Saida Khan from Kalianpuri. "Yesterday I went to a neighbour's house to ask for some water to drink. Instead they threw the water at me and threatened to call the police." Her neighbours across from the slums live in flats with piped water. The unequal

People in Dhaka, Bangladesh, wash by a communal standpipe the only source of water for drinking, cooking and washing for many slum households. According to the UN, there are currently 1.2 billion people globally living in areas with insufficient water. By 2025, two-thirds of the world's population could be threatened by water shortages. Lack of access to adequate quantities of clean water and poor sanitation are probably the greatest risks affecting the lives of the urban poor.

Image: Manoocher Deghati / IRIN

Demonstrators in Mathare, one of Nairobi, Kenya's largest slums, appeal to the Millennium Development Goals as they demand water after their illegal connection was cut by authorities in August 2007. There has been much talk of conflict over water, and experts warn of future unrest between communities and even nations as the world's water resources dwindle under pressure of over-exploitation, population explosion and mis-management of resources.

Image: Julius Mwelu / IRIN

Even officials admit the total distribution losses from the Delhi network of about 9,000km of water mains, some of which are 40 to 50 years old, is about 40 percent. The average in other developing countries is 10 to 20 percent; these losses are due to leaking pipes as well as unauthorised connections. According to the Center for Civil Society in Delhi, about 10 percent of people living in urban areas have no access to piped water supply and 30 percent receive a very small supply through standpipes.

Image: Peter Essick / Getty Images

distribution of water in Delhi, even between planned residential areas, can be extreme. In the central zone closely associated with government and the army, the average quantity is more than 500l per capita per day (pcd) and 18 times that of two large zones in the north and south of the city, which both receive on average 30l pcd. Of course for many unofficial slum settlements and jhuggi clusters there may be none at all. A household of five is considered to need at least 120l per day for basic hygiene, consumption and cooking.[5]

Delhi is in perpetual water crisis, more so during the dry season. With a population of more than 15 million, Delhi faces a water shortage of 750 million litres per day. According to the World Bank, of the 27 Asian cities with populations topping one million, Chennai and Delhi are ranked as the worst performing metropolitan cities in terms of hours of water availability per day, while Mumbai is ranked as second

Delhi is in perpetual water crisis, more so during the dry season. With a population of more than 15 million, Delhi faces a water shortage of 750 million litres per day.

worst and Kolkata fourth.[6] In Chennai, over-extraction of groundwater in the northwestern coastal belt has resulted in a rapid ingress of seawater, turning city water brackish. In Bangalore, the demand-supply gap is so large it can only be met by groundwater exploitation. It is estimated that 40 percent of Bangalore's people depend on groundwater.[7]

Groundwater extraction

As the demand-supply gap widens in Delhi, more groundwater is being exploited by individuals, industries and unregulated bottled water companies that own the estimated 200,000 tube wells. The failure of the Delhi water authority, the Delhi Jal Board (DJB), to meet the city's needs encourages private suppliers. These entrepreneurs play a significant role in filling the gap – but at a price, in terms of actual cost and environmental cost because they suck up groundwater to fill their bottles.

The emerging water market in India was valued at an annual US$2,000 million in 2003; multinationals are active in bottled water, which can cost up to 1,000 times more than tap water.

In some places in south and southwest Delhi, the groundwater level has fallen 20m to 30m below land surface. In some cases, a drop of more than 100m has been recorded.[8] The quality of underground water is deteriorating and in several places is unfit for human consumption. The Delhi Water Regulatory Commission, set up to control groundwater exploitation, is seen to have little impact and for many experts the general groundwater free-for-all, in India as well as China, is cause for great concern as the world's last ancient storage tanks are depleted at an unsustainable rate.

Community action

Inhabitants of many small unofficial slum clusters scattered around the city in the mid-1980s were relocated to what is now a thriving organised slum community at Mongolpuri and Sultanpuri.

Many had lived in hovels on open ground between middle-class areas in the city. Without official water supplies or sanitation they survived by illegally diverting water, buying it from private sellers or queuing at sparsely distributed hand pumps. Now, most of the two- or three-storied stone buildings have water, indoor toilets, an external pay toilet and washing blocks. But it did not come easily or fast.

In these slum settlements land was handed out in an organised programme incorporating numerous smaller, illegal settlements all over the city. Planned to coincide with the development of large garment factories, it was an example of pushing slum dwellers to the periphery in 'spatial exclusion', while also illustrating the government's bid to plan and provide for the large resettlement effort. How they finally got basic water provision and sanitation in the new slums is also an illustration of community action and the tenacity of women's groups. Rani and Maju in Sultanpuri said: "There used to be one common tap outside, with water coming for an hour or two each day, sometimes at two in the morning. There were hundreds of us needing water at the same time."

Furthermore, there were no toilets. "It used to be terrible with the raw sewage overflowing and seeping into people's houses. It was a disease hazard but also the smell was terrible." Sanitation is increasingly understood as a social challenge that affects women and girls far more than men. "My sister-in-law was sexually attacked when she went out to do her toilet," Rani said. "We would have to go in pairs or in groups to guard each other."

Six years ago, after 14 years of hardship, Rani and Maju, assisted by an Indian NGO, Saahas-ee, began to demonstrate outside different government offices demanding basic services. Initially their contact with government was confrontational but soon their dialogue became more constructive and the federations and local authorities found ways of working together. Soon thousands of families began getting water and waste drainage.

Now for every 24 houses there are three hand pumps dug 12m to 15m deep, and every house can apply for individual water connections at a nominal fee. Most people receive water twice a day for at least two hours. The community maintains the hand pumps and the women's federations act as manager for the DJB and collect its monthly payments.

Saahas-ee community workers and the federations have helped to clear drains and rubbish and mobilise the community, teaching people not to let their children defecate in the streets, not to throw plastic bags into drains and other basic public health messages. "After all this struggle we all really understand the value of water and we wouldn't waste even one glass," Maju said.

A critical moment

The story of water in India is not about government negligence towards the poor, nor the urban poor being singled out for marginalisation. In

fact, many praise India's efforts to provide potable water to its fast-growing population, and it may be one of the few countries to come close to meeting the MDGs in this sector. Instead, the story is more universal and entering a critical moment; a collision of supply and demand.

According to WaterAid India, poor urban communities consistently cite water and sanitation as their greatest need. Furthermore, "there is a complete absence of systematic intervention by local NGOs that can inform the infrastructure planning and reform process."[9]

The Water Supply and Sanitation Collaborative Council – a UN body – stresses that one out of every six people in the world (about 1.1 billion) do not have safe water to drink. About 2.4 billion people do not have adequate sanitation. The council warns against misspending billions of dollars in the name of development but calls for a new approach "based on working with and trusting local communities, focusing on the needs of households and supporting the reform of governments and institutions."

According to the council, the main hurdle in the way of safe water is not lack of resources, "it is a lack of willingness to learn from past failures and to listen to those who pioneered new approaches."[10]
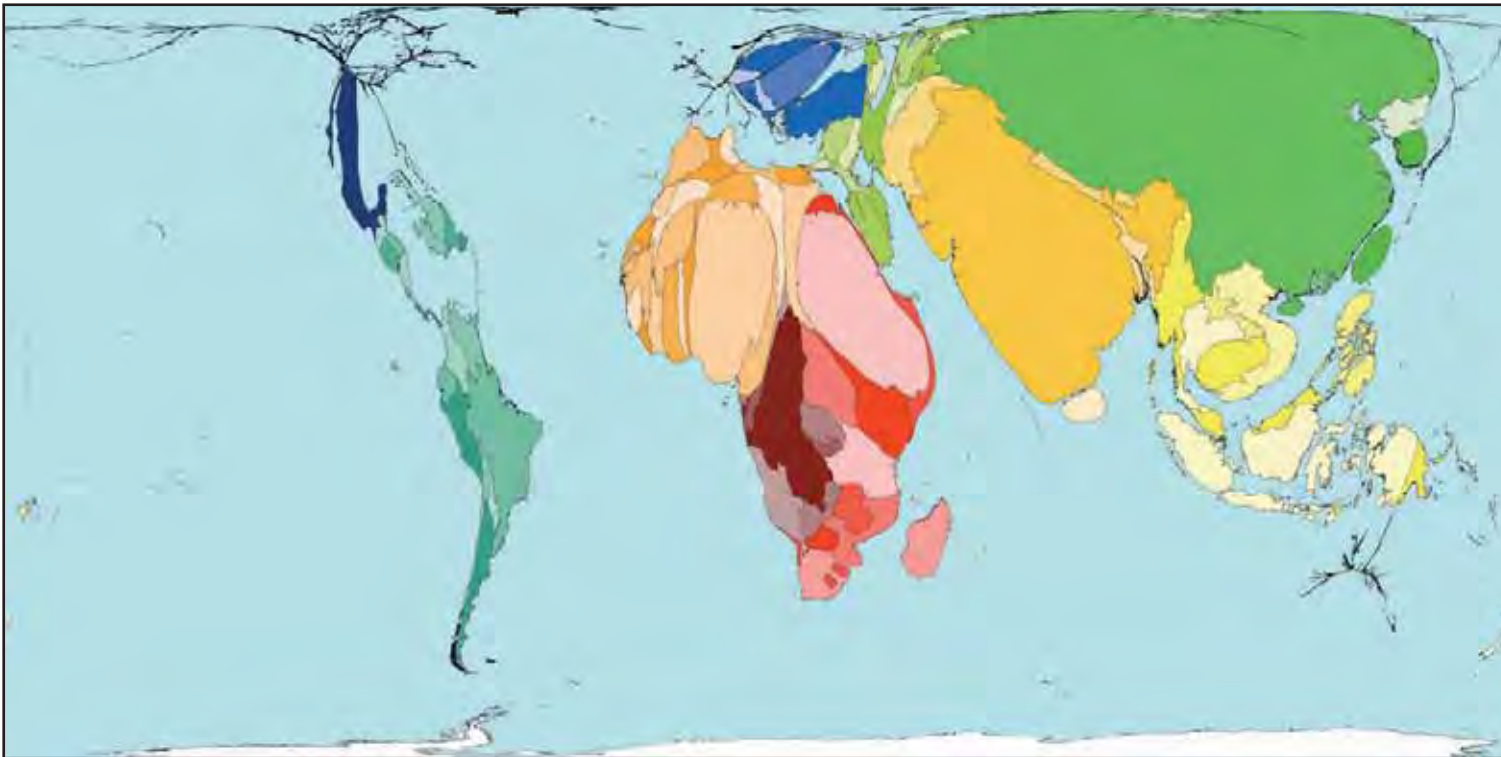
**"My sister-in-law was sexually attacked when she went out to do her toilet,"
Rani said. "We would have to go in pairs or in groups to guard each other."**

Poor water

Drinking water is essential to live, but dirty drinking water is also a major cause of disease. The largest population without access to safe tap water is in China: that is 324 million people, or 25% of the population. Worldwide 18% of people have no safe drinking water.

Territory size in this map shows the proportion of all people without reliable access to safe water that live there.
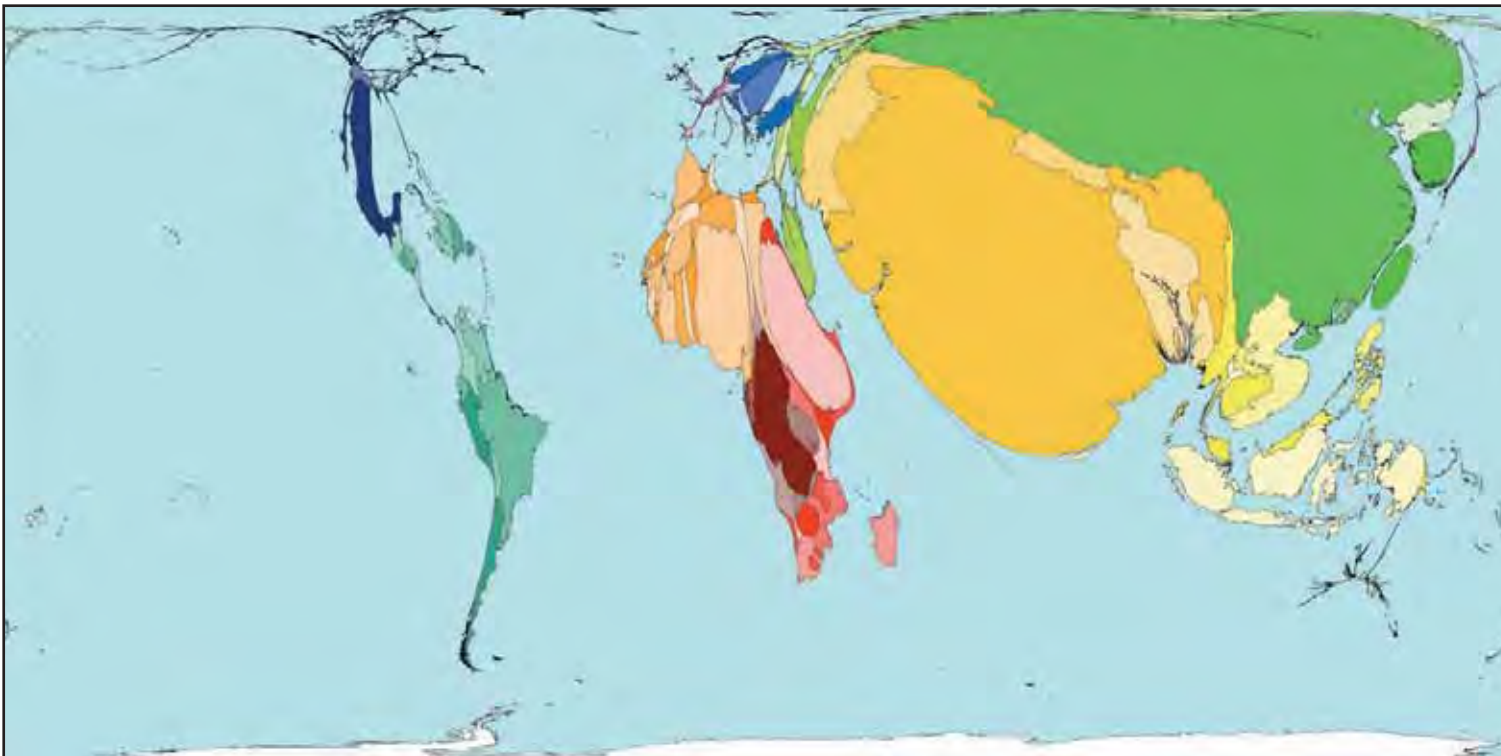
Poor sanitation

Of all the people in the world, 39.8% of us do not have access to basic sanitation. This means living within walking distance of private or shared (not public) latrines or toilets that effectively prevent human and animal contact with excreta.

Territory size in this map shows the proportion of all people without access to basic sanitation (toilets) that live there.

Buses drive through crowded Oshodi market. Lagos is Nigeria's largest city and among the top nine emerging mega-cities in the world. Its population has grown from 300,000 in 1950 to more than 12 million today. It is an urban planner's nightmare: There is no mass transit system and its roads are congested daily by more than one million vehicles. Millions of commuters are trapped for hours, most of them sweltering inside crowded minivan taxis. Beggars and children add to the chaos by moving with the traffic to hawk their wares.

Chapter 3

governance and planning
lagos: crisis of management

More than 65 percent of those who migrate to Lagos end up living below the national poverty line, only marginally better than the national average of 70 percent. Migrants usually live in one of the city's 200 slums, which range in size from clusters of shacks to entire districts. It is these people, currently living in wretched conditions, who suffer more if governments are unable or unwilling to put human and financial resources into planning for the future and improving governance.

Since 2000, the mega-city of Lagos has been drawing in an estimated 600,000 people per year, most of whom end up in slums. As in many fast-growing cities, the proliferation of slums and the influx of so many people has put a tremendous strain on the government's ability to provide basic services. A combination of difficult terrain and many years of economic crisis, misrule and corruption[1] have turned Lagos into a governance nightmare.

There is no mass transit system, and millions of commuters are trapped for hours, most of them sweltering inside crowded minivan taxis. Beggars and children move through the traffic, hawking water, electronic gadgets, medicines, food, clothes, toys, music cassettes, sunglasses, pens, shoes and picture frames. There is no proper sewage network, and safe drinking water is available only

to a small number of people. A regular power supply has been described as a 'distant dream', and in heavy rains many homes are flooded.

"Lagos is one of those places where you wonder just how anything manages to function," said one BBC correspondent, echoing the view of many who visit or live in Nigeria's capital.

City governance impacts inhabitants, especially the urban poor, in a way that does not compare with more self-sufficient and remote rural areas. Indeed, almost all aspects of urban development – employment and job creation; public transport and traffic; solid-waste collection and disposal; water and sanitation; health services; shelter and housing – hinge on the issue of governance.

In Lagos, city management is compromised by the influence of informal relationships. "Land rights, employment, industry and other sources of wealth rely on political interaction, involving patron-client relations, bribery, corruption, nepotism and/or 'long-legs' (contacts). Almost everyone knows someone with a link, however tenuous, to power [...] There is considerable interaction (some would say interference) between leaders at national, state and local levels and at least some sectors of the general public..."[2]

These informal relationships give rise to social inequity, ethnic tensions and political instability. Without effective government the entire concept of rights disappears. "[Unless] concerted action is taken to redress urban inequalities, cities may well become the predominant sites of deprivation, social exclusion and instability worldwide," according to UN-HABITAT.[3] Many argue that Lagos has already reached this state. Its future – and the lives of millions of its residents – depends on sustainable urbanisation and poverty reduction. Good governance is fundamental to this task.

Lagos: the fastest growing mega-city in the world

Lagos is the largest city in Nigeria. It is the main city of Lagos State and Nigeria's main commercial centre, with more than 70 percent of the nation's industries and economic activities carried out there. The city is also important to the rest of West Africa as a leading regional port and manufacturing centre with the highest number of multinational companies.

Worldwide, Lagos features among the top nine emerging mega-cities, including Delhi, Dhaka, Jakarta, Mexico City, Mumbai, New York, São Paulo and Tokyo. Its population has grown from 300,000 in 1950 to more than 12 million today. With an annual population growth rate of 4.8 percent, it is estimated that Lagos will be inhabited by more than 20 million people by 2020 and thereby join the ranks of a growing number of "hyper-cities".

Confined to only 3,345sqkm, Lagos covers just 0.4 percent of Nigeria's entire land area, making it the smallest of the country's 36 states. However, it has the greatest number of inhabitants, representing 10 percent of the country's population.

More than 65 percent of those who migrate to Lagos end up living below the national poverty line, only marginally better off than the national average of 70 percent. Migrants usually live in one of the city's 200 slums, which range in size from clusters of shacks to entire districts. It is these people, currently living in wretched conditions, who suffer more if governments are unable or unwilling to put human and financial resources into planning for the future and improving governance. The lives of the urban poor are in the hands of city authorities to a far greater degree than their rural counterparts, because when deficiencies exist in urban areas, there are few independent and appropriate alternatives available to people.

Transportation

People in Lagos depend on private cars, buses and taxis to get around. Every day, some one million vehicles congest approximately 2,600km of roads. "Lagos is unbearable! People are living in traffic!" exclaimed one desperate inhabitant in a recent Internet posting.

In a 2005 study by the Lagos Metropolitan Transport Authority (LAMATA), the main instrument for transforming the state transport system, road traffic was identified as the main source of air pollution in Lagos State, having "catastrophic" health implications.[4]

The concentration of carbon monoxide and sulphur dioxide in the air acts as an irritant to those suffering from lung diseases and can cause fatigue, loss of vision, headaches and nausea. "We can safely conclude that the cost of pollution in metropolitan Lagos has increased medical costs such as medicines and hospital visits and on productivity losses," the study found.[5]

More than 65 percent of those who migrate to Lagos end up living below the national poverty line, only marginally better off than the national average of 70 percent.

In addition to posing a health threat, public transport deficiencies further impoverish the urban poor: LAMATA estimates that transportation costs account for 20 percent of household budgets, second only to food.[6]

The problem with infrastructure is nothing new. In Lagos, "the colonial state apparatus and its post-colonial successors never succeeded in

Women carrying household necessities over a bridge in one of Lagos, Nigeria's 200 slums, which range in size from clusters of shacks to entire districts. In Lagos – a region of mangrove swamp, rivers and lagoons – water covers more than 40 percent of the entire area. Still, the majority of slum dwellers do not have access to clean water. Another great challenge facing the Lagos planners is housing and shelter since most available land is frequently taken over in uncontrolled and unplanned developments. The urban poor live in wretched conditions and are likely to continue in hardship if governments are unable or unwilling to put resources into planning for their future as part of an 'inclusive' city.

When planning for the delivery of basic services to slum dwellers, cities and utility companies must take into account the huge number of households and businesses who gain free access illegally. In Delhi, India, so many people tap into otherwise legitimate electrical lines that little or no effort is made to hide it. When an inspector of a local power company cuts power, it is only a temporary delay. Shortly after the inspector's departure, the lines are hooked up again.

Image: Chris Horwood / IRIN

In Lagos, Nigeria, money that might have been invested in healthcare, housing or physical infrastructure were allegedly diverted. Now, the city must find new solutions to old problems: air pollution caused by road traffic has severe health implications, particularly for the urban poor who cannot afford healthcare.

Image: Stuart Franklin / Magnum

building a fully functional metropolis through investment in the built environment or the construction […] Vast quantities of capital that might have been invested in health care, housing or physical infrastructure were either consumed by political and military elites or transferred to overseas bank accounts with the connivance of Western financial institutions."[7]

In addition to corruption and lack of political will, poor governance is a major obstacle to transport agencies in developing cities. The fragmentation and duplication of institutional responsibilities and

In addition to corruption and lack of political will, poor governance is a major obstacle to transport agencies in developing cities.

lack of coordination among agencies and ministries compounds the problem: In Lagos, for example, at least three agencies in addition to LAMATA are responsible for traffic and transport issues at the state level.[8]

Environmental sanitation

Lagos has often been referred to as the one of the dirtiest cities in the world.

The capital city lacks an effective refuse-collection service and has no central system for treating sewage and industrial effluent. Filling the vacuum are self-employed collectors who push carts through the streets, collecting rubbish from residents for a fee. Similarly, private operators evacuate sewage for city residents. Of some 6,000 tons of waste generated daily, only 3,000 tons are taken to three official dump sites by government-appointed refuse collectors and informal collectors, according to the World Bank.

Lagos health and environment officials acknowledge that most of the rubbish and sewage collected by private operators, as well as the industrial effluent, ends up in the lagoons and creeks. Much of the rest is burned in illegal rubbish dumps or in one of three official dumping sites.

Untreated sewage pollutes the lagoon and destroys marine and aquatic life, said Kenneth Iwugo, a Nigerian marine scientist affiliated with the University of Bristol who studied water pollution in Lagos. Where rubbish and other solid waste are dumped in officially appointed landfills, contaminants leak into ground and surface water, he said.

In Makoko slum, residents use small enclosures attached to their shelters as toilets and bathrooms. All waste is dumped into the same lagoon where they fish. There are pit toilets in areas of the settlement lying on firmer ground, but each one serves several families.

Lagos is particularly susceptible to water pollution because the water table is very shallow, sometimes only three metres from the surface, Iwugo said. In addition, the relatively loose and easily permeable soil allows the infiltration of contaminants. These environmental factors affect the food source and pose a significant risk of viral and bacterial diseases such as polio, meningitis, diarrhoea, cholera, parasitic infection and fevers spread by waterborne vectors.

Shelter and housing

Another great challenge is housing and shelter, particularly for people living in overcrowded slums. Official estimates put the population density of metropolitan Lagos at 1,308 per square kilometre, but in heavily built-up areas the average density reaches 20,000 per square kilometre.

The housing demand is unparalleled in any other part of Nigeria, and most available land in Lagos falls prey to unregulated and unplanned development. According to a 1978 law, all land in Nigeria is vested in the government.[9] However, traditional land rights are also recognised, which often leads to conflicting tenure claims and disputes. Insecure land tenure has helped spawn the many slums occupied by squatters, who, without a legal title to land, are unable to take out mortgages. Housing in the illegal slums is rent-free, but the trade-off is insecurity and poor or no amenities.

Informal settlements are absolutely off the radar in terms of infrastructure, services and future planning, except perhaps in terms of planning to remove them. In the name of security or economic development, a succession of governments has resorted to demolition as a solution to slum proliferation. These forced evictions make hundreds

of thousands of urban poor destitute overnight, as they immediately decamp to another, probably more marginal and inappropriate piece of land.

By the beginning of the 1990s, the most well-known slum in Lagos was Maroko, where some one million people lived in makeshift squalor next to the residential district of Victoria Island. In 1991 Raji Rasaki, then-military governor of Lagos, gave Maroko residents two weeks to move and, when the deadline passed, promptly sent in bulldozers to demolish the shantytown, ignoring a public outcry. None of the residents were resettled or compensated. Illustrating the common trend of 'spatial exclusion' – where the urban poor are driven out of town centres, allowing real estate values to soar – the area has since been taken over by wealthier residential developments and shopping malls, all of which are well-provided with basic services.

Following this precedent, demolition has become a frequent recourse for local authorities, who are often beholden to land speculators keen to cash in on the acute land scarcity of Lagos. In the past two years, parts of the Ijora-Badiya and Makoko slums also fell to bulldozers.

According to a joint study by Tunde Agbola and Elijah Agunbiade (two Nigerian researchers linked respectively to the University of Ibadan, Nigeria, and the University of Lagos), summary state-implemented evictions are unlikely to amount to any lasting solution. They call for "a vision of how to regularise the city's informal settlements and develop an inclusive city for all its citizens."

In an attempt to address the crisis of urbanisation in Lagos State, authorities have launched a Lagos Metropolitan Development and Governance Project backed with a US$200 million World Bank loan approved in March 2006. The World Bank currently has 22 active projects in Nigeria with a total commitment value of $2.2 billion, and the governance project is one of the highest valued active projects.[10] According to Deepali Tewari, the bank's senior municipal development specialist overseeing the project, the "objective is to increase sustainable access to basic urban services through investments in critical infrastructure."

Good governance is the essential first step towards alleviating poverty in the crowded slums of Lagos.

Under this initiative, nine of the biggest slums in Lagos will be rebuilt; the city's drainage system will be reconstructed to provide a long-term solution to perennial flooding; and infrastructure will be upgraded for the management of solid waste. Funding will also be devoted to improving public governance and the institutional capacity to identify and prioritise the most pressing needs of the city.

Good governance is the essential first step towards alleviating poverty in the crowded slums of Lagos. Years of economic crisis, corruption, the fragmentation and duplication of responsibilities, and the intrusion of informal relationships into the government's work have conspired to make daily life a misery for the burgeoning number of urban poor in Lagos. Even with adequate funding, sustainable improvement will be impossible without the political will to abandon corrupt practices and institute careful, appropriate planning.

Above: Shibam, Yemen – the 'Manhattan of the desert' in Yemen started 2000 years ago. Below: Mexcalitán in Mexico, said by some to be the birthplace of the Aztecs. Urban settlements are neither new nor are they destined to be chaotic centres of deprivation. The key issues are management, good governance and planning underwritten by political will.

Tensions run deep as policemen break up a demonstration by residents of Mathare slum in Nairobi, Kenya, on 31 July 2007. The demonstrations were organised after authorities disconnected an illegally connected water source, which left slum dwellers without water for a few days. Around the world, the majority of people living in slums have no access to basic services. Water and electricity are particularly hot commodities, compelling people to illegally tap sources. Although the demand for basic services is a legitimate one, city officials must navigate a path through legitimate demands and illegality.

Image: Julius Mwelu / IRIN

Dhaka, Bangladesh. As floodwaters rise, women and children wash and swim against the backdrop of slum clusters and apartment blocks. Of the people jostling for space in the city, at least 3.4 million live in 4,966 slum and squatter 'clusters'. The slums are as packed as they are numerous and invariably situated in the most flood-prone and waterlogged areas.

Image: Manoocher Deghati / IRIN

vulnerability to natural disasters

dhaka: reaping the whirlwind

The natural disasters visited upon Bangla Desh read like a list of Biblical plagues. "It's not just flooding, but we face earthquakes, cyclones, tornados, continual river-bank erosion, droughts and even poisoning affecting underground water,"
Whether Dhaka's authorities have a disaster prevention and city planning vision or not, some observers see more mighty forces at work that arguably make Dhaka's future grimmer still: "The rising sea and the melting mountains will meet on this tiny patch of the world, and the people who strain at its seams will drown with it, or be blown away to distant shores, casualties and refugees by the millions."

"They are 100 percent affected. Even if there is no flood, just heavy rainfall can be very painful to the poor. If there is a big flood then their sorrows know no bounds," says Shafiul Alam, secretary-general of the Red Crescent in Dhaka, Bangladesh.

Bangladesh is possibly the most disaster-prone country in the world. In any calculation of human vulnerability or risk, Bangladesh's high-density population must rank near the top. The natural disasters visited upon it read like a list of Biblical plagues. "It's not just flooding, but we face earthquakes, cyclones, tornados, continual riverbank erosion, droughts and even poisoning affecting underground water," explained Shafiul Alam, in Bangladesh's capital.

A cauldron of woes

Take the most unplanned urban centre in the world, wedge it between four flood-prone rivers in the most densely packed nation in Asia, then squeeze it between the Himalayas and a body of water that not only spins violent cyclones and the occasional tsunami but appears to be creeping inland and washing away farmland, tainting drinking water, submerging fertile deltas and displacing villagers as it approaches – and that is Dhaka. Add the expected impact of climate change to this cauldron and it is hard to be optimistic. Indeed, words such as deluge, torrent and wave apply as much to rural-urban migration as to meteorology.

The population of Dhaka, Bangladesh, has risen almost 10 times in the 26 years since its independence from Pakistan. The most recent national census conservatively counts 13.1 million people in the greater Dhaka area. Approximately 500,000 people arrive in the city each year. An estimated 84 percent of Bangladesh's total urban population lives in substandard slum housing.

Image: Manoocher Deghati / IRIN

Dhaka's population has risen almost ten times in the 26 years since independence from Pakistan. The most recent census conservatively counts 13.1 million people in the greater Dhaka area. Far from cresting, the population is expected to reach 25 million before 2025. Approximately 500,000 people arrive in the city each year. Countrywide, the urbanisation picture is much the same. An estimated 84 percent of Bangladesh's total urban population lives in substandard slum housing. This is the fourth-largest percentage in the world, and the biggest outside sub-Saharan Africa.[1]

City of five thousand slums

Of the people jostling for space in the city, at least 3.4 million live in 4,966 slum and squatter 'clusters'.[2] The slums are as packed as they are numerous and invariably situated in the most flood-prone and waterlogged areas. Khalik Mia, who sells fish, has lived for the past four years in a tiny hut on stilts over a water-logged area of smelly black factory sewage. When asked why he lived in a space of about 2sqm in such conditions, he answered: "Where else can I go? Anywhere else would be more expensive." Even so, the authorities

"It was 12 years ago. We lived in southwest Bangladesh but the river washed away our land. Over a thousand of us came to Dhaka. We were landless."

smash down his hut regularly, and during the rains the area floods "up to and even over my bed. All work stops, we end up just surviving. Often we have to move out for some weeks and live on top of the embankment."

The eastern and western anti-flood embankments that hold back the floodwaters were built in the 1980s and are effective at keeping riverine floodwaters out of parts of the city but also, in the absence of effective or well-managed drainage, keep other, unwanted waters in. This is known as risk substitution: The risk of river flooding has been substituted by the risk of rainwater flooding. A tin-roofed slum camp of about 2,500 families lies on the inside of the western embankment where large lakes seasonally form, over which the bamboo-stilted houses are perched. This is where Sujad Nagar and her neighbour Surupa, a 22-year-old mother of two, face the results of risk substitution every day: "Of course we do not let our children swim or touch it; this water is waste water from the drains and toilets, from the factories and from the

rain. It has nowhere to drain." Surupa and her community have access to municipal water and good latrines but they worry about their unhealthy environment. "In the rains the smell is less. In the summer the smell is terrible and the filth in the water is everywhere."

Two weeks earlier, in the dead of night, strong winds tore off Surupa's roofing and threw a tree into the side of her house. Every year flooding in the rainy season prevents the community from going to work and forces most to live precariously on flimsy structures as their latrines flood and their clean water sources are contaminated. But natural hazards are all-pervasive in Bangladesh. Surupa's father, Azhar Bapari, explained why they had come to Dhaka in the first place. "It was 12 years ago. We lived in southwest Bangladesh but the river washed away our land. Over a thousand of us came to Dhaka. We were landless."

Like a thief in the night

Numerous slum dwellers tell the same story. Bangladesh is criss-crossed by 230 rivers mostly originating in India, Nepal and China. River-bank erosion is a massive problem. Three major rivers, the Brahmaputra, Ganges and Meghna, divide and sub-divide over the flatlands of the country towards the wide coastal delta like an intricate but ever-changing lattice. Swathes of riverside land are washed away, sometimes overnight, and people awake to complete or partial loss of their only real asset. But such disasters are nothing new. The Bangladesh natural hazards expert, Nazrul Islam, writes that his family was forced to move by shifting rivers three times in his childhood, as was his grandfather. Studies show an estimated one million people are directly or indirectly affected by river-bank erosion nationwide; in one of them, almost 50 percent of slum dwellers interviewed cited it as the main cause for urban migration.

Although it does not stop them coming, once in Dhaka the odds are still stacked against the city-bound migrants. Quazi Baby, director of a local NGO, the Participatory Development Action Programme (PDAP), has worked with the poor for 12 years. "Land erosion and natural calamity are the key causes for migration, but when they come they find nothing, no work, no housing and no opportunities." What they do find is an unwelcoming city authority: In January 2007, the local

government forcibly evicted 50,000 slum dwellers and banned street hawkers, which directly affected between 200,000 and 300,000 people living mainly in the slums.

What they also find is a city inauspiciously placed for geography and climate. Its elevation ranges from 2m to 13m above sea level, with the majority of urbanised areas 6m to -8m above sea level. Not surprisingly, most of the slum clusters are in low-lying areas of the city, with the eastern side of Dhaka – a flood plain – filling up with new migrants. The western side is already packed. Dhaka is located in the catchment area for the Ganges, Brahamaputra and Meghna, and is literally boxed in by their distributaries of Balu (east), Tongi khal (north), Turag (west) and Buriganga (south)[3]. Flooding is the most common disaster in Dhaka and erratic changes in temperature and rainfall, with increased frequency of floods, are becoming more evident. Dhaka experiences floods every year, with really severe ones on average every five years. Major floods occurred in 1954, 1955, 1970, 1974, 1980, 1987, 1988, 1998, 2004 and 2007 (1988, 1998 and 2004 were catastrophic)[4]. These do not compare with the cyclone in November 1970, which killed an estimated 300,000 people, but the floods also take their toll in loss of life, livelihoods, shelter and infrastructure as well as the increased immiseration of the poor.

When it rains it pours on the urban poor

Worldwide, slum and squatter communities develop in dangerous environments. In claustrophobic urban areas, available space is most often found on cliff sides, flood plains and toxic ground. In many cases natural disasters have already affected these areas and will strike again, which explains the land's availability. People with few options will settle on a risky flood plain, in the shadow of a volcano or pesticide factory, as in Bhopal, India, or a liquefied gas facility in Mexico City. The urban poor are forced to make what author Mike Davis describes as a "wager against disaster". In the case of flood-prone Dhaka, the odds are stacked against them.

Floodwaters mix with sewage and breed waterborne diseases such as diarrhoea, dysentery, typhoid and scabies. Dr Hillol, from PDAP, said:

"During the flooding the waterborne diseases are the most common and they hit the poor hardest. Their immunity is far lower due to malnutrition."

There are economic consequences, too. In Sujad Nagar slum, 80 percent of the men work in a local garment factory. The total loss to large-scale industry in Dhaka due to the 1998 flood was more than US $30 million. However, the loss to small- and medium-sized industry – the majority employer of the urban poor – was $36 million. After the 1998 flood 27.4 percent of the slum population was left unemployed.[5]

The gender inequality of disasters

Research increasingly shows that the weight of socioeconomic crises at the household level rarely falls equally on men and women. The same is true of natural disasters. "Women and children are most likely to be

> **Flooding is the most common disaster in Dhaka and erratic changes in temperature and rainfall, with increased frequency of floods, are becoming more evident. Dhaka experiences floods every year, with really severe ones on average every five years.**

victims of disaster by the simple fact that they typically comprise at least 70 percent of the population in developing countries."[6] Quazi Baby of PDAP explained that in Bangladesh women and children often fend for themselves during natural disasters when their men are away in the cities or the men have more than one 'family' and therefore split loyalties in times of crisis. "The women suffer far more than men as they have to see to the food, and health, clothing and looking after the children and the old," she said. "They are always more vulnerable and often the men are absent."

Why cities develop on risky sites

There are examples all over the world of cities that have developed in risky areas. Many are initially attractive commercial zones – near rivers, major ports, fertile deltas. At first, the site is safe, but expansion may make it unsafe. Climate change is also exposing new, greater risks: coastal cities in China face a particular dilemma with the prospect of rising sea levels. Low elevation coastal zones currently account for only 2 percent of the world's land area but 13 percent

Floodwaters mix with sewage and breed waterborne diseases such as diarrhoea, dysentery, typhoid and scabies. Many of the urban poor live their whole lives in these conditions, where surviving the annual flooding has become a way of life. "During the flooding the waterborne diseases are the most common and they hit the poor hardest. Their immunity is far lower due to malnutrition," said Dr Hillol, from the Participatory Development Action Programme.

Image: Manoocher Deghati / IRIN

A flood-management dilemma: The eastern and western anti-flood embankments that hold back the floodwaters in Dhaka, Bangladesh, were built in the 1980s and are effective at keeping riverine floodwaters out of parts of the city. However, in the absence of effective or well-managed drainage, the embankments also keep other, unwanted waters in. This is known as risk substitution: the risk of river flooding has been substituted by the risk of rainwater flooding. "Of course we do not let our children swim or touch it," says Surupa, who lives in this settlement above the water. "This water is waste water from the drains and toilets, from the factories and from the rain. It has nowhere to drain."

Image: Manoocher Deghati / IRIN

(almost 500 million) of its urban population. Dhaka faces a regular threat of natural disaster reckoned to become worse in the coming decades.[7]

But once a city develops it rarely disappears, even after disaster; too many individuals and enterprises with economic interests exist for the city to move. Of course the poor bear the brunt and the wealthier, influential groups and most formal enterprises do not face as serious, life-threatening and life-changing risks from natural disasters. In the case of vulnerable mega-cities such as Mumbai, Dhaka and Shanghai, investment and people continue to pour in and the local municipalities are left with the challenge to safeguard their people and property. "The government does nothing to protect us from the flooding," claimed Surupa and her father; although different governments have tried to implement flood reduction plans over the past three decades, it is a sentiment echoed by many slum dwellers and NGOs working with the urban poor.

In most cases experts agree that preventing most of the harmful aspects of natural hazards is possible with planning, effective infrastructure, good governance and greater community participation. One chief of a major disaster bureau framed this idea as: "A paradigm shift in the development sector from income poverty to human poverty has been paralleled in the disaster management sector by a shift from seeing disasters as extreme events created by natural forces to viewing them as

manifestations of unresolved development problems."[8] The problem, therefore, is technical – and solutions are possible.

However, in the case of Dhaka and Bangladesh, where the urban poor exist on land highly vulnerable to flooding, cyclones and possibly rising sea levels, the difference may be academic. Nazrul Islam, disasters expert

"It's going to be very, very difficult for Bangladesh to cope and even for Dhaka to survive. It will be a terrible disaster. At a managerial level we are still very poor and there is just no strong vision for the city."

at the Centre for Urban Studies in Dhaka, finds the failure of successive governments to address the problem adequately, the impact of climate change and the rising numbers of urban poor offer little room for optimism. "It's going to be very, very difficult for Bangladesh to cope and even for Dhaka to survive. It will be a terrible disaster. At a managerial level we are still very poor and there is just no strong vision for the city."

Vision or no vision, some observers see more mighty forces at work that arguably make Dhaka's future grimmer still: "The rising sea and the melting mountains will meet on this tiny patch of the world, and the people who strain at its seams will drown with it, or be blown away to distant shores, casualties and refugees by the millions."[9] According to the 2007 UN State of World Population Report, the work of governments and civil society and the international community must focus more precisely and more actively on those "who strain at its seams": the urban poor who have no choice and deserve better.

A woman working at a tannery in Dhaka, Bangladesh, against the reflection of a building she could never hope to live in. In a city of more than 13 million people, waste water and chemicals from numerous different unregulated businesses drain together with domestic waste, solid waste and rainwater to create a noxious health hazard for the urban poor who have no where else to live but close to, or above, the waters.

Image: Manoocher Deghati / IRIN

A man in Dhaka, Bangladesh, sifts through the rubbish in the black waters that rise and fall with the annual floods. Most of Dhaka's urban poor live in stilted, bamboo structures over flood-prone, marginal areas in the city.

Image: Manoocher Deghati / IRIN

Addis Ababa, Ethiopia, is a city of more than three million people. Many rural poor arrive in Addis looking to escape the cycle of food deprivation and poverty, only to find themselves in a slum where these problems are almost as pronounced.

food insecurity
addis: putting food on the table

The search for food, as in most of the world's slums, is the top priority for poor Addis Ababa residents. According to the UN World Food Programme (WFP), a massive 49 percent of Ethiopians are malnourished. Ethiopia is still overwhelmingly rural, with 85 percent of the population living and working in farming areas. At Mercato – Africa's largest market – Kebede, one of the poorest of the poor, who sleeps on the streets, was queuing to pay for two bites of some leftovers from a small restaurant. This is his only meal most days. "I don't want the millennium," he said "I just want a job and some food."

The Ethiopian capital is a city of contrasts. The distinctions between wealth and poverty; modernity and destitution; greed and hunger exist in most cities, but in Addis Ababa they sit side by side, visible on every street corner.

There is no single notorious slum you can point to in the city. Nothing like Nairobi's Kibera or Rio's 'favelas'. The city's new rich and its constant poor live cheek by jowl and it is not unusual to see a mud-walled, tin-roofed shack huddled beside a garish, three-storey suburban palace. This has a lot to do with lax planning but is also indicative of a lack of crime and social conflict often found in other big cities. Addis is one of the most peaceful cities in Africa. The poor rarely take from the rich and violent crime is especially rare.

This is a remarkable fact in a city of more than three million people where some estimate that as many as 80 percent of the residents are slum dwellers. Others reckon 50 percent of Addis residents live below the poverty line. It is difficult to find reliable statistics in a country like Ethiopia and, of course, it is also difficult to define a slum. One dictionary characterises it as "a house or building unfit for human consumption".

These are everywhere in Addis.

Senait Tesfaye, 50, lives in one such house. "It's terrible around here," she says. "There is no sanitation so people get sick very easily. And it's not always easy for everyone to find food and shelter. They take to the streets when they're hungry."

The search for food, as in most of the world's slums, is the top priority for poor Addis Ababa residents. According to the UN World Food Programme (WFP), a massive 49 percent of Ethiopians are malnourished. Ethiopia is still overwhelmingly rural, with 85 percent of the population living and working in farming areas. Thanks to persistent droughts, flooding and pressure on land, levels of food security are much lower in these areas than in the cities and towns. But many rural poor arrive in Addis looking to escape the cycle of food deprivation and poverty, only to find themselves in a slum where these problems are almost as pronounced.

According to local nongovernmental organisations, food is not scarce in the city. Perched high above Ethiopia's arid lands in its brilliant green highlands, most of the city's surrounding farm are very successful. Markets and shops bulge with fresh produce and the Ethiopian staples of 'injera' flatbread, fruit, vegetables and pulses can easily be found. But the poor just do not have the money to buy them. In Addis Ababa, malnutrition stems from poverty.

Unemployment is also a huge problem in the city. Recent local newspaper reports highlighted the lack of jobs for university graduates. For slum residents the situation is even worse. Most find work on a day-to-day basis labouring, washing cars or assisting taxi drivers. Others sell chewing gum or small packets of tissues. And when work is scarce, some take to the streets to earn a living begging. They are there at almost every intersection, many with injuries suffered during the war with Eritrea, many with visible signs of malnutrition, and many very old or very young.

The UN Children's Fund (UNICEF) estimates there are more than 100,000 street children in Addis, with 600,000 around the country. The impact of malnutrition on them is devastating.

Its ability to kill is well documented but lack of nutrients can have a more slow-burn impact, too. Almost half of Ethiopia's children are malnourished but the majority survive. The New York Times[1] last year reported that without vital nutrients, huge numbers of Ethiopian children grow up stunted, weak and intellectually underdeveloped – some by as many as 15 IQ points.

In the poorest areas, nearly 60 percent of children can be affected. Slum dwellers say that diarrhoea, pneumonia and vomiting are major threats to their children.

Children at greatest risk

At the door of a one-roomed home in a small slum beside the gaudy Addis Sheraton hotel, Ligaba Solomon confirms that malnutrition causes many health problems and that sanitation is also a major threat to the health of his children.

"Look, if one person gets ill, everybody gets ill," he says. He gestures towards the Sheraton. "That is not the real Addis Ababa. This is."

…many rural poor arrive in Addis looking to escape the cycle of food deprivation and poverty, only to find themselves in a slum where these problems are almost as pronounced.

"Our children are always at the clinic," says his neighbour Saba Kebede, a mother of two. "Ten members of my family live in this room. We have no toilet or running water. Actually, there is one toilet in this area but it is used by hundreds of people."

An Addis newspaper, Capital, recently carried a story about so-called 'flying toilets' – plastic bags filled with faeces that are thrown to the street from doorways every morning, adding yet another health hazard for the city's poor.
Ajebe, a 13-year-old boy, complains that there is nowhere to play. "The streets are toilets," he says. "I have friends who have died after getting sick while playing."

The Ethiopian Ministry of Health is aware of the threats that malnutrition and poor sanitation pose but says that simply increasing access to healthcare is not the answer.

"My ministry does not believe that it is possible to solve 75 percent of the country's health problems caused by environmental degradation just by building hospitals," says Samuel Korma, spokesperson for the Ministry of Health "We are rather emphasising a prevention-based approach. We have devised a new sanitation plan along with urban health packages." It is too early to gauge the impact.

Fish on sale in Kibera slum. Nairobi, Kenya. Nairobi is a city of well-stocked supermarkets, international restaurants and endless street-side stalls of fresh fruit. However, proximity to food does not always mean access to food. Quality of diet is also a problem for many slum dwellers, as well as hygienic food preparation and storage.

These children, queuing for food, are fortunate to be at school in Kibera slum in Nairobi. Kibera is Kenya's largest slum, with almost one million residents struggling with poor access to clean water, sanitation, health services and education. Many schools try to offer some basic meals for the children, who are unlikely to have eaten before coming to class. Studies have shown that children learn better when well-fed, and their attendance at school is far higher when meals are offered as well as lessons.

Malnutrition, with malaria and HIV/AIDS, weighs heavily everywhere in sub-Saharan Africa. About five million children under the age of five die every year – 40 percent of deaths worldwide – and malnutrition is believed to cause more than half those deaths. Children in sub-Saharan Africa die at 22 times the rate of children in wealthy nations and at twice the rate for the whole developing world.

While the statistics are terrifying, there is some hope. Child mortality has declined by 40 percent in Ethiopia over the past 15 years and the Meles Zenawi-led government has been one of the more progressive

…there are more than 100,000 street children in Addis, with 600,000 around the country. The impact of malnutrition on them is devastating. …almost half of Ethiopia's children are malnourished but the majority survive.

sub-Saharan administrations in dealing with food deprivation. In a joint initiative with the UN, the government regularly screens nearly half its 14 million children under five for health problems caused by malnutrition. Since it began in 2004, the programme has delivered vitamin A doses and deworming medicine to nine out of every 10 children, vaccinated millions against disease and delivered fortified food and nutrition education. A remarkable achievement for a government often maligned for its poor human rights record.

A garden in the slums

Local NGOs have also managed to improve life in the slums, often with little in the way of resources. WESMCO, an organisation that in part funds itself by manufacturing building materials in a workshop adjoining its Addis headquarters, has provided communal toilets, taps and basins to improve sanitation. It has sought to tackle the malnutrition problem in an ingenious way.

"We call it urban agriculture," explains WESMCO director Eshetu Mengistu. "We provide land that was previously derelict, we give training and we give seeds." Local people can then begin to grow their own crops in the middle of the slums: cabbage, pepper, kale. About 800 families are benefiting from the scheme. They keep most of their crop to provide for the extended family and can often sell on the surplus for an income of around $20 to $30 a month – not a bad wage in Ethiopia.

It is a neat twist in a city where the majority of the poorest have migrated to Addis from the countryside. Ethiopia's population has doubled since 1980 and now stands at 77 million. But the 8 percent annual growth rate of Addis Ababa outstrips that of the country's population as a whole.

As we negotiate the winding streets of the slums that surround the WESMCO headquarters on our way to look at one of the vegetable gardens, Eshetu is greeted warmly by the residents. Most of the houses have mud walls, tin roofs and contain just one or two rooms. Toilets are rare and open sewers crisscross the narrow streets. Ten to 20 people live in one small house.

"Living conditions are very overcrowded," says Eshetu. "You can't imagine that human beings can really live like that. But they do. Addis Ababa is not really a city. It is a very congested slum town. For many people there is no water, no kitchen, no toilet, no shower. Within a small house, they cook, they live, they sleep, they eat."

Seven women and three men are working at the vegetable garden -– watering, weeding and sowing. In the distance the new skyscrapers of the city can be seen surrounded by cranes and scaffolding. Senait Tesfaye is picking some cabbages for her family.

"The garden has been very good for me," she says. "My son and his wife both died – one from TB and one from HIV/AIDS, so I now look after their two children. The garden helps me to provide for us. My sister and her husband also eat the food from here."

Senait's orphaned grandchildren are 15 and 13 and WESMCO also funds their education. She is unimpressed with the building work she can see in the distance.

"Those people don't care about us," she says. "When you've eaten a good lunch today why would you think about the poor?"

Boom or bust?

The development Senait is talking about has been fast. Addis saw some minor growth after the government of Prime Minister Meles Zenawi came to power in 1991 but it has accelerated over the past five years.

Hotels, shopping centres and office complexes rise from where small shacks once stood. Infrastructure is improving to support them. And diaspora Ethiopians with swollen pockets are returning with an eye on investment. But this expansion seems to be leaving most Ethiopians behind and its relentless progress has had a terrible impact on the city's poorest.

Roads have torn through slums and diggers have demolished the largely improvised settlements without warning. Addis business newspaper Fortune recently reported on the case of Osman Redwan, 24, who woke up one morning to find his shack had been sliced in two to make way for a new road.

"No one is against development," he said. "But you get horrified when you realise that you end up losing your business and ruining your life. This is not war. Development should not be at the expense of individuals."

Some analysts fear the growth is not sustainable. The construction-led boom might not find the long-term economic success to support itself, they fear. Others ask for patience, claiming the development just needs more time to filter down to those most in need.

Whoever proves correct, current statistics on Ethiopia make for grim reading. The country ranked 170 out of 177 countries measured by the UN Human Development Index in 2006. The average Ethiopian is expected to live just 48 years. Average GDP per capita stands at US$756; 78 percent of people have no access to a safe water source; and 47 percent of children below the age of five are underweight.

The poor of Addis Ababa are hoping the new millennium might bring a change. Ethiopia uses a variation on the Julian calendar that disappeared from the West in the sixteenth century so only entered 2000 on 12 September amid huge celebrations. The government is keen to use the occasion to project a more positive image of the country to the world.

"Those people don't care about us," she says. "When you've eaten a good lunch today why would you think about the poor?"

The recent release of opposition politicians who were jailed after contesting the result of the controversial 2005 elections has set the standard.

But not all Ethiopians will be celebrating. At Mercato – Africa's largest market – Kebede, one of the poorest of the poor, who sleeps on the streets, was queuing to pay for two bites of some leftovers from a small restaurant. This is his only meal most days.

"I don't want the millennium," he said. "I just want a job and some food."

Food is not scarce in Addis Ababa, Ethiopia. Markets and shops bulge with fresh produce. The staples of 'injera' flatbread, fruit, vegetables and pulses can easily be found, but the poor just do not have the money to buy them. In Addis, malnutrition stems from poverty.

Image: Manoocher Deghati / IRIN

Addis Ababa, Ethiopia, is currently enjoying a construction boom, with new tall buildings going up all over town. The casual visitor rarely sees that behind the main road the vast majority of residents carve out an existence in more modest conditions. Between 50 percent and 80 percent of the population live in slums, and obtaining sufficient food is a daily struggle.

Image: Manoocher Deghati / IRIN
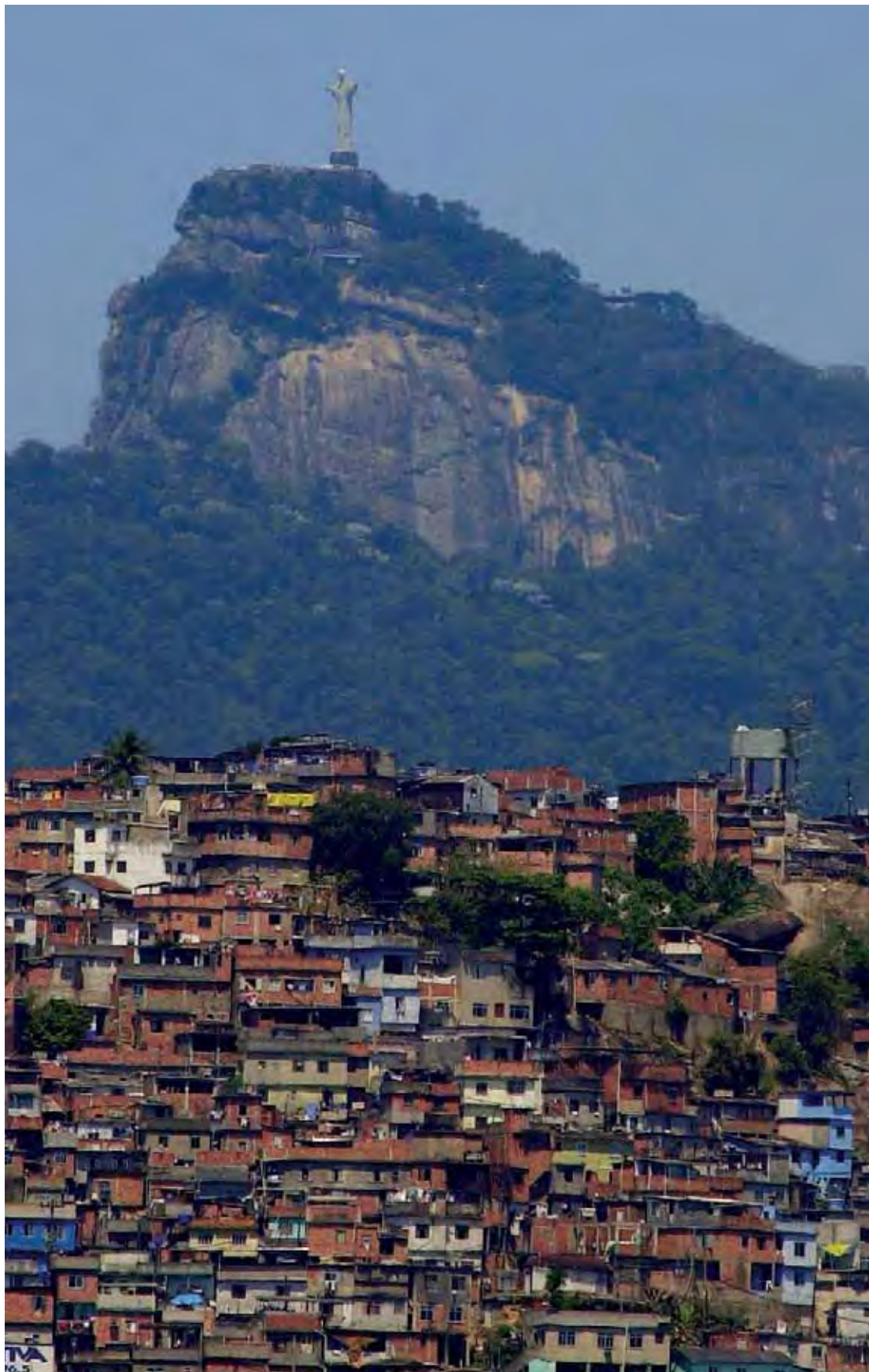
In Rio de Janeiro, Brazil, more than a million people, or 20 percent of the population, live in slums know as 'favelas'. For the city's wealthier inhabitants, the slums have long represented an abomination, a refuge for what Rio anthropologist Alba Zaluar calls the 'classes perigosas' or dangerous classes.

Image: Douglas Engle / AustralFoto

human insecurity
rio: fighting for the favelas

"The Brazilian government has made a big effort to say that Rio is a place of beaches, beautiful bottoms [and] physical beauty… [But] there are areas in Rio de Janeiro that are veritable war zones," says Andre Dahmer, one of the creators of a new website called Rio Body Count.

"I'm really scared of dying but what can I do?" one teenage drug trafficker, and father of one, asked recently during a visit to the Fumace favela in Realengo, on the western outskirts of Rio. "We're not here because we like it. We're here because we have families… I have a small child and there is no other work."

"When I arrived home they told me my wife was in the hospital and that she'd been shot while she sat in our bedroom," said Ricardo Alexandre Santino da Silva, a 31-year-old supermarket worker and resident of the Chatuba slum in Rio de Janeiro.

Like many residents of the shantytown, da Silva is an immigrant from Brazil's impoverished northeast who came to Rio in search of work. The huge influx of migrants from other Brazilian states, principally since the 1950s, has contributed to a massive social and security crisis.

"I remember the first night when we moved here [to Rio]. I sat at home watching the tracer bullets flying through the sky," said da Silva, who was brought up in the rural town of Valenca, Pernambuco State. "I said,

'Look, these bullets must be hitting someone's house.' I just never thought it would be mine."

The 'favelas', or shantytowns, of Rio de Janeiro began to spring up towards the end of the nineteenth century. Following the abolition of slavery in 1888, freed slaves began flocking to Brazil's then-capital in search of work. They set up home in poorly constructed slums built on the only land that was available, usually hilltops or swamps on the city's limits.

It was not until the mid-1990s that the favelas were included on city maps. For the city's wealthier inhabitants, the slums have long represented an abomination, a refuge for what Rio anthropologist Alba Zaluar calls the 'classes perigosas' or dangerous classes.[1] Over the last

century, governments have made numerous attempts to eradicate this "stain" from Rio's landscape, including removal programmes and the construction of housing projects on the city's outskirts.

As yet, however, no adequate solution has been found for Rio's slum problem, or indeed that of other large Brazilian cities such as Sao Paulo, Belo Horizonte, Recife or Belem. By 2001, according to that year's census, more than one million Brazilians were living in Rio's cramped favelas – or about 20 percent of the population.[2]

Overpopulation, the direct result of a 40-year trend of urbanisation and high birth rates, has caused an unprecedented social crisis affecting education, public health and public security.

During the 1950s Brazil underwent a massive industrialisation drive under then-president Juscelino Kubitschek. The rate of urbanisation rocketed, as thousands flocked from rural Brazil into the cities.

According to the Brazilian Institute of Geography and Statistics (IBGE), Brazil was still a predominantly rural country until the 1960s. Since then the rate of urbanisation has climbed from 44.7 percent (1960) to 67.6 percent (1980). Between 1991 and 1996, more than 12 million Brazilians moved from rural to urban Brazil.[3] According to the IBGE's 2000 census, over 80 percent of the population now live in urban Brazil.

The Brazilian sociologist and former Rio security secretary Luiz Eduardo Soares traces a clear path between the process of urbanisation and the explosion of urban violence in Brazil's southern metropolises. "In less than two decades [1960-1980] a country that had 70% of its population in rural areas, transferred itself, en masse, to the cities in a chaotic way and in extreme conditions of deprivation, exploitation and poverty," he writes.[4]

The result, Soares continues, was "social, economic, political and cultural crisis."

Across South America, perhaps most notably in Colombia, a similar situation is playing itself out. In Colombia thousands of displaced internal migrants – the 'desplazados' – and rural families have been forced into slum dwellings, compounding the urban crisis. Colombia's 'comunas' have suffered a similar process to Rio's favelas, with the problems associated with urbanisation bolstering the ranks of the 'pandillo' gangs, made up of disillusioned young men.

In Africa, too, the impact of urbanisation on security levels has been dramatic. A recent police crackdown on gang activity in Nairobi, Kenya's Mathare slum, in which at least 30 people were killed, underlined the problems the East African city is facing, many of which directly stem from issues of overcrowding and urbanisation.

The search for a better life

The story of Ricardo da Silva, originally from the impoverished northeastern state of Pernambuco, is typical of this process.

In Pernambuco, da Silva worked as a farm hand. In search of money, he came to Rio in 1992 and he found work in the Mundial supermarket chain. Like many others he moved into a small concrete shack in the Chatuba favela on the northern outskirts of the city, the only affordable accommodation he could find. In doing so he placed himself at the sharp end of Rio's problem with urban violence.

The sheer scale and chaotic construction of the favelas, which became home to hundreds of thousands of migrants, made them the ideal milieu for drug gangs to hide from the police and set up initially paternalistic, de-facto governments, albeit without any concrete political aims.

Since the 1960s hundreds of thousands of Brazilians have made similar journeys south, to the peripheries of Sao Paulo and Rio de Janeiro. Today several bus companies offer special routes, which directly link small northeastern towns to the favelas of Rio.

The continued arrival of so many internal migrants can be explained by the desperate conditions in Brazil's barren, drought-ravaged northeast.

The Complexo do Alemao is one of the most deprived and underdeveloped corners of Rio de Janeiro.

According to statistics put together by Rio's town hall, residents of the shantytown live, on average, 13 years less than people born in the

Police stand guard near graffiti reading 'no war' in the Rocinha slum in Rio de Janeiro, Brazil, on 12 April 2004. According to reports, about 1,000 police officers invaded the slum after a battle between rival drug traffickers erupted. At least eight people died during the confrontations.

Image: Douglas Engle / AustralFoto

'Say no to violence' say residents of slums in Nairobi, Kenya, where the largest informal settlements are in the grip of gangs who control the crime and many businesses. The police offer little solace to bullied inhabitants.

Image: Manoocher Deghati / IRIN

Denise Alves Tavares shows a photo of her son, Douglas Roberto Alves, 16, wearing a red and black shirt in the Vigario Geral favela, or slum, in Rio de Janeiro, Brazil, on 15 December 2005. Police occupied the slum after eight young people, including Douglas, were kidnapped, allegedly by drug traffickers from a nearby slum. The kidnappings were the result of a feud between rival drug gangs that has been going on for more that 20 years. Shootouts marked by indiscriminate gunfire between rival drug gangs and the police are common in Rio, and innocent bystanders have been caught in the crossfire. Rio's homicide rate rivals that of declared war zones.

Image: Douglas Engle / AustralFoto

wealthy south zone of Rio. Child mortality rates here are five times higher than in the southern tourist districts such as Copacabana and Ipanema. In terms of education, the picture is no less bleak. Residents of the Complexo do Alemao study for an average of four years, compared with ten years for residents of southern Rio.[5]

In many favelas the only immediately visible sign of the government is when the police are sent in to carry out an operation. Those who suffer most with this are the impoverished favela residents, who have little choice but to tolerate every imaginable form of violence.

Compared with the northeast, however, the standard of living represents, in many ways, a considerable improvement. The indices of human development, as measured by the UN, are still higher in this and other shantytowns than in many parts of northeast Brazil where a large proportion of their inhabitants come from.

Security crisis

The high levels of internal migration have triggered numerous social crises, putting pressure on underfunded education and healthcare systems. The combination of these factors also created what was perhaps the greatest problem: that of security, or rather the lack of it.

During the 1980s large quantities of cocaine and arms began to flow into Rio, turning many impoverished communities into localised conflict zones, dominated to a greater or lesser extent by rival drug factions. The sheer scale and chaotic construction of the favelas, which became home to hundreds of thousands of migrants, made them the ideal milieu for drug gangs to hide from the police and set up initially paternalistic, de-facto governments, albeit without any concrete political aims. Using handouts to the local poor, the traffickers established themselves as the unofficial rulers of many such areas.

The result has been an increasingly entrenched and as yet unresolved conflict between rival gangs and the police, who have employed increasingly militaristic tactics to try and drive out the gangs. Between 1999 and 2003 the number of people killed during police operations in Rio more than tripled from 289 to 1,195, according to Justiça Global.[6] The majority were poor, black males from the favelas, aged between 15 and 24.[7]

Those to suffer most then were the urban poor, either through direct involvement in the conflict or, more often than not, as innocent bystanders.

Ricardo da Silva understands the security crisis better than most. His wife – also a northeastern migrant – was shot in the chest during a gun battle between traffickers and police earlier this year. As a resident of Chatuba, one of 13 shantytown communities that form the Complexo do Alemao favela, each day on the way to work he is forced to pass through concrete barricades policed by teenage soldiers from the gang who routinely carry 9mm revolvers, hand grenades and assault rifles.

The security situation here is bleak – the favela is controlled by some of the best-armed drug traffickers in the city, members of the Red Command faction. When the police go into the favela they often come under fire. To reach da Silva's concrete shack you must pass countless houses scarred by bullets.

"My mum told me there was this intense shoot-out going on in the community," da Silva said of the day in May that the violence finally caught up with his family. "When I got home there was blood all over the place."

The state's inability to produce effective social policies for such large numbers of people has helped created what Rio's current mayor, Cesar Maia, himself admits is a "parallel power". The parallel states of Rio de Janeiro are sprawling breezeblock favelas, where often-violent traffickers operate according to their own laws. If a resident robs, rapes or informs on the traffickers they are routinely executed – often shot, dismembered and burned in makeshift crematoriums improvised out of car tires.

"The Brazilian government has made a big effort to say that Rio is a place of beaches, beautiful bottoms [and] physical beauty… [But] there are areas in Rio de Janeiro that are veritable war zones," says Andre Dahmer, one of the creators of a new website called Rio Body Count, which monitors the number of murders in the seaside city.

Haitian children play on the remains of a destroyed house, in the La Saline slum of Port-au-Prince. A gang's attempt to wrest control of the extortion racket in the slums of Haiti's capital turned into a violent raid in November 2001, that destroyed homes and caused three deaths. Armed attackers hurled firebombs and shot at residents. Between 1,200 and 1,500 homes were destroyed, Fire Chief Jean-Yzel Ladouceur said. Three people, including a 2-month-old baby, were shot to death, and 17 others were wounded by gunfire, residents said.

Image: Thony Belizaire / courtesy of AFP

In a police crackdown on gang terrorism in Mathare slum in the capital city of Nairobi, Kenya, residents lie face-down as police search for gang members of the much feared Mungiki sect in June 2007. Mungiki operates most extensively in Mathare as a quasi-religious criminal network, using transportation and makeshift sanitation facilities to extort money from unprotected residents.

Image: Julius Mwelu / IRIN

If the direct consequences of this violence are severe, so too are the side effects. Primary schools are often forced to close down due to the shoot-outs, social workers are reluctant to operate in such regions and the local telephone and electricity companies frequently refuse to install phones or cables in the slums because they are considered 'areas de risco', or areas of risk.

In many favelas the only immediately visible sign of the government is when the police are sent in to carry out an operation. Those who suffer most with this are the impoverished favela residents, who have little choice but to tolerate every imaginable form of violence.

"The first thing you notice here is the absence of the state," local politician and human rights activist Marcelo Freixo said during a recent visit to the Complexo do Alemao. He motioned to an open-air sewer beside him and then a nearby shack that was riddled from top to bottom with bullet holes. "As you can see there is not one policeman, not one school or health clinic that is working."

Analysts complain that the absence of healthcare, schooling and extracurricular activities has contributed to the swelling ranks of the drug gangs. With few qualifications, and fewer still employment opportunities, young favela residents are often lured into the drug factions with the promise of regular pay. The average wage of favela residents is around R$400 (US$200) a month. Working for the gangs, young men can earn that amount in a week.

"We're not here because we like it. We're here because we have families … I have a small child and there is no other work."

In a recent study of armed violence among young people, the anthropologist Luke Dowdney describes a series of risk factors that can draw teenagers into the gangs. Among them he cites: social marginalisation, a lack of public services or leisure facilities, unemployment, violence from state forces or armed groups and family problems.[8]

All of these factors, many the direct results of rapid urbanisation, can be found in Rio's slums to varying degrees.

"I'm really scared of dying but what can I do?" one teenage drug trafficker and father of one asked recently during a visit to the Fumace favela in

Realengo, on the western outskirts of Rio. "We're not here because we like it. We're here because we have families… I have a small child and there is no other work."[9]

Rio's politicians rarely shy away from the fact that the current security crisis is largely the result of government failures, in terms of education, public security and healthcare.

Faced with these realities, Rio's authorities have repeatedly tried to implement a number of schemes over the last 20 years designed to halt the violence. During the 1990s a pioneering housing scheme known as Favela Bairro (Slum Neighbourhood) was implemented, aiming to improve living conditions in the slums. The results, however, have been limited.

This year, in 2007, another high-profile plan, valued at over a billion US dollars to invest in Rio's slums was unveiled by the state and federal governments. The plans involve the construction of new houses, sewage systems and a network of cable cars and roads to improve transport and will focus on four violence hotspots, including the Complexo do Alemao, where da Silva lives. The plans also reportedly include offering financial assistance to "repatriate" migrants from other Brazilian states who wish to leave certain areas of the slums.

Many are sceptical, however, arguing that until something is done to improve the socioeconomic situation thousands of miles away in the northeast of Brazil, little will improve further south in the urban favelas.

Da Silva meanwhile has moved temporarily into his mother's house in a different, supposedly safer, part of the shantytown. He also says he is considering returning to the northeast with his wife. It is, he admits, harder to find work there but the security situation will be a considerable improvement.

"It's terrible when something like this happens, isn't it?" says the soft-spoken northeasterner, whose strong regional accent remains even after 15 years in Rio.

"It was never like this back home."

Perpetrators and victims – and grieving relatives – of gang violence in the slums of Honduras, Guatemala, Haiti and El Salvador. According to UN-HABITAT over the period 1980–2000, total recorded crime rates in the world increased by about 30 per cent. Over the past five years, 60 per cent of all urban residents in developing countries have been victims of violence. For the well-off there has been a rapid growth of the private security industry and of urban gated communities. The urban poor often have to fend for themselves as whole sections of slums are no-go areas for police and where gangs and militias rule. These photos were taken between 2005-2006.

Facing page images: Ariana Cubillos (AP), Yuir Cortez and STR (courtesy of AFP). Above image: Orlando Sierra (courtesy of AFP)

A policeman directs traffic in downtown Jakarta, Indonesia. Air pollution in cities – often a by-product of unplanned rapid economic growth – has become a major health hazard. The estimate of annual premature deaths caused by urban air pollution has recently been revised upwards to more than 750,000 globally, including more than 530,000 in Asia.

Image: Ade D Irewan / Swisscontact

pollution control
jakarta: battling to breathe

"When I started out as a doctor 18 years ago, these cases were almost unheard of. Now 80 to 85 percent of all my patients have acute respiratory infections," confirmed Djudjung Aroean, a doctor who works at a government clinic in a poor area of the city. "There is a direct correlation between the rise in traffic and the cases I see of acute respiratory infection," he claimed.

Experts are warning that the 2008 Olympic games may be hazardous to your health. As the International Olympic Committee warns anyone with a history of asthma or respiratory disease against going to Beijing, sports coaches are advising their teams to spend as little time as possible in one of the most polluted cities in the world. Few locals have the luxury of choice, and millions live and work in China's polluted capital and dozens of other Chinese cities – sixteen of which feature on the World Bank's list of the 20 most polluted cities in the world.

According to a new report, hundreds of millions of city dwellers breathe air polluted with chemicals, smoke and particles that dramatically exceed World Health Organisation (WHO) limits, with major impacts on health and the environment.[1] One of the report's key findings is that concentrations of the fine particulate matter PM10, one of the main

threats to health and life, are "serious" in Beijing, Dhaka, Hanoi, Ho Chi Minh City, Jakarta, Kathmandu, Kolkata, New Delhi, and Shanghai.[2] The estimate of annual premature deaths caused by urban air pollution has recently been revised upwards to over 750,000 globally, including more than 530,000 in Asia.

Air pollution is concentrated in cities, and vehicles are the main culprits, directly affecting the health of urban populations.[3] This should come as no surprise to anyone who lives in or visits Jakarta, Indonesia, and experiences the ubiquitous exhaust fumes hanging in the air and obscuring visibility most days. Acute respiratory illnesses associated with poor air quality and poor housing conditions are impacting the human and economic productivity of cities, and not surprisingly the heaviest burden falls on the urban poor.

Despite vehicle emissions being reduced in many areas, the volume of vehicles in use is rising rapidly. Though Indonesia is not alone, the nation and its capital city of Jakarta have become notorious for high levels of pollution rising in step with its rapid economic growth and rate of urbanisation.

Indonesia and Jakarta: poverty and urbanisation

While Indonesia is one of the quintessential Asian 'tigers' and despite its spectacular success in reducing poverty from 64 percent in 1975 to 27 percent in 1997, more than half of Indonesians live on less than US$2 per day: "To the traveller, the most visible face of urban poverty in Indonesia is the condition of the millions of poor people living in slums in Jakarta. The abject conditions of slum dwellers amply demonstrate the serious socio-economic, political and environmental implications of the phenomenon of urban poverty." [4]

With a population of approximately 222 million, Indonesia is the fourth most populous nation of the world. A massive archipelago of more than 17,000 islands, where only 6,000 are officially inhabited and just one, Java, is home to over 60 percent of the population as well as Jakarta – its capital.

Not surprisingly, Jakarta, like other large cities, acts as a giant magnet as the endless division and sub-division of family-inherited arable land proves unable to feed a growing population. More than 30 percent of Indonesia's population is urbanised, but experts are warning the government to brace itself for a rapid rise, predicting that by 2025 up to 70 percent of the population will live in Indonesia's cities.

Areas of poverty in downtown Jakarta are shrinking as the city puts up more top-end apartment complexes, high-rise offices and shopping malls. The remaining slum areas are becoming more congested, and only the most marginal urban spaces along railway tracks and canal banks are left for the steady influx of urban migrants.

In a classic example of spatial exclusion, many of the poor areas downtown have been demolished. Communities are bought out or evicted and forced to move to the distant edges of Jakarta in the peri-urban suburbs, where there are few facilities and poor transportation systems. In a climate of massive past and present land speculation, real estate developers employ thugs and use strong-arm tactics to speed the process of pushing the poor off lucrative land. As with the nationwide trend, analysts reckon the population of Jakarta will almost certainly double or more in the next two decades, but it is hard to imagine where future poor migrants will find space.

Seventy percent of all Indonesia's wealth is centred around the nation's capital. Jakarta's population fluctuates between nine million and 13 million – depending on whether one counts the daytime or night-time population – illustrating the high number of commuters who live outside central Jakarta and travel to work each day, causing much of the air pollution in the city.

Recipe for pollution

Rapid economic and demographic growth has resulted in a largely unregulated capital teeming with vehicles and small- as well as large-scale industries, all of whom are increasing in number while enjoying effective impunity for any pollution they cause.

The number of motor vehicles has increased 12 percent every year in recent years. There are 2.5 million private cars registered in the city of Jakarta, plus more than 250,000 taxis and buses, and almost four million

The abject conditions of slum dwellers amply demonstrate the serious socio-economic, political and environmental implications of the phenomenon of urban poverty.

motorbikes. This adds up to nearly seven million engines daily polluting the city's air. And the number keeps rising. The recent craze is for motorbikes, which make up 73 percent of all motor vehicles. More than 1,000 new bikes join the Jakarta throng every day, representing a revolution fuelled by ease of attaining bank loans for the middle classes and some poor as well as by necessity, as commuters live further and further away from the city centre.

Experts estimate that by 2020 the national total will triple to 90 million units, suggesting that tailpipe emissions, as well as traffic volume, must be controlled. Such moves could have a substantial impact: A 2007 study

The dramatic skyline of Jakarta, Indonesia, as storm clouds merge with smog over this huge city of notoriously poor air quality. Air pollution is a direct consequence of urbanisation and increased urban population. More than 30 percent of Indonesia's population is urbanised, but experts are warning the government to brace itself for a rapid rise, predicting that by 2025 up to 70 percent of the population will live in Indonesia's cities.

Image: Widermanto / Swisscontact
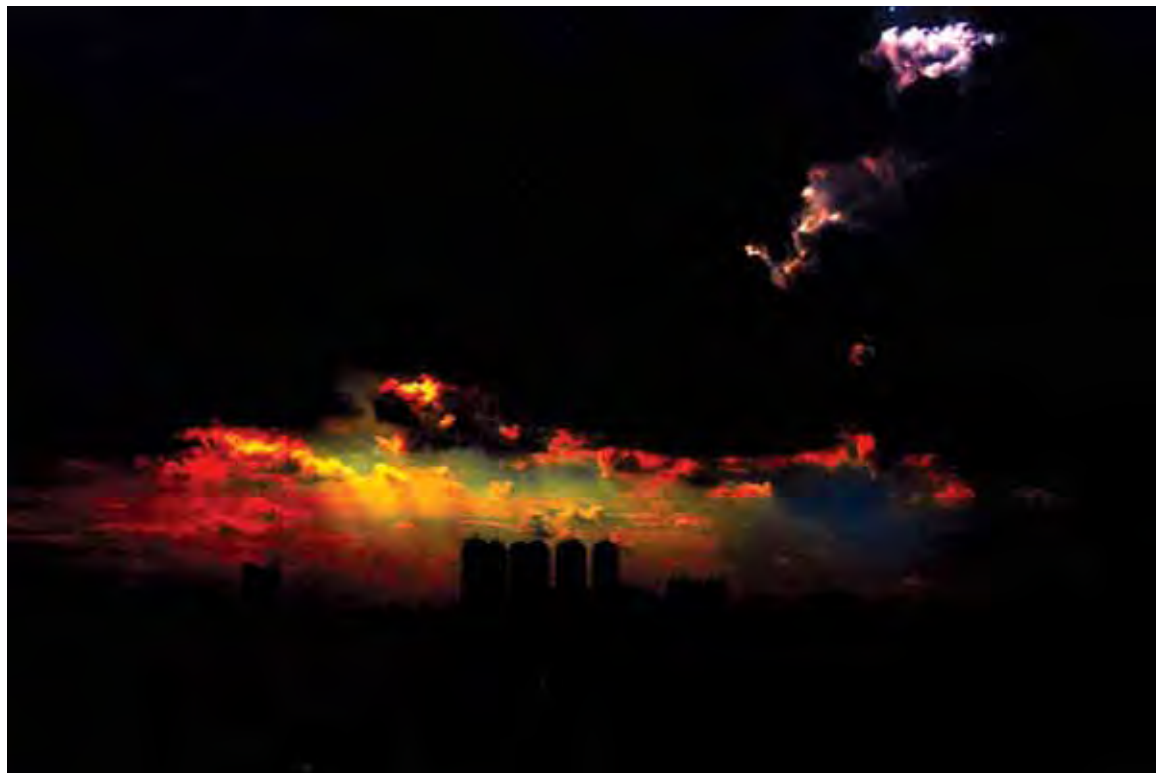
At a busy intersection in Jakarta, a street vendor enjoys brisk trade selling face masks against the vehicle fumes.

Images: Rasdian A. Vadin

Rapid economic and demographic growth has resulted in a largely unregulated capital teeming with vehicles and small- as well as large-scale industries, all of whom are increasing in number while enjoying effective impunity for any pollution they cause.

found that when Beijing ordered around 800,000 of the capital's 2.8 million cars off the roads for three days in 2006, local nitrogen oxide air pollution levels fell 40 percent.[5]

Oil consumption in Indonesia has been steadily increasing at a rate of 5 percent every year in recent years. Dirty fuel (diesel) and an ill-advised government subsidy of fuel to stimulate industrial growth have only recently been curtailed (2005), while various other regulations concerning vehicle emissions and industry standards are weakly enforced. Even leaded petrol has been sold, for institutional and well as technical reasons, up to as late as two years ago and will only be finally curtailed in 2007.

Poisonous city

At a noisy intersection of endless, slow-moving traffic, a group of guards from a private security firm take a rest by some stalls in the shade of an overpass. The noxious vehicle fumes mix with the aroma from their clove cigarettes as they shout over the din of revving engines. "In rush hour it's worst," says Augus Hariyanto. "We all wear masks and have difficulty breathing." Like the street vendors who sell them cigarettes and drinks, they work along the roads as guards at the front gates of different companies. "We know it's affecting us, but it's affecting us slowly. A slow death." They all agree, laughing resignedly.

According to Jakarta's Environment Management Body, air quality in Jakarta continues to deteriorate despite widespread concern, publicity and passing of anti-pollution laws. In 2005 there were only 28 days with clean air, down from 53 days in 2004 and a sharp dive from 103 days in 2000.[6] By all accounts 2006 and 2007 have been no better. It could be worse, claims Eni Sudarmono, director of the local environmental action group Green Monster: "Luckily, we are not in a valley like Kathmandu or Mexico City. The sea winds take a lot of the pollution away."

The main pollutants in Jakarta's stifling cocktail are lead, suspended particulates (soot, smoke dust and liquid droplets), carbon monoxide, carbon dioxide (CO_2), nitrogen dioxide and sulphur dioxide. All of them are associated with fuel combustion at the industrial and domestic levels but mostly from vehicles. At over 40 percent, Indonesia produces more CO_2 than any other country in ASEAN, the regional political and economic organisation of ten South East Asian Nations.

The health penalty

Acute respiratory infections cause 4.5 million deaths among children every year, the overwhelming majority occurring in developing countries. According to a World Bank report, cases of respiratory ailments in Indonesia are unusually high, and in Jakarta respiratory inflammations account for 12.5 percent of all deaths – double the rate for all Indonesia.

"When I started out as a doctor 18 years ago, these cases were almost unheard of. Now 80 to 85 percent of all my patients have acute respiratory infections," confirmed Djudjung Aroean, a doctor who works at a government clinic in a poor area of the city. "There is a direct correlation between the rise in traffic and the cases I see of acute respiratory infection," he claimed.

Studies show that the risk factors that increase the incidence and severity of lower respiratory infection in developing countries include large family size, lateness in the birth order, crowding, low birth weight, malnutrition, vitamin A deficiency, lack of breast feeding, pollution and young age. While rich and poor alike are exposed to dangerous air, it is the urban poor who are more vulnerable to its effects by virtue of their living conditions, workplaces and inability to afford good remedial or preventative healthcare. According to Dollaris Suhadi of Swisscontact, a Swiss NGO that works with governments for clean air programmes in Indonesia, Bolivia, Peru, Vietnam and Philippines, "The health impacts

Battling to breathe in Jakarta.

Facing page images: Tody Maulifa, Ari Basuki, Ade D. Irawan, Saiful Anwar, Rahmad Gunawan

of pollution mainly affect poor people. Those who can afford good health aren't affected, but the poor – they die." Increasingly activists are framing the debate in terms of 'environmental injustice' as studies expose the direct link between higher risk from pollution and lower socioeconomic status.[7]

Not only are the dangers outside, but for many they start at home. Cooking and heating with solid fuels on open fires or traditional stoves results in high levels of indoor air pollution and of course predominantly affects the poor, who rarely use electricity or gas for cooking and heating.

According to The World Health Report 2002, indoor air pollution is responsible for 2.7 percent of the global burden of disease. In 11 countries – Afghanistan, Angola, Bangladesh, Burkina Faso, China, the Democratic Republic of Congo, Ethiopia, India, Nigeria, Pakistan and the United Republic of Tanzania – indoor air pollution is responsible for a total of 1.2 million deaths a year. The full scale of the problem of indoor air pollution is only recently gaining the attention it deserves from pro-poor groups.

The economic penalty

"We recognise that the high rate of urbanisation, the use of motor vehicles and the industrialisation process have created air pollution that threatens public health, increases the burden on the urban poor, and reduces national productivity. The economic costs that Indonesia currently has to bear are enormous. […]These costs will continue to rise if no preventative action is taken," stated Paskah Suzetta, State Minister for Development Planning in December 2006.

Some countries argue that pollution is a short-term and regrettable but unavoidable consequence of rapid industrialisation, urbanisation and economic growth. Of the massive economic losses associated with air pollution, 90 percent are associated with impact on health and lower productivity, higher absenteeism and actual health costs. In Asia it is estimated that the health costs from pollution reduce gross domestic product (GDP) by some two percent .[8]

In 2002 a Asian Development Bank-funded study estimated that the losses related to the poor air quality in Jakarta would increase from $181 million in 1989 to $403 million in 2015 if effective countermeasures were not taken immediately.

In addition to the economic penalty, there is also potential for social and political unrest. In July 2007, China allegedly pressured the World Bank to cut parts of a report suggesting pollution causes hundreds of thousands of premature deaths annually in the country. China, increasingly the 'dirty man' of global polluters, argued that if the true inflammatory facts were publicised it could lead to social unrest and political insecurity.[9]

Good policies unenforced

It seems there is no lack of good regulation and anti-pollution policies in Jakarta and other municipalities. "It's all about implementation," says Swisscontact, echoing the sentiment of most observers and activists, including government agencies. Some talk of the 60,000,000 rupiah ($6,500) fine for car owners with emissions that do not conform to regulations. Since the law was passed in 2005, not one vehicle owner has been fined, despite ample evidence that very few cars meet the standards. Equally, a recent rule stipulates that one day a month all private traffic should be banned. This rule remains unenforced. Lead-free fuel is only going to become fully and solely available in 2007. Fines

According to The World Health Report 2002, indoor air pollution is responsible for 2.7 percent of the global burden of disease. In 11 countries… indoor air pollution is responsible for a total of 1.2 million deaths a year.

for industries polluting the air or waterways are rarely prosecuted and punishments are minimal. Generally there is a serious lack of disincentives for polluters.

Cleaning up the city

Eni Sudarmono of Green Monster, a branch of Fauna and Flora International, is optimistic and sees changes in the government's attitude to the environment: "There are solutions […] it's not inevitable that cities have to be polluted." . Indeed numerous cities around the world where the car has become king – even dictator – are now 'greening' urban transportation.[10] Strategies that increase the use of busses, metro lines, light trains; enforce non-leaded fuel use and vehicle testing; set strict

standards for cars and industry; facilitate the transfer to condensed natural gas (CNG); and make space for bicycles and pedestrians have significantly reduced poisonous emissions in previously notorious bad-air cities such as Bangkok, Delhi, Hong Kong, Shanghai and Tokyo, for example. Both car-dependent and car-saturated cities thus need a combination of transportation and land use that is more favourable to greener modes.[11] Jakarta is implementing some new ideas but the positive impact has yet to be felt.

"Without proper control of traffic emissions put in place, the rapid increase in motor vehicles […] will cause air quality to worsen and incur enormous damage costs in health, productivity and the economy,"[12] concluded a 2006 government-led study in Indonesia. The good news is that with the right vision and government commitment cities can grow without the environmental damage that we have become used to. Today some feel Jakarta has already gone too far and are calling for the nation's capital to be moved altogether to another location. That idea has yet to catch on, but it has raised the very real question of whether Jakarta is sustainable as a functioning capital for a nation of 220 million people when issues of development, corruption, natural phenomena and cheap cars keep on colliding. In the meantime, the urban penalty of pollution continues to fall most heavily on the lives of the urban poor.

For the many thousands of people who work outside, exposure to city air pollution is a major hazard. According to a World Bank report, cases of respiratory ailments in Indonesia are unusually high, and in Jakarta respiratory inflammation accounts for 12.5 percent of all deaths – double the rate for all Indonesia. For the urban poor with less access to health facilities, less money to afford medicine and few alternative employment strategies, the urban penalty is most severe.

Images: (Above) Swisscontact / Clean Air Project
(Below) Tody Maulifa

With an estimated one million inhabitants, Cairo's huge slum, Manshiet Nasser, sits on the rocks where Egypt's Eastern Desert plateau meets the Nile valley. In Cairo and other mega-cities that are home to millions of urban poor, slums typically develop on wasteland or the most precarious environmental zones. Unstable, sub-standard housing in areas that lack any formal provision of services is the norm for most of the world's one billion slum dwellers.

Image: Jeff Black

the housing crisis

cairo: sheltering the urban poor

Three of the world's 30 largest slums are found in Cairo. "Today, 45 percent of Egypt's population is living in slum conditions. There are about eight million slum dwellers in greater Cairo. This is very serious and very dangerous," says Abdallah Adel Aziz Attia, professor of architecture and urban planning at Ain Shams University.

"Cairo is a big informal city with strips, just strips, of formality," explains Naglaa Arafa, programme analyst for the UN Development Programme's slum upgrading initiative.

It is almost midnight and the slum is teeming with activity, an unending sea of people moving through the main street. A thousand lights and food stalls line the narrow roads, competing with the shops for attention. Egyptian pop music is playing at full blast and trading is in full swing, with as many children and women as men milling about at this late hour. "Manshiet Nasser never sleeps," says Essam, our guide through one of Cairo's largest slums, housing approximately one million urban poor. A visit to some of the apartments in the makeshift tall brick terraced housing offers more sobering evidence of the extreme congestion in which families live, with erratic or distant water supply, minimal sanitation and piles of cardboard, old vegetables and rags – typical of unregulated slum housing the world over.

"It's far worse higher up the hill. People don't have water, toilets or electricity. In winter people cannot sleep because of the rain coming through their roofs – they crouch under tables and chairs," Essam explains, vividly describing what the UN Human Settlements Programme (UN-HABITAT) calls nondurable housing – so common for millions in cities throughout the developing world.

The urban poor often have little choice but to take shelter in ramshackle structures constructed in the most polluted, dangerous or marginalised areas. Typically illegal, they are usually excluded from city infrastructure and planning even if they have existed for decades and house hundreds of thousands of people who may constitute the backbone of the city's economy.

The Egyptian government has been reluctant to legitimise the Manshiet Nasser illegal squatter settlement, which sprang up about 30 years ago,

Farmland on the outskirts of Cairo, Egypt, is fast diminishing as new, unplanned and unregulated housing springs up on private land and closes in on the pyramids. With about 65 percent of its population living in towns and cities, northern Africa is the most urbanised sub-region of the continent.

Image: Manoocher Deghati / IRIN

Slums in the old city of Cairo, Egypt. The Aga Khan Trust for Culture believes the downward spiral of disinvestment and deterioration can be stopped and that renovation can trigger urban revival and economic progress. Municipal authorities have preferred to demolish the crumbing urban centres to make way for new businesses or modern, middle-class apartment blocks.

Image: Manoocher Deghati / IRIN

by providing basic services such as water, sanitation, schools, clinics and other amenities – let alone property or land rights. According to UN-HABITAT, an estimated 30 percent to 50 percent of urban residents in the developing world have no legal rights such as a title deed or a contract to prove security of tenure.

The illegal, unrecognised, unassisted and undervalued millions of urban poor struggle to fend for themselves but their large and growing numbers suggest cities neglect them at their peril. By not addressing the housing and land rights issue more practically, cities can only be storing up future problems for themselves and their residents.

Urbanising northern Africa

With about 65 percent of its population living in towns and cities, northern Africa is the most urbanised sub-region in Africa. By 2015 it is expected the proportion will rise to 70 percent. Rapid urbanisation in the

"It's far worse higher up the hill. People don't have water, toilets or electricity. In winter people cannot sleep because of the rain coming through their roofs – they crouch under tables and chairs"

past two decades has resulted in significant social and environmental problems, characterised by increasing urban poverty and massive informal settlements and slums, mostly devoid of basic urban services, which encroach on valuable agricultural land.

All these aspects are evident in Egypt, particularly in Cairo, where more than 65 percent of all urbanised Egyptians reside in a highly centralised system where, at best, all secondary cities are satellites to greater Cairo. Mohamed Sammeh works for the government census department. Two years ago, he was surveying villages in Upper Egypt (southern Egypt) and found that in almost every one, 60 percent of homes were boarded up. The story was the same everywhere: "They've gone to Cairo."

The Cairo magnet

Three of the world's 30 largest slums are found in Cairo. "Today, 45 percent of Egypt's population is living in slum conditions. There are about eight million slum dwellers in greater Cairo. This is very serious

and very dangerous," says Abdallah Adel Aziz Attia, professor of architecture and urban planning at Ain Shams University.

Wherever you go, the core of the old city, with historic monuments, modern world-class hotels, and business centres, soon gives way to seemingly endless, ugly, unplanned residential tower blocks housing the middle classes and the richer of the poor. Many of the rich have moved, or are moving, out of town to super-elitist, new peri-urban purpose-built cities, such as New Cairo to the east.

The millions of urban poor find shelter in ancient graveyard tombs, crumbling grand homes, warren-like structures, mushrooming multi-storey informal settlements, subdivided tenements, new government peri-urban apartment blocks, sub-standard inner-city houses and boarding houses. "Cairo is a big informal city with strips, just strips, of formality," explains Naglaa Arafa, programme analyst for the UN Development Programme (UNDP) slum-upgrading initiative.

Informal settlements in greater Cairo have grown against a backdrop of an over-supply of formal housing units that are too expensive for low-income families. An estimated 1,000 people come to Cairo every week looking for a new life and shelter in a city already bursting at the seams.[1] Natural growth of the existing population of 18 million – including the eight million slum-dwellers – in Cairo is cause enough for concern as the city fast approaches its transition from mega-city status (10 million) to hyper-city (20 million) status.

No guiding vision

Achieving the balance between housing supply and demand has been a problem that all Egyptian governments have tried to solve over the past four decades. Depending on who you ask, some would argue the government has failed and that it never seriously tried. A recent study by the Ministry of Planning highlights the need for 5.3 million housing units up to 2017 to accommodate the expected increase in population to 23 million.[2]

Many analysts point to poor management and lack of visionary planning as the central problem. "There is no national development strategy where all policies aim to reach the same strategic objective.

Instead, each minister acts like a pharaoh and does whatever he wants," claims Aziz Attia.

Widespread insecurity of tenure in the informal sector and unrealistic rent controls in the formal sector are additional impediments to a more efficient use of housing resources. Well-meaning, socialist-style rent controls dating from the 1970s and 1980s mean that original leases and sitting tenants have control while landlords – receiving often derisory rental income – lose all interest in maintaining their houses. The tenants may enjoy absurdly low rent but their homes decay and they live in hope of the speedy arrival of a government demolition order, which, in turn, may secure them a free, new government apartment and compensation for the owners.

Expanding outwards or reviving the centre?

The Aga Khan Trust for Culture believes that the downward spiral of disinvestment and deterioration can be stopped and that renovation of historic areas in downtown Cairo can trigger urban revival and economic progress. However, in the past few years the trust has only managed to work with 70 houses in a slum of 150,000 people – a small, albeit valuable and visionary, drop in the bucket of Cairo's urban housing problem. Its approach stands in contrast to the government policy of demolition of the old city and relocation of the urban poor in efforts to 'modernise' Cairo.

Travelling out west towards the pyramids, both sides of the freeway vividly illustrate the seemingly unstoppable encroachment of housing on arable land. "Every month you see more new buildings," explains the UNDP's Arafa. "They start building them in the middle of the night so that there's a structure of sorts by the morning. By law an existing structure cannot be torn down." Hundreds of unfinished houses, some one storey, others three or five, box in tiny plots of fast diminishing vibrant green crops. In what was only a few years ago vital agricultural land circling Cairo, unregulated and illegal housing is emerging at a frightening rate. "It's a question of perspective; what we see as 'problems' are the solutions for the low-income," says Ali Dessouki from the German technical aid agency GTZ.

Opportunistic migrants pay the local land owners to build and local authorities appear unable to stop them. There is talk, too, of corruption and complicity.

In fact, Egypt's housing sector as a whole is plagued by confusion and inefficient regulations. As a result, 90 percent of Egypt's urban real estate and more than 80 percent of the nation's rural sector is extra-legal.[3] People do not stop engaging in transactions because the laws are complicated. Instead they develop a parallel economy, creating their own institutions to secure and transfer property, enter into partnerships, guarantee credit contracts or resolve conflicts.

"Cairo is a big informal city with strips, just strips, of formality"

New urban development initiatives such as the ten new cities on the periphery of Cairo and New Cairo itself were designed to decentralise and relieve the burden of migration on the old city centre, but to many they have resulted in a pattern of corruption, elitism and incompetence.

Relocating the poor

Meanwhile, real solutions to the informal and illegal settlements are elusive. "It's a catastrophe," says GTZ's Dessouki. "The government has no long-term vision to deal with it; they just spend their time fire-fighting." The previously popular solution of relocating the urban poor to small, purpose-built flats on the edge of town far away from where they can find work has proven to be unpopular as well as ineffective in stemming the flow of new migrants to the centre.

Those given new apartments in the 1980s and 1990s often abandoned them, either letting or selling them and returning to their original slums where they feel more comfortable and are nearer employment opportunities. Essam is 38 and was born in Manshiet Nasser. He would not leave it for anything: "All my friends and family are here, and besides, the new apartments they give you are far from the city and isolated." Indeed, part of the slum's attraction is its vibrancy. The importance of networks, social cohesion and human intimacy should not be underestimated as vital elements of social capital that develop in slums, despite the squalor, extreme lack of privacy and non-existent services. "Just give us water and sewerage," begs one woman, who does not want to be relocated from a smaller slum in Old Cairo, Darb Al-Ahmar.

Run out of town

In more extreme cases, forcible eviction makes it impossible to return. Abdo Abu El Ela, co-founder of Al Shehab, a nongovernmental

Rapid urban growth and the spatial exclusion of the urban poor is often presaged by the forcible eviction and demolition of informal or illegal settlements. Some studies suggest up to 6 million people were forcibly evicted in 2006 worldwide. Here, an impoverished woman sits in the remains of an old downtown traditional 'hutong' quarter which has been forcibly cleared for development.

Image: Mark Henley / Panos Pictures

Children living on the pavement in Dhaka, Bangladesh, in June 2007. The dual economic imperative of needing to be close to the workplace and being unable to afford housing forces millions of people through Southeast Asia to live, work and sleep on the streets. Some may never live in a durable structure.

Image: Manoocher Deghati / IRIN

The price of modernisation? Having been evicted from their 'hutong' (traditional close-built town homes) house, which was demolished to make way for new modern developments, the Wang family live in a plastic tent in Beijing, China.

Image: Matias Costa / Panos Pictures

Downtown Dhaka at night. The illegal, unrecognised, unassisted and under-valued millions of urban poor struggle to fend for themselves, but their large and growing numbers suggest cities neglect them at their peril. By not addressing housing and land rights issues more practically, cities can only be storing up future problems for themselves and their residents.

Image: Manoocher Deghati / IRIN

"Every month you see more new buildings," explains the UNDP's Arafa. "They start building them in the middle of the night so that there's a structure of sorts by the morning. By law an existing structure cannot be torn down."

organisation working in the sprawling and pitiful Ezbet El Haggana slum, claimed that in the past the government "demolished slums promising new apartments and to this day nothing has been given."

A survey of 60 countries, quoted by UN-HABITAT, found that 6.7 million people were forcibly evicted from their homes between 2000 and 2002, compared with 4.2 million between 1998 and 2000. Reports suggest that the highest number of evictions occur in sub-Saharan Africa.

In what author and urban specialist Mike Davis calls the criminalising of the slums, many countries have used the excuse of law and order to demolish unwanted inner-city settlements. In Egypt, President Anwar Sadat told journalists in 1980 before demolishing the Ishash al-Turguman slum in Cairo that it was "a literal nest of subversion, where communists hid, where it was impossible to reach them since the narrow streets prevented the use of police cars." Inhabitants were evicted and the area replaced with a parking lot.

Upgrading and regularising

However, as a result of social pressure, few areas in Cairo have actually been cleared. Instead, the government is now exploring how it can regularise slums by offering land rights and upgrade conditions by providing basic infrastructure. Official sources suggest that significant strides have been made but in reality, provision remains erratic, partial and deficient.

Slum regularisation and upgrading is complicated and epitomises the twilight world the urban poor often inhabit, where they are caught between necessity and officialdom. Equally, municipalities, even with the best will, cannot give blanket sanction to illegal squatting or irresponsible settlements on marginal land where no services are provided or planned. Additionally, too flexible or accommodating an approach by government could be seen as a green light for millions more would-be migrants expected in the already bursting mega-polis of the developing world.

Dead capital

The welfare of millions of urban poor in terms of shelter, security and basic services is a compelling reason to find ways to assist them, but the issue of regularising their land rights has another powerful imperative. Shelter and housing for the urban poor is a critical necessity, not only for the obvious reasons of people needing a home of their own but because titled land rights and security of tenure offer a key foundation for potential prosperity and inclusion in the national economy.

Without it, the millions of slum-dwellers are effectively sitting on "dead capital", it is argued. Unleashing the economic potential of the poor is, according to various analysts, linked to giving them land and property rights, which they can use as collateral and security as they start businesses and enterprises beyond the small-scale informal occupations in which many are involved.

Urban housing is inextricably linked to planning and governance, and the basic human needs – and rights – of the urban poor for shelter and basic services are critical dilemmas for their reluctant metropolitan hosts. Easily overlooked in the list of priorities for the urban poor, security of tenure, property and land rights need to be reappraised and seen as a potential key that can unlock other economic and social solutions.

Transforming the desert? Cairo's plans to relieve the population pressure on urban housing has resulted in the ambitious construction of the Ten Cities on city outskirts and in the desert. The construction boom gave jobs to thousands of urban poor, but the housing was beyond their reach. The poor mostly stayed in their slums, and the middle and upper classes are moving out to the new cities. Even with the new accommodation, Cairo's housing pressures continue to rise with an estimated 1,000 people moving into the capital every week.

Image: Manoocher Deghati / IRIN

A street vendor in El Alto, Bolivia. It has been argued that women and girls bear the greatest burden of the 'urban penalty' of the poor. In addition to their duties to maintain the home, cook, find water and fuel they must also find a way to bring in cash to the household.

Image: Dado Galdieri

employment insecurity
el alto: labouring to survive

Bolivia was said to have the second most unstable labour market in all of South America, causing much despair among the urban poor. "It was a really hard time," says Roberta Quispe, who lives in El Alto. "I could barely find work. And the price of everything started to rise. Street crime spiked, too; they would steal anything."

"It's not surprising that the vast majority of the population, unable to secure formal employment, should have created other forms of work as their only option […] For the last 20 years, Bolivians have not only had to find work, but basically create their own jobs within the margin of opportunity allowed by our country's economic and employment structure."

Towering 4,000 metres above sea level, the city of El Alto, Bolivia, is one of the highest cities in the world. In the afternoon, the icy wind can lower the temperature to zero degrees. The city is surrounded by snow-capped Andean mountain peaks in what would seem a picturesque haven. But today, El Alto is the site of Bolivia's biggest shantytown. With its urban sprawl and extensive squatter settlements expanding across the slopes surrounding the capital city of La Paz, El Alto has been described as "chaos in motion".

The people of El Alto, known as Alteños, depend almost entirely on the informal economy for their livelihood. Stand by and watch as thousands of people converge on the 16 Julio market on a Sunday morning. Women, men and children – laden with vegetables, fruit, cars, llamas, furniture, books by the kilo, used clothes or pirated DVDs – all hoping to sell their wares.

The Alteños have a strong work ethic, working up to 52 hours per week.[1] Yet the rapid population growth of the city has meant that the majority of its inhabitants are either poor or very poor. Despite their hard work, they still lack access to safe drinking water, sanitation, electricity, healthcare, education and housing. In fact, only some 7.3 percent of Alteños are able to satisfy their basic necessities, according to the UN's 2004 Human Development Report. Almost everyone lives either on the threshold of poverty (25 percent), in moderate poverty (48 percent) or in severe poverty (17 percent).

"The poor come to the city to work," says Jockin Arputham, who lives in an informal settlement and is a leader of Slum Dwellers International. Most people labour in the informal economy because

cities have failed to provide adequate or sustainable employment for the urban poor, he said.

This is the employment crisis currently facing many fast-growing cities: The majority of the urban poor are not idle, but work for an income that cannot keep them above the poverty line of US $1 a day.[2] And where the formal sector is unable to generate sufficient employment to absorb the rapidly growing labour force, more and more people turn to the informal sector for survival. "Employment is, in its essence, a poverty-related issue," according to the International Labour Organisation (ILO).[3]

Skyrocketing costs, plummeting employment

The shaky economy in El Alto is rooted in the hyperinflation of the 1980s when Bolivia, after years of military dictatorship, managed to reconstruct its republican democracy. In 1984, the country had an annual inflation rate of over 10,000 percent. "Structural adjustment" was prescribed in 1985 to stabilise the economy. Mass unemployment was the result of free-market economic policies supported by the final administration of late President Víctor Paz Estenssoro[4] and by privatisation – in sectors such as water services – which in turn astronomically elevated consumer costs in the 1990s.

At the time –with 66 percent of its people impoverished and half the population between the ages of seven and 18 – Bolivia was said to have the second most unstable labour market in all of South America,[5] causing much despair among the urban poor. "It was a really hard time," says Roberta Quispe, who lives in El Alto. "I could barely find work. And the price of everything started to rise. Street crime spiked, too; they would steal anything."

When Bolivia's work environment was 'liberalised' by the government, it allowed for regulation-free personal contracting, among other things, and ended all forms of state social welfare. The result was low formal-sector wages, less job security and a failure to respect workers' rights. According to sociologist Jiovanny Samanamud of the Bolivian Strategic Research Programme, who has studied micro-businesses in El Alto, "It's not surprising that the vast majority of the population, unable to secure formal employment, should have created other forms of work as their only option […] For the last 20 years, Bolivians have not only had to find work, but basically create their own jobs within the margin of opportunity allowed by our country's economic and employment structure."[6]

Population explosion

Since the beginning of the century, El Alto has been the fastest-growing city in Bolivia. In 1952, El Alto was mainly rural, with a population of 11,000. The population exploded between 1976 and 1985 due to migration from mining centres and rural areas, reaching a total of 307,000. By 1992 it had climbed to 405,000; and it is now estimated at approximately 860,000.[7] As in many countries, a demographic revolution is bringing hundreds of thousands of Bolivians from isolated communities to sprawling slums like El Alto.

Worldwide, many push and pull factors influence migration from rural areas to cities: low and declining profitability of agricultural production, absence of non-agricultural employment opportunities and a general lack of services such as school, health clinics and hospitals. Additional push factors include drought, soil erosion, desertification, deforestation, flooding and other environmental problems that increase pressure on the land and its people. People are pulled to cities by the expectation of finding better services, housing,

wages and more reliable sources of food. As a result, urbanisation, including 'premature' urbanisation – that is to say urbanisation without the economic base to support it – is on the rise.

In developing countries, there is "a large and widening gap between the expectations and the realities" of those migrating to cities.[8] In particular, access to food and jobs is becoming more limited, and the results for the poor are often greater poverty and hardship than in rural areas. While most rural people grow at least some of their food, people living in cities must purchase food and other commodities, even water. Consumer prices and the ability to earn a cash income are

El Alto, Bolivia, is one of the world's highest cities and slums. Its vast squatter settlements spread out on the slopes around the capital city of La Paz. El Alto has been the fastest-growing city in Bolivia: In 1952, El Alto was mainly rural, with a population of 11,000. The population exploded between 1976 and 1985 due to migration from mining centres and rural areas, reaching a total of 307,000. By 1992 it had climbed to 405,000; and it is now estimated at approximately 860,000. As in other slums, many residents live without adequate access to safe drinking water, sanitation, electricity, healthcare, education and housing.

Image: Dado Galdieri

Women in El Alto, Bolivia, selling second-hand clothes; an increasingly common site in slums around the world as cast-off clothing from developed countries is recycled for profit. When families struggle to make ends meet, women and girls are increasingly drawn into the informal work sector.

Image: Dado Galdieri

In what appears to be a pre-industrial, medieval scene of human effort, men work a giant winch to haul a ship up a runway for repairs in Dhaka, Bangladesh. Casual workers such as these may consider themselves lucky to find such work in a city of 13 million inhabitants that is bursting with slums. Approximately 500,000 people arrive in the city each year.

Image: Manoocher Deghati / IRIN

therefore critical for the poor, or anyone, in cities. The urgent need for work is unequivocal. To survive, a significant proportion of the new urban population, in particular women, engage in the informal sector because there is no alternative – and most lack the skills necessary to engage in the formal sector.

As in most fast-expanding cities in developing countries, El Alto's informal sector is diverse and encompasses a wide range of workers: street vendors, garbage recyclers, transit system workers, garment workers working from their homes, and informally employed personnel of formal enterprises. Because it often serves the needs of a high proportion of inhabitants through the provision of goods and services, it plays an important yet controversial role:

According to the World Bank report, the informal sector, "provides jobs and reduces unemployment and underemployment, but in many cases the jobs are low-paid and the job security is poor. It bolsters entrepreneurial activity, but at the detriment of state regulations compliance, particularly regarding tax and labor regulations."[9]

While many developing countries have regarded this informal sector as illegal, many people and households would not survive without the ability to make a living that working in the home or street provides. Bolivia is not the only country to depend heavily on the informal sector: It is believed that in many fast-growing cities as much as 60 percent of employment is in the informal sector. In a recent study[10],

El Alto has been the fastest-growing city in Bolivia. In 1952, El Alto was mainly rural, with a population of 11,000… By 1992 it had climbed to 405,000; and it is now estimated at approximately 860,000.

the International Labour Organisation found that despite stunning economic growth in Asia, more than one billion women and men work in the informal sector.

Manifestations of an employment crisis are also typically seen in high unemployment rates among the young. There are more than 85 million unemployed youth (aged 15-24) around the world. In El Alto, the young people do not quite fit the typical model, as almost all unfailingly find some kind of work, joining the ranks of the 17 million young Latin Americans who make less than $2 a day. [11]

"Our culture teaches us to work beginning from a very young age, starting with just helping around in the house and in daily life," says Willy, who sells mobile phones in the slum, in reference to the education and social values of the Aymara people, who comprise more than 80 percent of the El Alto population. "We don't see work as being limited to a specific time period. 'Work days' don't mean anything to us. Our only goal is to make sure we earn what's necessary for the family."

Although international labour conventions specify that no child under age 13 be allowed to work, in El Alto around 7,500 minors between the ages of 10 and 14 work at least half-days in some sort of informal job. Young people are often found working in transportation (which is a partially public, partially private activity), shining shoes on the street, or selling candy, soda or crackers out of one of the thousands of roadside stalls around La Paz and El Alto. It is so common to see them busily go about their daily work that state institutions and some nongovernmental organisations have come to see the age of 10 as the valid 'working age.'[12] This, however, is an improvement. In 1993, Bolivia's National Statistics Institute Domestic Survey found age seven to be the effective minimum working age. This became the impetus for a national governmental policy not for the prevention of children's employment but rather for the sector's regulation.[13]

Thus the youth in El Alto follow the lead of many other residents who work six or seven days a week, at any given time of day and, often, at more than one job. In fact, almost 93 percent of the population does some sort of paying work.[14] Entire families leave in the morning to spend the day working, even if for very little, facing poor working conditions and a lack of job security, benefits and career opportunities. Although they work, they continue to be poor, as the income is neither sufficient nor consistent.

Historically cities have been hot-house concentrations of cultural, artistic, scientific, political and, above all, economic growth. The potential cities have to act as catalysts for national growth is unquestionable, but it does not happen automatically. In the developing world, the speed of urbanisation – which is often more

> **"We don't see work as being limited to a specific time period. 'Work days' don't mean anything to us. Our only goal is to make sure we earn what's necessary for the family."**

accurately 'premature urbanisation' – intensifies the factors creating urban poverty, with high rates of unemployment, under-employment and low pay. In a situation where there seems to be little hope in the near future of providing socially protected formal-sector employment to those now working in urban areas, outlawing or ignoring the informal sector will have little positive impact on poverty alleviation.

The problem with employment for most urban poor is that it is generally informal, impermanent, small-scale and hand-to-mouth in nature. Offered neither security nor eventual escape or advancement from low-skilled, menial and low-paid jobs, most of the urban poor are locked out of more secure, long-term employment.

A cholera patient in a treatment centre run by Médecins Sans Frontières (MSF) in Luanda, Angola, May 2006. Angola emerged from a 27-year conflict in 2002. During the war years, cholera epidemics in Luanda and the coastal areas were frequent: Between 1987 and 1995, there were 90,000 cases and more than 4,500 deaths, according to MSF. Cholera is directly linked to poor sanitation and congestion.

Image: Paolo Pellegrin / Magnum

health and sanitation
luanda: living in the Hot Zone

Some 37 percent of deaths in Angola could be prevented each year if environmental factors like drinking water and sanitation were improved, the World Health Organisation (WHO) has claimed. UNICEF's Guy Clarysse, a medical doctor who has served in many African countries, said he has never seen more appalling hygiene conditions. "People in these *musseques* are literally living on heaps of garbage, in some of the worst conditions imaginable," he said.

"If they happen to fall ill, it will be up to God to save them, as accessing a health centre from these *musseques [Luandan slums]* could be a nightmare," observed another aid worker.

Angola emerged from a 27-year conflict in 2002, but more than half the people in the capital city of Luanda still live in wartime conditions, crammed like sardines into tiny mud-and-tin shacks, in settlements precariously perched on hardened mounds of waste.

While the city provided a massive influx of people with a safe haven from the violence that raged in the countryside, it offered little else in terms of services, having been built to accommodate only 400,000 residents. Overcrowding, poor sanitation and lack of access to clean drinking water and health services have left Luanda's urban poor vulnerable to sickness, particularly waterborne diarrhoeal diseases.

The war has frozen time in Angola. In fact, public health conditions in the capital today are comparable to those of London or New York 100 years ago. Less than 40 percent of Angola has access to clean water and sanitation, contributing to high rates of under-five mortality, according to the UN Children's Agency (UNICEF). Some 37 percent of deaths in Angola could be prevented each year if environmental factors like drinking water and sanitation were improved, the World Health Organisation (WHO) has said.[1]

With no sanitation in the overcrowded informal settlements, cholera outbreaks are common. During the war years, cholera epidemics in Luanda and the coastal areas were frequent: Between 1987 and 1995, there were 90,000 cases and more than 4,500 deaths, according to the international medical charity Médecins Sans Frontières (MSF).

But it was the cholera outbreak that began in 2006 and ended in June 2007 – which had one of the world's highest recently-reported fatality rates, with 2,722 deaths out of a reported 67,257 cases[2] – that shook up Angolan authorities and aid agencies, bringing the related issues of safe water, adequate sanitation and accessible health services for the urban poor into sharp focus.

The daily struggle

Clean drinking water is an absolute necessity to healthy human life, and finding it is a daunting task for the inhabitants of Luanda's 'musseques', the informal settlements that are home to the majority of the capital's 4.5 million residents. Without access to this precious resource, the vulnerable urban poor are placed at even greater risk. It is no surprise that the devastating 2006 cholera outbreak began in Boa Vista, a musseque in the capital's Ingombotas Municipality, near the Luanda harbour. Unsafe drinking water, mountains of fly-infested garbage and sewage disposal in open, rudimentary sewers set the stage for the disease to thrive.

Unsafe drinking water, mountains of fly-infested garbage and sewage disposal in open, rudimentary sewers set the stage for the disease to thrive.

Eta Daniel, a resident of Boa Vista, probably gets water in much the same way her mother did almost 20 years ago, when the country was in the throes of civil war. Then, as now, the main water source would have been private tankers, which still service more than half the city's neighbourhoods. Perhaps unlike her mother, Daniel is more aware of cholera. She knows her water has to be chlorinated, so she tries to buy treated water supplied by Luanda's provincial water authority. But frequent power failures, at times lasting a week, interrupt operations at the treatment plant. "I have three children," Daniel says. "I need to have water, so sometimes I have to buy water from private sellers." She does not know whether they chlorinate it.

At the peak of the cholera epidemic in 2006, MSF found that most of the private tankers were selling untreated water.[3] The National Water Directorate has now stationed a police official at the Bengo River at Kifangondo, 20km outside Luanda, to ensure the tankers leave with chlorinated water, but aid agencies do not rule out the possibility that some are still selling untreated water.

"One needs to monitor [water quality] to ensure the water supplied by the private sector is treated," said an aid worker who wanted to remain anonymous. "Truck drivers can be in a rush and do not want to queue to buy the chlorine."

Water – treated or not – is expensive in the musseques. A family of four can spend up to US$60 a month on water. "This often does not include the basic minimum required per person per day," said Allan Cain, director of the Development Workshop (DW), an anti-poverty nongovernmental organisation. "You might find families managing with a 20-litre jerry can per day."

Pierre-Marie Achy, UNICEF's cholera coordinator in Angola, said the recommended amount of water per person for drinking and sanitation needs is 30 litres per day.

According to a 1995 study sponsored by the World Bank and conducted by DW, residents in the musseques paid private sellers up to 10,000 times more than people in the 'cement city' (a term for the pre-war formal Luanda city) paid to the provincial water company for treated water piped into their household taps.

Perhaps the biggest stumbling block for aid agencies has been breaking through what has been described as the "water cartel", which controls the supply of water to almost all of Luanda.

Miguel Domingo, chair of the National Association of Truck Water Distributors, said the private sector geared itself up 20 years ago, during the war, because it realised the business potential in providing an essential resource like water. It set up pumps and installed pipes big enough to fill around 450 tankers per day (five million litres) from the Bengo River.

"It is a business worth several million dollars a year," said Dauda Wurie, UNICEF's water and sanitation project officer.

Poverty-stricken residents, most of whom barely manage to earn $50 a month, cannot afford gas or wood to boil water. The cheapest purification alternative is to use bleach powder, but a joint survey by the

A child with cholera being treated in a treatment centre run by Médecins Sans Frontières in Malanje, Angola, May 2006. The cholera outbreak that began in 2006 and ended in June 2007 – with 2,722 deaths out of a reported 67,257 cases – shook up Angolan authorities and aid agencies, bringing the related issues of safe water, adequate sanitation and accessible health services for the urban poor into sharp focus.

Image: Paolo Pellegrin / Magnum

Olususun land fill site, in Lagos, is Nigeria's largest rubbish dump dealing with 2,400 metric tons of rubbish every day. A whole community live on the dump, collecting the scrap and trading it for money. In slums across the world, the urban poor make a living from sorting and scavenging in what can be a relatively lucrative business for the middlemen who buy and recycle their findings. Often, these people live near or on the rubbish dumps, which present environmental problems for expanding cities and are a major health hazard for those working in them.

Image: Lionel Healing / courtesy of AFP

Ministry of Health and UNICEF showed that while most people were aware of cholera, they were largely ignorant of accessible water-purification methods.[4]

The war ended in 2002, but in the musseques, people wonder why their daily lives are a fight for survival. "There is only one standpipe here, at the bottom of the settlement," a woman complains as she makes her way up an embankment of compacted garbage and earth. "We still have to climb up to get to our homes every day."

Invisible healthcare

Safe water may be the number one priority for the urban poor, but access to adequate healthcare runs a close second.

"If they happen to fall ill, it will be up to God to save them, as accessing a health centre from these musseques could be a nightmare," observed an aid worker.

Angola has an abysmally low number of health professionals: 1,165 physicians and 18,485 nurses for a population of more than 15 million.

Guy Clarysse, the head of the health and nutrition section in UNICEF Angola, said the location of the musseques was a possible factor in the staggering death toll from the 2006 cholera outbreak. Rapid medical treatment is essential for those suffering from the disease, but many residents of the musseques were unable to reach health centres in time.

Aid agencies said MSF had stepped in and set up makeshift clinics within easy reach of some affected localities, saving many lives.

Mark van Boekel, MSF's head of mission, said the Angolan government has shown remarkable progress recently in rehabilitating and constructing health clinics and hospitals in Luanda and in the countryside. "Unfortunately, none of these gleaming buildings have adequate health personnel," he said.

Angola has an abysmally low number of health professionals: 1,165 physicians and 18,485 nurses for a population of more than 15 million.[5] Over the past five years, run-down public hospitals in

Luanda have been given a makeover, and health service is free. "But only when it is available and if medicines are available at the clinics. Often, we have to buy from pharmacies," complained a Boa Vista resident.

The sorry state of sanitation

More than half Angola's population lacks access to sanitation, and most people live on less than $1 a day.

The absence of toilets poses severe public health and security problems, especially for women and young girls. In the musseques, many communities share a single toilet. Lack of water prevents children and adults from using the available latrines, and people defecate at night in open areas, in the streets and rubbish dumps.

A joint UNICEF and Angolan government survey found entire communities in Luanda without latrines. In the São Pedro da Barra township, the residents defecate into plastic bags and throw them into the sea. "There is virtually no means to dispose of sewage in Luanda. It flows out in its raw state to the sea," said one resident who had been infected with cholera twice.[6]

"The only solution is change of behaviour. Luanda has been built to accommodate only 400,000 people – you cannot expect the government to catch up overnight," said Claire-Lise Chaignat, the WHO coordinator for the global task force on cholera control. "They must become aware of chlorination, storing water in clean containers and observing basic hygiene – it is the best they can do in these conditions."

But Luanda continues to grow at a frightening pace, and aid agencies wonder if service provision will ever catch up. Although people who had fled to the capital during the war had started returning to their rural homes as infrastructure and essential services improved, at least 150,000 people moved to Luanda every year, said DW's Cain.

Poor people who are "living in peri-urban musseques pay many times more for water and other essential services than those living in the

cement city, meaning they consume less, and the resulting hygiene and health statistics are now some of the worst in the world," Cain said.

Sharing the wealth

A few kilometres away from Boa Vista, oil tankers line the road near the harbour. Angola is one of the world's largest producers of oil, with the oil sector accounting for 90 percent of its exports, according to the International Monetary Fund.

But aid workers and NGOs have often lamented that little of the oil revenue has filtered down to the poor.

"The UN estimates that 3.9 million people, or 83.1 percent of Angola's urban population live in slums, as of 2001.[7] At the same time, the World Bank estimates Angola's 2005 GDP growth rate at 20.6 percent. This stark contradiction illustrates that Angola has clearly failed to use its oil wealth to address the dire needs of the urban poor to basic healthcare, potable water, sanitation facilities and adequate housing," said Jean du Plessis, deputy director of the Centre on Housing Rights and Evictions, a Geneva-based NGO that advocates on behalf of the urban poor.

Finding a solution

UNICEF's Clarysse, a medical doctor who has served in many African countries, said he has never seen more appalling hygiene conditions. "People in these musseques are literally living on heaps of garbage, in some of the worst conditions imaginable," he said.

Despite measures taken to improve water quality and sanitation since the 2006 cholera outbreak, living conditions for the urban poor are still perilous. Parts of Boa Vista have access to shiny new standpipes, but children still rifle through giant heaps of garbage a metre or two from where their mothers are buying water from the community-appointed representative responsible for maintaining the standpipe.

The biggest challenge to providing services is accessibility, Clarysse said. "Laying down water pipes in some of these informal settlements is impossible. The only solution is to demolish these musseques and provide new, cost-effective housing with services for the residents."

In Angola, all urban land is owned by state. It is estimated that eight or nine out of every 10 urban dwellers live in settlements or in multi-family buildings constructed in the 1960s, in which the services, once again, do not work, either because they progressively deteriorated, or because the constructions were occupied before completion of services.

Several plans to provide public housing have been announced over the years, but they lack clarity on details and funding. For example, in 1979, the Luanda Master Plan proposed to "clean out" the musseques and replace them with medium-height or high-rise multifamily buildings, locally referred to as 'grandes blocos'.

Things happen at their own pace in Luanda, but they are happening, admit most aid workers.

"We cannot rule out another [cholera] epidemic," said WHO's Chaignat, "as the conditions for yet another epidemic remain."

UN-HABITAT is currently working with the Angolan government to prepare profiles of the informal settlements in its nine cities, including Luanda, and Chinese money has started rolling in to Angola, in addition to oil revenue. According to media reports, a $6 billion loan on easy terms has begun to bear fruit. Roads have been dug up, and maintenance work on the existing water network is currently underway, Cain said.

DW has played a significant role in helping almost a million musseque residents access piped water since 1999. Through the establishment of water committees, communities collect funds to pay for the installation of neighbourhood standpipes by the provincial water authority.

Maria Trajo, chief of water quality at Angola's National Directorate of Water, said her department has plans to provide tap water to at least half the city's population by the end of 2008, and a sewage treatment plant in one of the nine municipalities in Luanda has been built. [8]

In the meantime, some communities have decided to take matters into their own hands rather than wait for the government to roll out services.

A young girl carries a baby on her back while searching through rubbish for metal scraps to sell in Kroo Bay, Freetown, Sierra Leone. Without proper waste management and the provision of clean water, the urban poor in expanding slums around the world will continue to be the hardest hit by preventable diseases.

Image: Tugela Ridley / IRIN

They have taken charge of cleaning their alleys and collecting their own garbage. Unfortunately, with the lack of officially designated places to dump the rubbish, it eventually ends up near water sources.

The war in the countryside of Angola may be over, but there are still battles to be won against poverty in the musseques of Luanda, where each day is a fight for survival. And with the rainy season in September on the horizon, the vulnerable urban poor have little available to arm themselves against another deadly cholera outbreak.

"We cannot rule out another [cholera] epidemic," said WHO's Chaignat, "as the conditions for yet another epidemic remain."

A view of Porto Pesquiero, a slum in downtown Luanda, Angola, where the first cases of cholera were recorded in February 2006. Less than 40 percent of Angola has access to clean water and sanitation, contributing to high rates of under-five mortality, according to the UN Children's Agency, (UNICEF). The World Health Organisation claims some 37 percent of deaths in Angola could be prevented each year if environmental factors like drinking water and sanitation were improved.

Ulaanbaatar, Mongolia. A man walks to his yurt, overshadowed by a new housing complex. More and more rural poor are joining the urban poor in Ulaanbaatar to survive in a world that for many Mongolians has changed dramatically in the past 15 years. "I was forced to leave the countryside seven years ago, but I know others who are arriving all the time. For us this city is the only chance for employment," said one migrant.

Image: Justin Guariglia / Getty Images

cultural change
ulaanbaatar: painful transitions

In contrast to the popular image of Mongolia as a nation of traditional herders, the Asian Development Bank (ADB) calculates that well over 60 percent of the population live in urban centres, with between 800,000 and one million people in the capital. A high proportion of these live well below the official poverty level; countrywide, 36 percent live below the national poverty line, but in the capital the proportion is more than double this figure.

All over the world, particularly in developing countries, hyper-cities, megacities, 'million' cities and tens of thousands of provincial towns and urban centres are drawing in millions of people annually like powerful magnets. Behind every individual's movement from the countryside or village to the large town and city is a story of both loss and gain. Urban centres are powerful engines driving people towards increased homogeneity as they find their place in an increasingly globalised world. Many aspects of culture are rapidly becoming casualties in this process as traditional pastoralists, herders, farmers and craftsmen join the ranks of the formal and informal urban economy.

Ulaanbaatar is, at first, deceptive. The Mongolian capital spreads out over a plain along the banks of the River Tuul; the medium-height buildings forming the city centre are overlooked by low green mountains, which roll over the vast landscapes making up much of Mongolia's 1.5 million square kilometres.

Beneath the surface

India is twice the size but has more than 50 times Mongolia's 2.6 million people, half of whom are younger than 20. In Mongolia there is none of the chaos and overwhelming sense of numbers one feels in Tokyo, Beijing, Dhaka or Delhi, and in the balmy summer months, at least, tall grass and wild flowers grow up between well-proportioned housing blocks and fenced compounds, and along the wide roads all over the city. Shaggy-maned horses and sheep graze the grasslands on the outskirts of the city that always seems close. Urban apocalypse this is not, and yet a harder reality lies beneath the surface.

Living below the line

The proximity to nature and lack of congestion belie the fact that a remarkably high proportion of Mongolians live in cities – in particular, Ulaanbaatar. In contrast to the popular image of Mongolia as a nation of traditional herders, the Asian Development Bank (ADB) calculates that well over 60 percent of the population live in urban centres, with between 800,000 and one million people in the capital. A high proportion of these live well below the official poverty level; countrywide, 36 percent live below the national poverty line, but in the capital the proportion is more than double this figure.

More and more rural poor are joining these urban poor to survive in a world that for many Mongolians has changed dramatically in the past 15 years. "I was forced to leave the countryside seven years ago but I know others who are arriving all the time. For us this city is the only chance for employment," explains Erdenbileg, who had to fend for himself after the state-run abattoir in western Mongolia closed down and he and hundreds of others lost their jobs.

The Soviet Union dominated the Mongolian social, economic and political system when the country became a communist state in 1924. With the fall of the Soviet empire and the collapse of the Council for Mutual Economic Assistance, whose members were Mongolia's main trading partners, the country was forced to begin its rapid transition to a market economy. Before 1990, the command economy meant all property and livestock were owned by the state but people were guaranteed work, free education and healthcare, with affordable housing, transport and commodities. Poverty was virtually unknown. Private enterprise was banned and there was no freedom of movement between the countryside and cities or between cities.

The dramatic shake-out of labour from uneconomic state-owned enterprises has been largely absorbed by the expanding informal economy. Urbanisation in Mongolia has been rapid and concentrated. Already 57 percent urbanised, in a small number of urban centres, of which Ulaanbaatar is the largest by far, the population exceeds employment opportunities. Before the break-up of the Soviet system, migration was strictly controlled and restricted. The first wave of rural-to-urban movement took place in the late 1980s and intensified in the 1990s. According to Hubert Jenny of the World Bank, it continues at a rapid pace.

Poverty in ger settlements

Jenny traces the urbanisation in Ulaanbaatar and the two secondary cities of Erdenet and Darkhan to the growth of peri-urban, spontaneous 'ger', or traditional circular tent, settlements. "With little or no planning by local government, the uncontrolled growth [of] the ger areas has impeded the efficient delivery of public services."

In fact the challenge of infrastructure delivery is compounded by the extent of poverty in ger areas: 78 percent of residents live on less that US$30 a month, with the poorest 8 percent living on less than $12 per month.[1] According to the European Commission Humanitarian Aid department (ECHO), increasingly severe climatic conditions that are making rural life hard for humans and livestock alike have "led to a massive rural exodus towards the cities, in particular the capital … which is totally incapable of responding to the basic needs of the new population." Despite the semblance of modernity in Ulaanbaatar, aid workers claim that those who have lost everything from natural

"I was forced to leave the countryside seven years ago but I know others who are arriving all the time. For us this city is the only chance for employment"

disasters "live in a dramatic state of poverty, lacking food, water, shelter, non-food items, heating, healthcare and education. Alcoholism, violence and prostitution are spreading, external support is very limited."[2] In recent years articles have been written on the increasing number of street children in the capital and the families who live in sewers during the bitter winters, as they are unable to afford housing or fuel to keep warm in their traditional tents. According to a June 2003 study by the NGO Action Contre la Faim, many children in the ger peri-urban areas are not immunised and suffer from malnutrition.

Ger settlements epitomise spontaneous and unplanned urban growth around the outskirts of the capital. Normally they start as a tent within a spacious fenced compound, but as friends and relatives join the original family in the city, the number of ger within a compound

A Mongolian nomadic herder chaperons his flock
of sheep as they graze near downtown Ulaanbaatar,
with a giant billboard featuring a presidential campaign
advert by the Revolutionary party. For many Mongolians
the cultural transition from rural to urban life is painful
and irreversible.

Image: Stephen Shaver / courtesy of AFP

Slumming in Ulaanbaatar, Mongolia: Urban apocalypse in the style of India or Nigeria, for example, this is not, and yet a harder reality lies beneath the surface. 'Ger', or traditional circular tent, settlements epitomise spontaneous and unplanned urban growth around the outskirts of the capital. The challenge of infrastructure delivery to these settlements is compounded by the extent of poverty in ger areas: 78 percent of residents live on less that US$30 a month, with the poorest 8 percent living on less than $12 per month.

Image: Justin Guariglia / Getty Images

In 2005 a government census in Upper Egypt found that in almost every village, 60 percent of the homes were boarded up. The explanation was the same everywhere: "They've gone to Cairo." Many cultural traditions are rapidly becoming casualties in the urbanisation process, as pastoralists, herders, farmers and craftsmen join the ranks of the formal and informal urban economy. Here, a camel herder in Cairo appears to resist that trend.

Image: Manoocher Deghati / IRIN

increases. Some families manage to build two-storey houses in their compounds over the years, but most cannot afford to do so. Migrants are forced to start a new life in the city due to lack of employment and the harsh climate in rural Mongolia. Some also come to be with relatives or children and for education, and some live in traditional tents without facilities on the outskirts in order to gain an income from their rented apartments in city centres.

…increasingly severe climatic conditions that are making rural life hard for humans and livestock alike have "led to a massive rural exodus towards the cities, in particular the capital … which is totally incapable of responding to the basic needs of the new population."

According to John Sparrow of the International Federation of the Red Cross and Red Crescent Societies, "For former herders a major obstacle is simply getting registered. They do not bring the necessary documents. But unless they are registered they cannot get state health or social care, or education for their children." In the settlements it is common to see people hauling plastic drums of water from standpipes to their homes. Queues reminiscent of other more congested areas of Asia surround the standpipes. Baasansuren, a 38-year-old mother of four, sits outside a ger with her friend who migrated with her to the city some years earlier. "She lost all their ID documents so officially she doesn't exist in the city," Baasansuren explains. "Her kids can't go to school or get any healthcare and she doesn't have enough money to bribe the offices to give her new papers."

Stepping off the steppes

Many Mongolians complain of the imminent end of their centuries-old nomadic lifestyle. "Now you cannot survive herding livestock. If you have 200 or less you can forget it. You will not survive and you will have to come to the city like us," explains Erdenbileg. "It's too tough. Only those with 1,000 or more will make it, and they are the few rich ones."

ECHO estimates there are approximately 160,000 herders with 25 million animals in Mongolia. The number is diminishing every year as people give up their traditional nomadic life. "Past *dzuds* [freezing winter cold snaps] have resulted in an increasing rural-urban migration,

especially towards the swelling suburbs of the capital, where unemployment causes further severe destitution," it states.

Immediately after the fall of communism and the privatisation of herds there was a brief but environmentally unsustainable increase in herders and animals. The forces of economics and the severe freezing winters of 2000-2002 soon reversed that trend. In 2000, about 3.4 million animals (10 percent) died and in 2001 another 4.7 million (15.7 percent) froze. In 2002 another lethal cold snap killed 2.9 million animals (11 percent).

The transition has been tough but many see it as inevitable. "It's the end of a long tradition and we are still adapting. We miss the old life," says Baasansuren, pointing to the hills outside the city, her wind-blown face tanned from the summer sun. "I often think of the wide landscapes and the horses but we are here to stay. We cannot go back to it. We get jobs in the city and life is less precarious. Anyway, young people today don't want to be herders and the weather in Mongolia is changing."

Climate change appears to be altering previous accepted cycles and taxing traditional coping mechanisms. Exceptionally cold winters – previously experienced once every 50 years – are contrasted by hotter summers and lower rainfall. Drought is also a severe problem facing herders, who watch large numbers of their animals die from lack of grazing and water. Scientists warn these extremes of weather are likely to continue and are part of the global change in climate.

Irreversible trends

Across the Sahel in Africa, in the highlands of Latin America and even in Europe, rural lives are becoming harder to sustain and so, too, are traditional ways of life. It is the same for the Somali or Kenyan pastoralist as for the Mongolian herdsman: Without adequate social safety nets or informal means of insurance, people whose animals die and who lose their livelihoods are forced to drop out of the pastoral system. This often has detrimental consequences since they are usually ill-equipped to succeed in more urban settings, which struggle to absorb an influx of unskilled labour.[3] In parts of Kenya in 2006, some pastoral

communities lost 60 percent to 80 percent of their livestock in the drought and many warn that "the pastoral way of life is everywhere under attack."[4]

According to the ADB, the main causes of poverty in Mongolia are "harsh natural conditions, geographical isolation, difficulty to access financial resources and unemployment." Low incomes are compounded by inadequate social services, particularly poor medical facilities, urban services and education. The challenge is to broaden and sustain Mongolia's growth and provide opportunities for the many poor Mongolians who have not yet benefited from the transition to a market economy.[5]

There is optimism, however, as Mongolia is "successfully transforming into a market economy and in 2006 remained strong, with gross domestic product [GDP] growth at 8.4 percent and per capita GDP above $1,000 for the first time." Even so, the ADB recognises that these gains have been "insufficient to ameliorate living conditions for a large percentage of the population that fell into poverty in the early transition years."

High education standards have been maintained, and Mongolians rank fourth globally with a 97.8 percent literacy rate even though 50 percent of the population lack access to potable water, according to figures from the international NGO, Save the Children UK.

These years, and decades, will doubtless be seen as the transition period not only for Ulaanbaatar's socioeconomic profile, but also culturally, as the traditional herding lifestyle wanes with the rise of other economic opportunities. But the chances are that Mongolia will find a balance and

poverty will be reduced as more urban migrants are absorbed by the growing economy. Employment is key to addressing urban poverty. There is no sense of the pervasive or endemic poverty in the ger settlements that one feels in many other capitals.

For the millions of people who move to cities and towns all over the world, the transition is normally born of crisis or emergency. Whether people make the move because of a deterioration in their ability to survive, economic changes that make their previous livelihood untenable, or to escape natural or manmade crises, it is often a one-way

"I often think of the wide landscapes and the horses but we are here to stay. We cannot go back to it. We get jobs in the city and life is less precarious. Anyway, young people today don't want to be herders and the weather in Mongolia is changing."

ticket. For some, particularly the rural youth, the cities are magnets of hope and opportunity that contrast with the predictable narrowness of traditional rural life.

The world's climate is changing and so is its socioeconomic framework, with each affecting and being affected by the other. At the same time, the absolute number of people continues to rise rapidly. The paddy farmer of rural Bangladesh becomes a rickshaw puller in Dhaka, a wooden wheel-maker in rural Cambodia works in the garment factories of Phnom Penh and a horse herder of the Mongolian steppes works in the capital's tannery. Traditions are lost and ancient crafts and established patterns of interaction vanish with the disappearance of social rituals and ceremonies as the hegemony of city life dominates and people adapt.

A Rajistani woman in traditional costume living in pitiful slum conditions in Hyderabad, India. As more rural people move to cities, traditions are lost and ancient crafts and established patterns of interaction vanish with the disappearance of social rituals and ceremonies as the hegemony of city life dominates.

Image: Jenner Zimmerman

The poverty of our century is unlike that of any other. It is not, as poverty was before, the result of natural scarcity, but of a set of priorities imposed upon the rest of the world by the rich. Consequently, the modern poor are not pitied… but written off as trash. The twentieth-century consumer economy has produced the first culture for which a beggar is a reminder of nothing.

John Berger
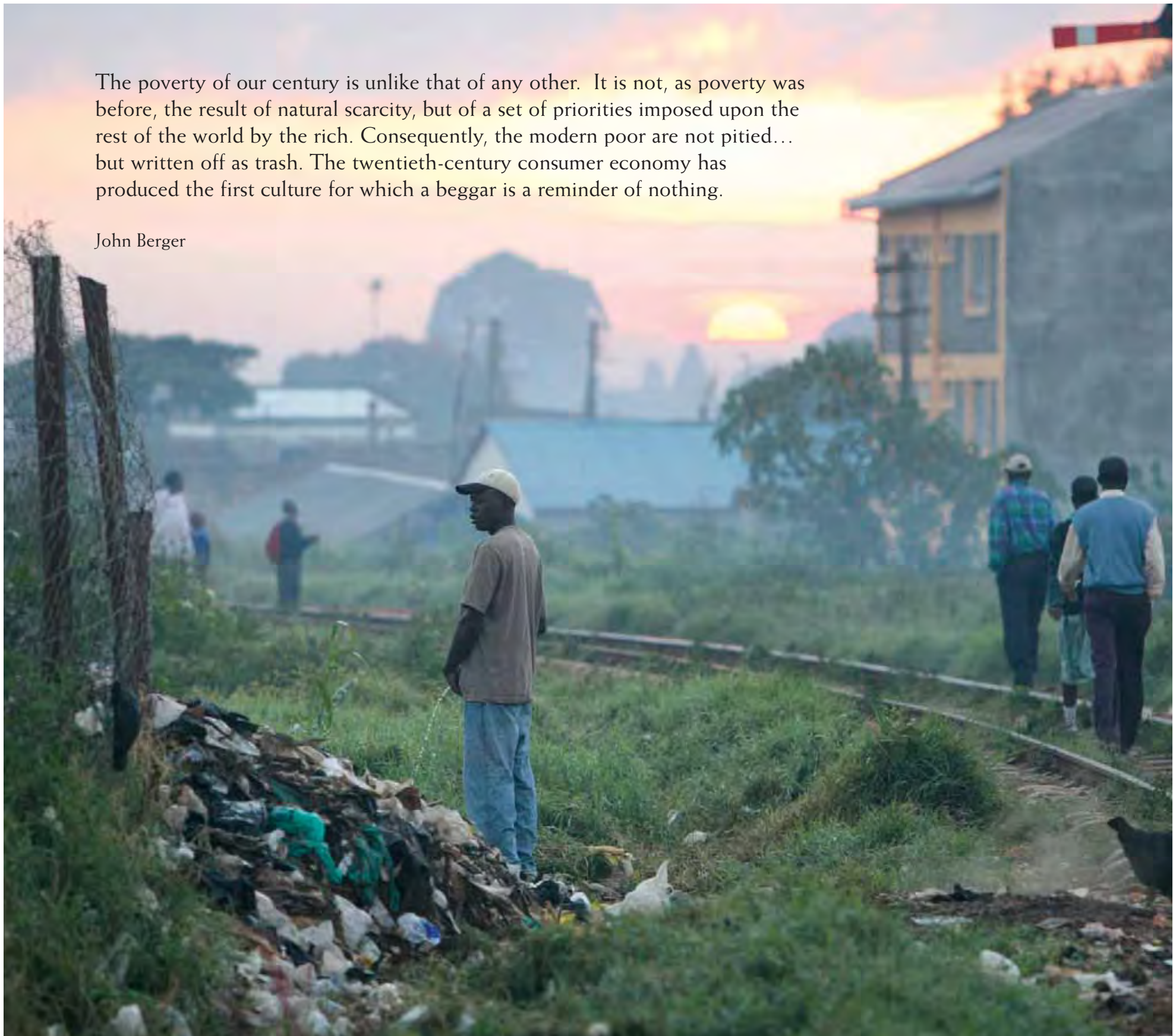
endnotes

Chapter 1 – overview: tomorrow's crises today

[1] The author thanks Casey Johnson for this lead paragraph.

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[9] The Land Use Decree Act (1978) states: "The land is held in trust and administered through the government's authority to the use and benefit of all Nigerians."
[10] The only other active project in Nigeria of a similar value is the Second National Urban Water Sector Reform Project, also valued at US$200 million.

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