

# Cities and Biodiversity: No Longer Foes

*Although cities occupy just 2% of the Earth's surface, they house half of the world's population, while urban dwellers use 75% of the planet's natural resources.*

Cities' ecological footprint extends far beyond their boundaries, as growing populations and food demand claim more agricultural land conversion or industrial pollutants make their way from cities downstream. Meanwhile, urban growth with its associated housing developments is fast replacing natural habitats, and is intensifying the use of natural resources for building materials and energy consumption. Furthermore, global challenges such as climate change or the spread of invasive alien species are also magnified by cities.

just a few kilometers from downtown, over 400 bird species are found. Even more astonishingly, we are seeing the emergence of species only occurring in urban areas, such as the black redstart (*Phoenicurus ochruros*), a bird recently found to breed only in buildings or other urban structures in the UK.

Many local initiatives are integrating environmental concerns into urban planning. With the protection of biodiversity in mind, local decision-makers of the Japanese city of Nagoya decided to protect its Fujimae Tidal Flats, an

important stopover site for migratory birds, by limiting the construction of wind mills along the flight path. In Walvis Bay, waste collection infrastructure incorporates urban poor called "scavengers" into



However, the idea that urban and natural environments are by definition foes, rather than friends, is increasingly being challenged. Without dismissing the impacts of urban growth on natural habitats, more and more cities are looking at the two as being complementary, especially since the disruption of global biodiversity and ecosystem services impacts on cities themselves. What is more, cities such as Bonn, Montreal, Nagoya, Curitiba and Walvis Bay are all offering examples of how urban development may in fact contribute to the conservation, sustainable use, and fair and equitable sharing of benefits arising from biodiversity.

This year, for the first time in history, more people will live in cities and towns than in the countryside – making us officially an urban species. The often neglected fact is that people living in a rapidly urbanizing world with shrinking natural habitats often know only one kind of biodiversity: the one found in cities. Besides, cities and biodiversity share the same territory. For instance, São Paulo's parks and green spaces are home to 47 endemic species of mammals, 31 reptiles and 40 amphibians. In Nairobi National Park,

the recycling system, with some 100 people making a living from recycling over a thousand tonnes of solid waste per year. Recycling also reduces the space required for land filling thereby helping to conserve the city's dune ecosystems and unique species adapted to Namibia's harsh arid conditions. The Canadian city of Montreal adopted a Tree Policy that aims to diversify the species of trees lining city streets and expand the canopy cover to offset the "urban heat island" effect and devastating insect infestations that are becoming more frequent with climate change. In Bonn, Germany, over half of municipal lands are classified as protected areas, and the city government publishes annual environment, climate change and sustainability reports to improve their management.

While the problems are similar, solutions are as diverse as the cities themselves. However, there are common aspects to successful interventions which indicate that, in order to manage biodiversity successfully, cities have to mainstream biodiversity into planning, establish functioning governance structures able to enforce legislation, involve citizens and especially poor communities from the start, invest in education and awareness, and cooperate with other levels of government.

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## **The Urban Environment Newsletter Goes Electronic!**

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# Asia

Hailin City, China

## Boundless forest on a snowy plateau

Lying in the southeastern part of the Heilongjiang Province, Hailin City has a population of 440,000. The city is poetically known as “boundless forest on a snowy plateau”, the title of a famous novel by the Chinese writer Qū Bo.

Forest, water and other natural resources significantly contribute to development of Hailin City, but have also been under severe pressure from the same. With a forest cover of over 70%, Hailin “lives on forest, develops on forest”, as the local saying goes. The forests are also rich in biodiversity, ranging from medicinal plants, such as ginseng, to charismatic mammals like the Siberian (Manchurian) tiger.

The city’s water supply mainly comes from the nearby Hailang River, but due to the lack of wastewater treatment facilities, over five million tonnes of untreated sewage and industrial wastewater used to be discharged into the river annually.

In order to improve urban environmental management and planning, Hailin joined the UNEP/ UN-HABITAT Sustainable Cities Programme in 2005. Since then, the city has formulated, through stakeholder consultation, a strategy and action plan for water conservation and management. Enforcement of existing forest management policies and reforestation programmes helped increase the forest cover from 71.3% in 2000 to 74.2% in 2007. Public awareness of the importance of preserving biodiversity and healthy ecosystems has also grown. Many challenges still remain, but Hailin City remains committed to following the path of sustainable urban development.



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# Africa

## Lake Victoria Cities and Biodiversity

Shared by Kenya, Uganda and Tanzania, Lake Victoria is the second-largest freshwater reservoir in the world and the source of livelihood for some 30 million people. The urban sprawl around the Lake has been the principal threat to biodiversity, as these coastal cities lack adequate urban planning and infrastructure, resulting in air and water pollution, deforestation and wetland degradation due to poor land use practices, and the scarcity of green spaces.

In response to these challenges, the local authorities of the Lake Victoria cities have recently embarked on the process of elaborating City Development Strategies defined as action plans for sustainable growth through participation of all stakeholders. Significantly, all local authorities have recognized the importance of improving the urban environment for enhanced productivity and poverty reduction, and prioritized *in situ* conservation as the principle mechanism to stem biodiversity loss.

Kenyan cities of Kisumu and Homa Bay are undertaking tree-planting initiatives to protect existing green spaces and rehabilitate degraded areas. In Tanzania, Bukoba and Musoma are taking steps to promote the sustainable use of wetlands and alleviate pollution from current waste management practices. In Uganda, environmental awareness programmes in Jinja support designation of environmental zones within the municipal boundaries to restrict development, safeguard shorelines and wetlands, and control runoff and erosion, while in Entebbe, the varied collection of plant and animal species hosted by the Botanical Gardens is being showcased.

These initiatives demonstrate that local actions aimed at protecting biodiversity can have direct positive impacts as well as contribute towards the achievement of the Millennium Development Goals.



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# Curitiba – The City of People

Curitiba is one of the most liveable urban centres of Brazil, if not of Latin America, thanks to a succession of visionary mayors that have continued to build on the sustainability legacy of their predecessors. Back in the 1970s, the city government decided to solve the environmental and social problems associated with car-dependent urban mobility. Thirty years later, Curitiba is dubbed “The City of People” and boasts not only an environmentally friendly public transport, but also a pioneering recycling system which employs formerly disadvantaged communities in a “waste for food” programme.



Earlier this year, Curitiba introduced another city-wide project which shows that social and environmental concerns are two sides of the same coin. Curitiba’s Biocity Programme combines public and private initiatives in an effort to contribute to the global target to reduce the loss of biodiversity by 2010. The city government

has created Biocity Conservation Units with the participation of civil society to preserve green areas in private ownership as well as committed itself to planting only species indigenous to the region. A new research centre for indigenous plants in Curitiba Botanical Gardens offers training and information to the public.

Larger planning projects such as the revitalization of the Barigui River Basin and of a federal highway that crosses the city envisage the creation of parks along the river and the highway, bicycle lanes and pedestrian pathways, and the use of bio-fuels in public transport. Through the Land Ownership Regularization Plan, the city has worked with the informal settlers to relocate them to new neighbourhoods. The relocation is accompanied by social programmes and employment schemes where beneficiaries are engaged in the protection of the areas where they previously lived.

The experience of Curitiba shows how a dedicated local authority can create a sustainable city for and with its citizens. A planning approach that combines environmental and social concerns and involves stakeholders from the very beginning has taken Curitiba where it is today – a city of people which ranks highest for its liveability in the entire country.

**More Information:**

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## Local Action for Biodiversity (LAB)

– an ICLEI Initiative

The Local Action for Biodiversity (LAB) Project is a global urban biodiversity initiative recently launched by ICLEI – Local Governments for Sustainability, which was initiated by the City of Cape Town at the ICLEI 2006 World Congress and supported by the City of eThekweni (Durban). The Project aims to promote and deliver on the importance of urban biodiversity through coordinating the sharing of experiences, successes and challenges from a diverse group of participating local governments from around the world.

LAB focuses on the key roles that local authorities currently play, as well as the increasingly critical role that they will play into the future, in conserving the world’s biodiversity. Local governments with a track record of involvement and interest in biodiversity initiatives are invited to participate in the LAB Project. So far, some 20 local governments have committed to the project, and several of them are now completing their Biodiversity Reports, the first step in the LAB Project. Other deliverables include: the compilation of Biodiversity Action Plans and Frameworks based on a LAB Toolkit; formal commitments to biodiversity by local government leaders; and five on-the-ground initiatives that each local government will undertake, representing 100 new areas to be managed for biodiversity within world cities.

In October 2007, all participating local governments will gather in Zagreb, Croatia for a workshop, which will focus on the development of a toolkit for urban biodiversity, identify future steps, and discuss the emerging global partnership of agencies, foundations and national and local governments in support of urban biodiversity.

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Latin America

Partner

## Mayors Commit to Achieving the Global 2010 Biodiversity Target

Curitiba, Brazil, 26-28 March 2007: For the first time in the history of the Convention on Biological Diversity (CBD), mayors gathered to discuss the role of cities in achieving the target to significantly reduce the loss of biodiversity by 2010. The mayors adopted the Curitiba Declaration on Cities and Biodiversity which will be conveyed to the ninth meeting of the CBD Conference of the Parties, to be held in May 2008 in Bonn, Germany. The Declaration endorses the Global Partnership on Cities and Biodiversity, initiated by establishment of a clearing-house mechanism in UNEP, which brings together existing initiatives the CBD Secretariat, as a forum for exchange on cities and biodiversity. The Declaration of experiences, was also recommended. UNEP also emphasizes the need of raising public awareness and educating new generations, as well as disseminating best practices and lessons learned through cooperation between cities. The Declaration is requested to assemble a publication of awareness and educating new generations, as case studies from around the world, on cities, ecosystems and biodiversity, in collaboration with UN-HABITAT and ICLEI.



### Upcoming events:

**ICLEI Local Action for Biodiversity Workshop**  
15-17 October 2007  
in Zagreb, Croatia

**Second United Cities and Local Governments World Congress**  
28-31 October 2007  
in Jeju, Republic of Korea

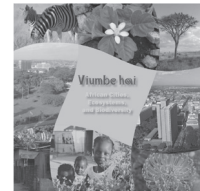
**UN-HABITAT Expert Group Meeting**  
"Urban planning best practices"  
8-9 November 2007  
in Rome, Italy

**UN-HABITAT Expert Group Meeting**  
"Climate Change Mitigation and Adaptation at the Local Level"  
21-22 November 2007  
in Nairobi, Kenya

**Municipal Leaders Summit on Climate Change at UNFCCC COP 13 and Kyoto Protocol MOP 3**  
3-14 December 2007  
in Bali, Indonesia

## Viumbe hai – African Cities, Ecosystems and Biodiversity

Wildfires, floods, vital ecosystems clogged with waste, human-wildlife conflict, pressure on green spaces due to urbanization and development – these are some of the challenges cities in Africa have to tackle when managing the ecosystems within and outside their boundaries. A new booklet published by UNEP, UN-HABITAT and ICLEI presents six case studies which describe how urban managers have found innovative solutions to meet these challenges. Cape Town, Accra, Nairobi, eThekweni (Durban), Walvis Bay, and Dar es Salaam offer evidence how the urban poor can benefit from healthy ecosystems for example through employment in tourism and improved health and food security.



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## Lake Victoria Environment Outlook

The Lake Victoria Environment Outlook report provides an in-depth integrated analysis of the environmental dynamics within the basin. The report has been prepared within the framework of the Africa Environment Outlook (AEO) process. Set within the context of environment and development, the report explores the plight of people and their livelihoods. It considers social and economic issues, including global trade and conflict, and their interaction with the environment. The report also discusses the existing policy framework and options for improving these livelihoods and sustaining the environment in order to achieve sustainable development in the basin.



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