



TUNZA

for young people • by young people • about young people



WHERE the WILD THINGS are...

GREEN CITIES: Plan for the planet!

SUPERSIZE ME...

...the growth of cities...

PRIUS test drive...

ESSENTIAL ELEMENTS...

Green KAISER...

WASTE NOT...

...WANT NOT



TUNZA

TUNZA

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photo: K. Songuattana/UNEP/Topham



photo: Nigel Young/Foster and Partners



photo: Wolfgang Schmidt/Still Pictures

UNEP and Bayer, the German-based international enterprise involved in health care, crop science and material science, are working together to strengthen young people's environmental awareness and engage children and youth in environmental issues worldwide.

A partnership agreement lays down a basis for UNEP and Bayer, who have collaborated on projects in the Asia and Pacific region for nearly ten years, to step

up current projects, transfer successful initiatives to other countries and develop new youth programmes. Projects include: TUNZA Magazine; the International Children's Painting Competition on the Environment; the Bayer Young Environmental Envoy in Partnership with UNEP; the UNEP TUNZA International Youth Conference; youth environmental networks in Asia Pacific; the Asia-Pacific Eco-Minds Forum; the Eco Forum in Poland; and a photo competition, 'Ecology in Focus', in eastern Europe.



Partners for Youth and the Environment



**Green cities:
Plan for the planet!**



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photo: Tjyawatchalapong/UNEP/Topham



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photo: Sean Sprague/Still Pictures



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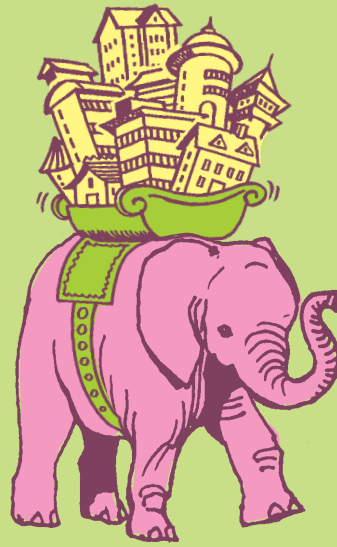
photo: <http://www.hrt.msue.edu/greenroof/>



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photo: Stephan Brameisen, University of Applied Sciences, Wädenswil

Planning for an urban planet



Our generation is about to notch up an extraordinary record: we will be the first in the entire history of humankind to live mainly in towns and cities. Soon, more than half the people on earth will live in urban rather than rural areas – after millions of years, humanity will have become a predominantly urban species.

And the trend will not stop there. By 2030 – when our children will probably be much the same age as we are now – two thirds of the world's people will be in the ever-expanding towns and cities. Already more of us – 3 billion – live in them than inhabited the entire globe just 50 years ago, and their numbers are swelling by more than a million every week.

Cities present great economic, cultural and social opportunities. But many of the world's environment and development crises are concentrated in them. They suck in resources from all over their countries and the rest of the world, creating enormous 'environmental footprints' that can be bigger than entire nations. The wastes they emit are responsible for most of the worst pollution of land, air and water. And, though poverty is often worse in rural areas, it is more concentrated – and therefore more politically explosive – in urban ones.

It's quite an inheritance. Fortunately something is being done to get to grips with it. This year's World Environment Day, on 5 June, is focusing on Green Cities. Mayors from all over the world will converge on San Francisco for the day's main celebrations.

The mayors will share ideas and experiences of tackling problems – and work out solutions. The day's theme is, after all, 'Plan for the Planet!' They plan to adopt the world's first ever set of environmental agreements to be made between municipal governments. These San Francisco Urban Environmental Accords – which will be signed on the 60th anniversary of the founding of the United Nations in the city – will lay down measures to reduce climate change, waste and pollution, and increase wildlife and public transport.

It is good that the mayors will be setting goals for our new urban planet. But it will be up to us to see that they are met, for cities have a vital part to play in delivering a more environmentally sustainable world.

We want to hear from you – your views, your news and your ideas. E-mail us at: tunza@ourplanet.com.

Editorial

Essential elements

Asphalt, steel, plastic and petrol may be more familiar elements to city dwellers than the traditional water, fire, earth and air. But like everyone else urbanites depend on the natural world, just the same.

Here's how.

photo: Topfoto/Image Works

▼ Air

Half of the world's city dwellers – men, women and children – have to breathe potentially dangerous air every day. Many hundreds of thousands die from outdoor air pollution; many more become ill from asthma, bronchitis, lung and heart diseases.

Mexico City's air pollution is amongst the worst in the world – in the past, birds have fallen dead out of the sky over its central square. Ozone levels exceed international standards 300 hours a year, mainly due to the city's 4 million ageing motor vehicles and more than 30,000 factories.

But there are solutions. Los Angeles was once a byword for

smog. But southern California has done much to clean up its air and has introduced measures to green the car. Most cities in developed countries have phased out leaded petrol, which can damage children's brains. Switching to unleaded petrol saves money too – the United States saved \$10 for every \$1 invested in the switch, through reduced health costs, low engine maintenance and improved fuel efficiency.



photo: Topfoto/R. Roberts

▲ Food

The world's towns and cities grow by another million people each week, and as they swell to take in the newcomers, there is less land to feed urban dwellers. Food has to travel further to reach them: up to a third of it is spoilt in transit.

Farming the city helps solve this. Around the world, 850 million city dwellers (a quarter of the world's urban population) are fed by some 200 million urban farmers cultivating plots ranging from community gardens and commercial farms to domestic yards and rented municipal land in public allotments. Some supply local



photo: Shihua Zhao/UNEP/Topham

markets and businesses; others just eat what they grow. Farming the city provides jobs, as well as vital nutrition.

But high pollution rates and inadequate waste disposal can contaminate crops; poor animal husbandry can hasten the spread of diseases to humans; and using urban land for farming can increase sprawl, as displaced people and businesses seek space nearby. Sometimes it makes economic sense to rely on fertile rural lands and use metropolitan space to yield a higher financial return.

But in cities as varied as Jerusalem, Dakar and St Petersburg (where more than half the city's 5 million residents cultivate produce), urban farming is improving people's lives.



photo: Dale Hinman/UNEP/Topham

▲ Water

Poor children in city slums die more often of waterborne diseases than their counterparts in the countryside, even though urban areas are better supplied with water and sanitation than rural ones. Infections and viruses flourish in the concentrated waste produced by high densities of people.

In Latin America 120 million urban people are estimated to have no easy access to clean water: in Africa this rises to 150 million and in Asia 700 million. Even more lack sanitation: 150 million in Latin America, 180 million in Africa and 800 million in Asia.

Meanwhile cities from Phoenix to Johannesburg, Lima to Madrid

have to bring in water from hundreds of kilometres away, as rains fail and they use up their groundwater supplies.

The world's leaders have pledged to halve the number of people without clean water and sanitation by 2015. Progress is mixed, but some countries – like South Africa – are well ahead of the target, showing what can be done. Meanwhile conserving water and planting trees on watersheds can protect precious supplies.

▼ Parks

Humans have long recognized the value of urban green spaces – from the 6th century Hanging Gardens of Babylon and the palatial horticulture of Renaissance Florence to planned garden cities in Victorian England and today's Central Park in New York.

Parks and natural settings have been shown to improve the physical, mental and emotional health of people as varied as cancer patients, schoolgirls and occupants of tenement housing. Public greenery can strengthen civic pride, create jobs, engage youth and the elderly, and improve public health and safety.

Citizens know the worth of parks and other green spaces, and have often rallied to save them when they have been threatened by development.

Indeed one of the world's great cities owes its existence to a park. In 1652, Jan van Riebeeck of the Dutch East India Trading Company planted what is now called Company's Garden to provide fresh vegetables to Dutch sailors sailing round the tip of Africa. The city of Cape Town then grew up around the grounds – which today house public paths, fountains, pools, a botanical garden, museums and the South African parliament.



photo: KGH

Essential elements

Rooms with a view ● ● ● ● ● ● ● ● ● ● (of the future)

In today's concrete jungles, sustainable architecture is – literally – breaking new ground. Green building principles – which seek to provide both the best structural performance and to conserve water, land and energy – are changing the way buildings are designed, built and run.

Green architecture is becoming more and more popular. Corporations and governments are increasingly signing on. Building green can reduce energy consumption (and thereby running costs), as well as increasing productivity, health and morale in the employees, students – or even shoppers – inside.

A **Condé Nast Building, New York.** Architects: Fox & Fowle, 1999

Right at 'the crossroads of the world' – New York City's famed Times Square – the Condé Nast Building (home to the publishers of Vogue, Glamour and GQ magazines) was one of the first-ever green skyscrapers. A massive network of recycling chutes services each of its towering 48 floors. Two fuel cells use natural gas instead of fossil fuels to supply the building with all its night-time electricity, and 5 per cent of its massive daytime needs. The exhaust gases are then used to heat the building and provide hot water, while specially glazed windows allow daylight in and filter out ultraviolet rays.

B **Swiss Re Tower, London.** Architects: Foster and Partners, 2004

Londoners have affectionately dubbed the Swiss Re Tower 'the Gherkin' for its uncanny resemblance to a giant pickle on the city skyline. The global reinsurance company – which has taken a lead in calling attention to the dangers of climate change – made its words concrete when building its offices. The 180-metre tapered glass tower, which rises above a ground-level plaza of restaurants, shops and cafes, is within easy walking distance of public transport and uses 50 per cent less energy than a conventional building of similar size. Upwardly spiralling light wells circulate fresh air and natural lighting throughout its 40 floors, and exterior weather sensors monitor outside temperature, wind speed and sunlight levels, closing blinds and opening window panels as needed.

photo: Fox & Fowle Architects/Andrew Gordon Photography



A

photo: Nigel Young/Foster and Partners



B





C

C Edificio Malecon, Buenos Aires.
Architects: Hok Sustainable Design, 1999

The 12-storey glass tower Edificio Malecon is one of the most technologically advanced office buildings in Buenos Aires. It stands on a reclaimed brownfield site of old industrial land: its parking garage is built within the foundations of a 19th century warehouse. Its long, narrow shape and orientation from east to west are designed to minimize the amount of solar heat trapped during the hottest times of the year, while mechanized sunshades and windows deflect excess sunlight and harness cooling breezes from a nearby river. High performance, lightweight exterior panelling forms a glass curtain wall to protect the building from the elements while providing wide views from every angle.

photo: Daniela MacAdden/Hok Sustainable Design



D

D Menara Boustead, Kuala Lumpur.
Architect: Ken Yeang of T. R. Hamzah & Yeang Sdn Bhd, 1986

Menara Boustead, the Kuala Lumpur headquarters of the international information and technology company IBM, is an energy-saving skyscraper that aims to make use of the tropical climate. Windows and glass curtain walls maximize natural lighting throughout its offices and meeting rooms, as well as lobbies, lifts, lavatories and stairwells. A specially glazed curtain wall prevents the building's 30 floors absorbing excessive solar heat, while external fins and adjustable slats provide shade from the sun. Skycourts, terraces and atriums house plants and other greenery, increasing the supply of oxygen and sending natural ventilation through the building's core.

photo: T. R. Hamzah & Yeang Sdn Bhd

E The Green Building, Cape Town.
Architect: Mike Schroeder of the Development Action Group, 2003

The low two-storey Green Building, in Cape Town's Westlake Business Park, is built from recycled, local concrete brick and sustainably harvested wood, and boasts a passive thermal design that eliminates the need for air conditioning. If needed, the building can be flushed with cool night air through two chimney ducts linked to concrete pipes running underneath the ground floor. Roof-mounted photovoltaic (solar cell) panels turn sunlight into electricity, while a separate solar power system heats water for kitchens and bathrooms – including showers for those who cycle to work. Drainage systems channel household 'grey' wastewater and rainfall into surrounding fruit and vegetable gardens.

Another innovative green building – the Reichstag in Berlin – is featured in the 7 City Wonders on page 22.



E

photo: Mike Schroeder, Cape Town

photo: Dylan Garcia/Still pictures



Pedal power

Cyclists in Vienna can hop on any of the city's 1,500 public bikes any time of the day or night free of charge, thanks to the municipal 'Viennabikes' programme launched in 2002. The pink and blue bikes – weighing about 17 kilos each to deter theft – can be picked up and dropped off at any one of 235 terminals throughout the central districts. Users insert a small deposit of 2 euros (\$2.60), refunded on return, and tourists are invited to take free maps of the city with them.



photo: http://www.wien.gv.at

Think traffic, think jams. Cars in Washington DC spend the equivalent of almost three days a year stuck in traffic; vehicles in Bangkok, an astounding six weeks. So we can add wasted time (costing trillions of dollars), to air and noise pollution, and injuries and deaths from accidents – in assessing the price of city life.

And it's going to get worse as cities grow – and grow more prosperous. Car ownership rises as fortunes improve: on average, wealthy households make twice as many trips daily as lower income ones. Are there any answers?

High performance

Bogotá, Colombia – one of the world's highest capitals – has made extraordinary progress in switching from cars to public transport. It has set up a remarkably successful rapid transit bus system – the TransMilenio – which now carries more than a million people a day and is estimated to save each of them an average of 300 hours in commuting time every year. By 2020, 85 per cent of the city's 9 million people will live within 500 metres of a station. Meanwhile the city bans 40 per cent of its cars during rush hours, closes 120 kilometres of roads to traffic every Sunday, and has scrapped planned new highways

JAMS

预览已结束，完整报告链接和二维码如下：

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