

In the course of human history urban development has accelerated worldwide. Between 1975 and 2000 the planet's urban population increased from 1.5 billion people to more than 2.8 billion, or about 45% of the total population. By 2020 it is estimated that the figure will have risen to 60%. But not all urban dwellers benefit

from city life. In 2001 some 924 million people, or roughly 31.6% of all city dwellers lived in slums. Over the next 30 years as many as 2 billion people will be living in slums, challenging the target of achieving significant improvement in the lives of at least 100 million slum dwellers.

## Cities in the Andes: threats and hopes

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The Andes region of South America encompasses Bolivia, Colombia, Ecuador, Peru and Venezuela. Among the region's unique features are its varied climate and its considerable environmental and biological diversity.

The region is facing unprecedented urban growth. In 2003 the total population was reported as 119 million inhabitants, with 1.8% annual population growth for 1994-2003. Colombia, the most densely populated country in the region, accounted for 37% of the total population.

With the population doubling between 1970 and 2001, the number of city dwellers increased nearly threefold over the same period, growing from 32 million to 85 million inhabitants (1). In 2003 the urban population accounted for 76% of the total regional population, up from 71.6% in 1994 (2). The United Nations Development Programme (UNDP) estimates that city dwellers will account for 79% of the total population by 2015.

There are two types of urban development. "Decentralised" urban development is characterised by the presence of several large cities in a given country that offer a variety of services (healthcare and education, for instance) and opportunities for employment. Services and the availability of jobs are the main incentives for individuals to migrate to urban areas. This type of development is encountered in Colombia, with several large cities such as Medellín, Cali, Cartagena and Barranquilla, as well as the capital Bogotá.

"Centralised" urban development characterises countries that have only one major urban area, such as in Peru, where 29% of the country's population is concentrated in Lima. This type of development places increased demands on public services, housing and infrastructures and generates increased pressure on the environment (a lack of or inadequate sewage treatment reduces water quality; increased solid waste without the appropriate disposal systems affects soil and air quality).

The rural poor who migrate to urban areas often live in shanty towns, generally built on vacant land from light construction materials such as wood. The underlying ground (sandy hills, for instance) is often unstable and structures are often built with no technical guidance. The resulting situation generates additional pressure on the environment.

As in other developing areas, poverty is a crucial issue. Venezuela has the highest proportion of people too poor to afford even food (23%), followed by Ecuador and Colombia (20% each). This type of extreme poverty is also a source of environmental pressure.

A sustainable urban area is one that can provide its population with a stable, profitable economy, social cohesion and a healthy environment. However according to this definition, sustainability is difficult to achieve, due to factors such as population size and growth rates, income level, the spatial dimension of environmental issues and the role of local stakeholders. Cities in the Andes region face a number of environmental issues.

But three are particularly important: water availability and quality, air pollution and solid waste disposal.

One third of the world's renewable water resources are located in Latin America and the Caribbean. Ideally they should meet the needs of 90% of the total population in the area. Nevertheless, 38 million urban dwellers do not have access to adequate drinking water supplies. Recently cities in the region have improved access to water. On average 88% of the population of the Andes region has access to this resource, and 79% has access to drainage systems. However, access to water is critical in the shanty towns on the fringes of these urban areas, which are largely inhabited by the poor. In such areas, the scarcity of water has an enormous impact on children, exposing them to many diseases such as diarrhoea, parasitic fever or hepatitis. The Andes region has high rates of child mortality, with extreme levels reported for Bolivia and Ecuador, where 20% of children under the age of five die from gastro-intestinal illnesses.

Water quality is also a major issue. Between 70% and 80% of waste water is channelled back into the water system without any treatment. Despite decreasing availability and quality, little effort has been made to provide adequate water treatment. Waste water treatment rates are only 30% in Bolivia, 11% in Colombia, 5% in Ecuador, 14% in Peru and 10% in Venezuela.

Air quality is also very poor in many countries in the region, exceeding World Health Organization thresholds for pollutants dangerous to human health. The continuing deterioration of air quality has resulted in increases in respiratory illness, allergies and other ailments. This has led to increased spending on healthcare and a drop in the productivity of workers.

There are two types of air pollution: point-source (industry) and mobile-source (motor vehicles). The major problem affecting the region in terms of air pollution is transport systems that allow the use of outdated, low-capacity vehicles. Maintenance is at best inadequate, all too often non-existent, and fuel quality is poor. Some countries have nevertheless tried to remedy this situation. For example the city of Bogotá has launched Transmilenio, a massive public bus transportation system, with articulated buses each carrying 160 passengers. It has also implemented a number of other policies including the conversion of cars from traditional fuels to natural gas, motor vehicle certification and cycling programmes.

Two additional problems faced by cities in the Andes region are the generation and disposal of solid waste. In the last 30 years the amount of solid waste generated by Latin American cities has doubled. Furthermore the composition of the waste produced has changed, with a decrease in organic matter and an increase in non-biodegradable materials which may also contain toxic substances.

The coverage provided by solid waste collection services is low, with inadequate equipment and fees that do not reflect the true value of the service. In Ecuador 53% of the population has access to waste collection services; in Peru the figure is 60%. Often when collection services are not available in some areas of the cities,

solid waste is dumped on riverbanks or burned. At other times, the final disposal sites are the very places where poor people live. Local people sort and sell paper, glass, plastic and other waste materials to scratch a living in an underground economy that represents the only chance for survival for some families.

In the Andes region, sustainable urban development is a major challenge. The key environmental issues affecting the region are complex and go far beyond the environment itself. Despite these difficult conditions, some creative initiatives have emerged that promote the integrated management of all the various components of an environmentally-sustainable urban area. The idea is to ensure that policy decisions generate synergies across a range of sectors. For example the City of Lima has developed an anti-drug programme for street children aged 12 to 17 convicted of petty theft. The goal of the

programme is to increase the children's self-esteem and thus prevent future drug abuse and crime.

One group of 120 children received landscaping training. They were put in charge of maintaining the parks and landscaped areas they had previously used to hide from the police or to use drugs. They received a salary and a uniform. Most of the children who participated in the programme stopped stealing, remained drug-free, and gained a sense of pride in the work they had accomplished while contributing to improving the urban environment.

Building urban areas that can sustain long-term growth demands an efficient institutional framework, comprehensive regulation and enforcement, and active participation by local stakeholders. The number of cities in the region that manage participatory budgets has increased. Local stakeholders play an active role in decision-

making, setting priorities and allocating financial resources, in the fight to solve the issues plaguing the region's cities.

In the Andes region, an average of 18% of the urban population is living in extreme poverty. These people are the region's most vulnerable; they are more likely to live in high-risk areas and contract environment-related diseases, with greater exposure to natural disasters such as floods. In this sense, poverty, the environment and economic growth are closely interrelated. The key to solving these problems is to set up incentives to promote the kind of programme development and investment that will generate long-term economic, social and environmental benefits.

1. Andes Community General Secretariat, Sub-regional Statistical Information System, Decision 115.
2. Based on Andes Community population data at [www.comunidadandina.org](http://www.comunidadandina.org)





# Malindi leads the way with community activism

By Cecilia Kinuthia-Njenga, Human Settlements Officer, UN-Habitat

Just mention the expression “shanty town” and the first thing that springs to mind is filth. While this may be true of slums around the globe, it is not the case in Kisumu Ndogo and Maweni in Malindi, Kenya. These two shanty towns, much as Malindi itself, are free from the litter and solid waste plaguing most unplanned settlements and towns in Kenya today.

Malindi is a popular tourist destination 125 kilometres north of Mombasa on the Indian Ocean. Over the years the urban environment deteriorated so much that residents became alarmed, prompting them to form the Malindi Green Town Movement (MGTM) to introduce sustainable, integrated urban environmental planning and management.

The project targeted an area of 670 sq km with a population of 140,000. One third of the area is part of the Indian Ocean coastal ecosystem. The intended beneficiaries of the project were the poor of Malindi - mainly women and young people. Community ownership of the project was a key success factor. Today a visitor walking through Kisumu Ndogo and Maweni will see garbage bags outside every door. Members of the community collect and bag garbage from their homes and the surrounding area. The bags are then collected by youth groups and stored at a temporary site in the community. The municipal council takes the garbage to designated dumps. The project has provided community members with income and boosted the capacity of the Malindi town council to involve key stakeholders.

Prior to this initiative the community had had no experience with solid waste management. Residents dumped their waste directly into the ocean, gradually turning Shella Beach, the oldest part of Malindi and the most attractive part of the bay, into a health hazard and an eyesore. Because it is located in a basin, with sand dunes on the beach side and hills to the west, south and north, the town flooded whenever it rained. To make matters worse, there was no conventional drainage or sewer system. Most residents depended on water from wells, some of which were dangerously close to pit latrines. Household wastewater

often overflowed into the streets and the ocean. The constant flooding left the barren, dusty streets riddled with potholes. Litter such as plastic bags and coconut shells was scattered throughout the town, where cattle could also be seen grazing. There was a filthy produce market with makeshift stalls and even a dumpsite right in the middle of a housing estate.

Virtually no town planning had ever been carried out. The lack of a proper zoning plan led to the spread of slums. There were no playgrounds, public gardens or other amenities. Disease, especially malaria, was a particular threat to infants from low-income homes. The town council lacked the adequate resources and by-laws for effective planning, waste management and environmental protection, undermining its credibility. Moreover the community did not have the necessary negotiating and lobbying skills to compel the council to provide services. Ideally environmental conservation in Kenya is managed by the federal government in partnership with municipal councils and citizens. However citizens bear the brunt of mismanagement and lack of effective policies.

One of the reasons behind the problems plaguing Malindi and many other Kenyan towns is the absence of a sound legal framework for environmental issues. Often, there is little the community can do against individuals or institutions that contribute to the environmental degradation of public spaces.

Outraged by the situation, a group of residents formed the Malindi Green Town Movement (MGTM) in 1994. According to MGTM Chairman Godfrey Karume, “We were appalled by the plastic paper [sic] menace, garbage dumping along the beach and in residential areas, dirty streets, poverty in the communities and the allocation of public spaces to private developers.”

Garbage collection, a service lacking in many towns in Kenya, is now provided by local youths, most of whom were previously unemployed. Statistics from MGTM show that the youths collect an average of 50 tonnes of solid waste every week. They generate income by charging between 100 and 150 shillings (\$1.30 to \$2) a month, serving a population of 80,000. Maweni resident Esther Katunda states, “Since we discovered that

garbage could be turned into income, we have not turned our backs on it; we collect it and transform it into a livelihood.”

Working with the council, the community has defined a set of environmental by-laws, which are in the process of being passed for use in Malindi. MGTM and the town council signed a memorandum of understanding setting forth the rights, responsibilities and obligations of each party regarding solid waste management. Women’s and youth groups, and other community-based organisations have obtained vehicles from the council and repaired them for refuse collection.

Village committees were set up to organise the new fee-based waste collection system, with 19 solid-waste storage points built at central locations. Youth groups now compost biodegradable material and operate a garden producing food and seedlings and selling surplus compost to local farmers. The movement has developed a two-wheeled bike to collect waste and is involved in activities such as cutting grass and clearing brush around homes, sealing open manholes, spraying insecticide to kill mosquitoes, and chlorinating public wells to improve water quality. The crows that once blighted the town have been trapped and their eggs destroyed. The Watamu dump, in the middle of a residential estate, has been relocated and the site rehabilitated and turned into a park.

Plastic bags – an environmental threat all over Kenya – are conspicuously absent in Malindi, thanks to the zeal of women’s and youth groups in Kisumu Ndogo and Maweni. They collect the bags as raw materials for a cottage industry producing baskets, hats, table mats, floor mats and other products. Local schools have been recruited to help, with the one that collects the most winning a trophy for environmental protection. Women’s groups involved in the cottage industry pay a shilling per kilo of plastic. They will soon be selling plastic to a firm that manufactures containers and other items.

Malindi has been transformed. The town has regained its former beauty and is once more attractive to tourists. Due to the high level of awareness and increased public involvement in environmental issues, residents are determined to maintain the improved conditions. Shella Beach is now home to beach-football pitches, boat-building yards, public gardens, and sunbathers.



The communities have been empowered to work together through the village committees to solve environmental problems. For example, the government was recently forced to stop a hotel developer when Malindi residents voiced their concerns over the potential dumping of untreated wastewater directly into the ocean. Similarly the community blew the whistle on a foreigner who was illegally exporting live coral to Europe for use in aquariums. The project has boosted the level of community activism and residents now regularly speak out at town meetings.

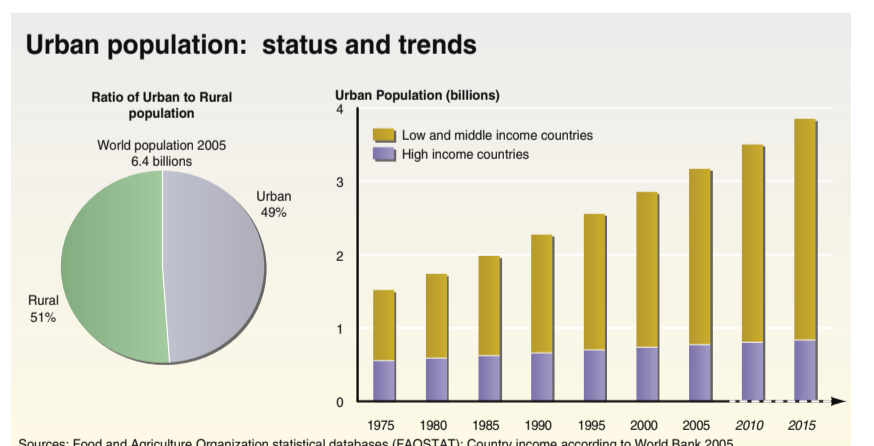
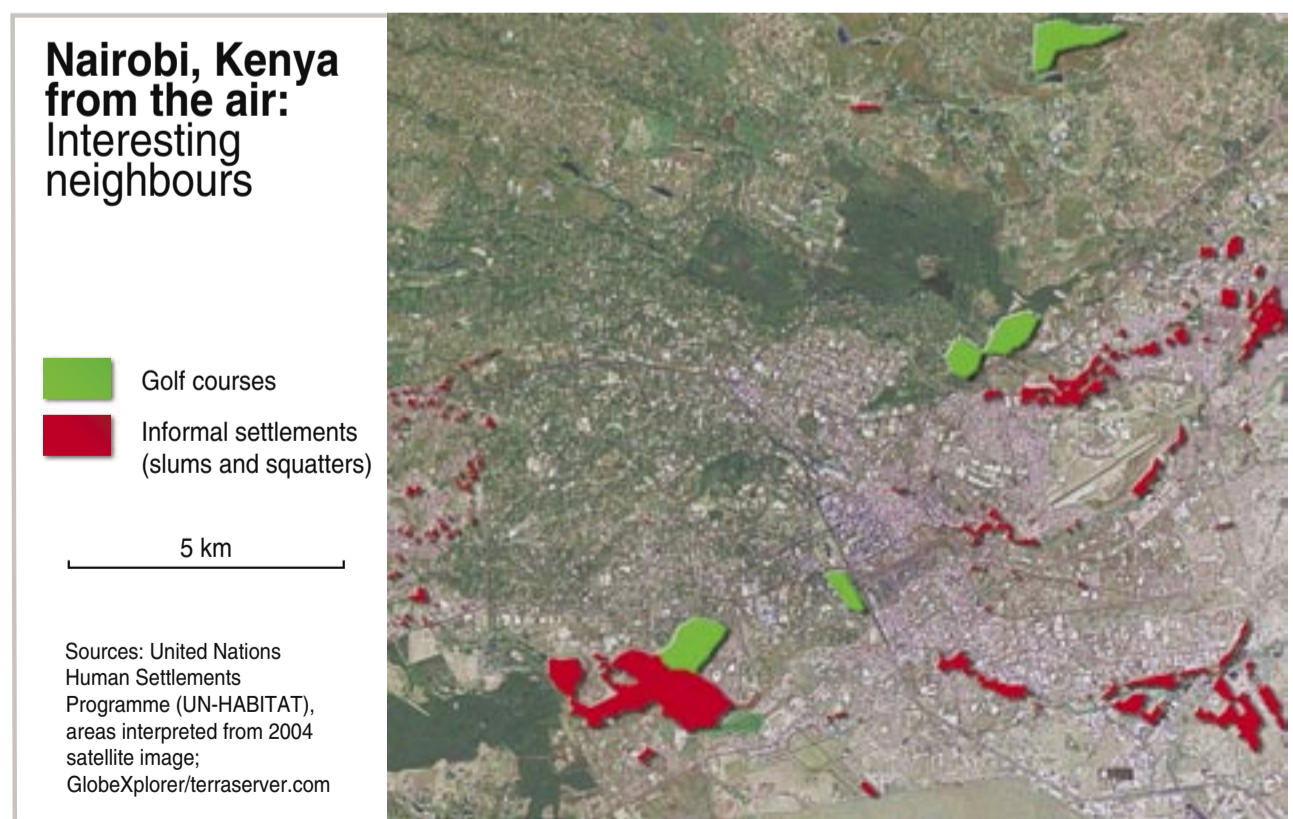
The structures created through this project have given community members a forum where they may express their ideas and find solutions. Citizens have taken responsibility for local problems and a number of locally-funded initiatives have been implemented with the support of readily-available human resources in the community.

At a time when cities and towns all over Kenya are grappling with mismanagement, poor service delivery and environmental degradation, Malindi has invested in a grassroots solution based on good governance empowering women and encouraging community participation. The project’s community-based environmental conservation and recycling activities supplement efforts made by the local council.

Malindi has received national and international recognition for its efforts and has won a number of awards, including the UN-Habitat/Ford Foundation Mashariki Innovations in Local Governance Awards Programme (MILGAP) prize in 2004.

## Key lessons learned from the Malindi Town Movement

- The public is ready and willing to support well-managed programmes.
- People want to be associated with success.
- People are willing to contribute to dealing with common problems as long as they are actively involved and programmes are managed in a transparent manner.
- Money is not the best catalyst for change; it is merely a tool. When necessary, press coverage should be given.
- Records must be maintained at all times for project activities and, where necessary, project reports must be written and filed.
- MGTM uses banners, leaflets, newsletters, T-shirts, buttons, barazas (assemblies), songs, poems, dances and public announcements. Members belonging to other organisations publicise activities ahead of time.
- The credibility of an organisation is vital.
- The answer to cleaning up urban areas is community mobilisation and recycling.
- We can overcome challenges and achieve positive results through a high level of commitment.



Nairobi has undergone dramatic growth since 1979 and is now home to well over 3 million people making it the largest African city between Johannesburg and Cairo. It sprawls to the new suburbs and slums north, east and west. It is interesting to compare the area covered by golf courses and informal settlements and their respective locations. Slums – home to about 60% of Nairobi’s population – occupy almost the same amount of space as golf courses. Kibera – one of the oldest and largest slums in Kenya and Africa, with between 500,000 and 800,000 occupants – stands next to a golf course roughly the same size. For decades neither seems to have impinged on the other’s existence. The golf course has irrigated greens, whereas the neighbouring slum dwellers are underprivileged consumers.