STATEMENT

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ON THE OCCASION OF THE

CITIESALIVE!
WORLD GREEN ROOF INFRASTRUCTURE CONGRESS

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COP10 MOP5

PROMOTING BIODIVERSITY IN CITIES OF TODAY AND TOMORROW

Ladies and Gentlemen,

The United Nations has designated the first Monday of October every year as World Habitat Day. This year, under the theme "Planning our urban future", UN Secretary General Ban Ki Moon stressed the importance of sustainable urban planning to meet the needs of city dwellers. The Secretary General stated that the major challenges of the twenty-first century include the rapid growth of many cities and their role in causing and mitigating climate change. If new ideas from smart cities around the world are pointing the way toward sustainable urbanization, there is a lot more to be done in terms of urban governance and support to urban development globally[1].

Along with climate change, the challenge of protecting biodiversity is at the forefront of political attention today. The UN General Assembly declared 2010 as the International Year on Biodiversity in recognition of the enormous significance of biodiversity for the citizens of the world. Biodiversity means health, fresh water, clean air, jobs, development, and protection against the negative effects of climate change. In the urban context, biodiversity means quality of life.

I would like to thank the Congress Partners, Green Roofs for Healthy Cities, the City of Toronto and the World Green Roof Infrastructure Network, their organizing committees and sponsors, for organizing CitiesAlive! As an international platform for the exchange of ideas, this congress represents a unique opportunity to discuss the crucial role of urban infrastructure development and urban greenery in addressing global challenges such as climate change and biodiversity loss.

I wish to take this opportunity to congratulate the City of Toronto, mayor Mayor David Miller and deputy mayor and councilor, Joe Pantalone, for their leadership role in implementing the first Green Roof by-law in North America and for promoting the benefits of green infrastructure on biodiversity and ecosystems. Allow me to use a quote by Mr Pantalone's 16-year-old son who was paying him a compliment for his efforts at greening his own roof: "Dad, you've created your own ecosystem here where before there was a desert". Like him, I applaud the City of Toronto's efforts as well as those of the leading cities present today. Such contribution at raising awareness on the importance of biodiversity is invaluable because winning the hearts of citizens is a crucial step in the fight for life on Earth. It simply confirms that local authorities have a major role to play as global change starts at the local level.

The role of cities and local authorities in reducing biodiversity loss

As we know, ecosystems are what sustain human life on this planet. Most humans now live in cities, which are themselves dependent on ecosystems for the provision of food, quality of

[1] UN Secretary General, "Message on World Habitat Day", United Nations, 5 October 2009.

air, drinking water, building material, clothes, fuel, medicines etc. Benefits beyond basic necessities - cultural, aesthetic and economic play an important role in providing urban citizens with a higher quality of life.

For example, we are all aware of the increasing demand for urban greenspace. Studies by the World Health Organization demonstrate that overcrowding, noise, air pollution, and lack of green spaces and communal meeting places such as parks, are associated with increased stress levels among city residents and have a significant effect on mental health.[2] In addition, the economic value of biodiversity is huge: about 40% of the world economy is based on biological resources. It is a priceless treasure for us and for future generations

Towns and cities are growing today at unprecedented rates, setting the social, political, cultural and environmental trends of the world, both good and bad. In 1950, one-third of the world's people lived in cities. Just 50 years later this rose to one-half and will continue to grow to two-thirds, or 6 billion people by 2050. Cities are now home to half of humankind and use 75% of the planet's natural resources. Humanity's ecological footprint is 2.2 ha per person – over 21 per cent greater than the earth's biocapacity (1.8 ha), or its capability to regenerate the resources used[3]. In other words, it now takes more than one year and two months for planet Earth to regenerate what we, its inhabitants, use in a single year.

Such rapid urban development and consequential exploitation of natural resources has had disastrous effects on plant and animal habitats. Already species are disappearing at the rate of 150 to 200 a day, between 50 and 100 times the natural rate. It is the greatest extinction crisis since the dinosaurs disappeared… 65 million years ago.

Political and institutional mandates of cities and local authorities are key to reducing the rate of biodiversity loss. For example, cities often manage surrounding watersheds and the delivery of freshwater, and biodiversity is a much more economic and efficient water depurator than any treatment center. This point is plainly demonstrated by the example of New York City, which is estimated to have saved billions of dollars by investing in watershed protection instead of building and operating water treatment plants[4].

Cities are often responsible for decisions relating to urban infrastructure, energy and transportation, all of which have a large impact on climate change and biodiversity. Municipal governments determine norms for construction, development and day to day commerce (they authorize operating licenses for business). As most economic decision-makers are in cities, significant progress in preserving biodiversity can be made through partnerships between local governments and the private sector. Cities can also integrate a variety of environmental quality

[2] WHO, 2007; WHO Centre for Health Development, 2007; Evans, Wells & Moch, 2003; Vijayakumar, 2004; New York City Department of Health and Mental Hygiene, (n.d).; Qin, 2005; Galea, et al. (n.d.); Blue, 2000; Izutsu, et al., 2006. As referenced by UN-HABITAT, idem.p.162.

[3] United Nations Human Settlements Programme (UN-HABITAT) "Innovative cities. Why learning is the key to urban development" , 2008. p. 128. On line http://www.unhabitat.org/categories.asp?catid=365

[4] "How New York City Used an Ecosystem Services Strategy Carried out Through an Urban-Rural Partnership to Preserve the Pristine Quality of Its Drinking Water and Save Billions of Dollars" Albert F. Appleton, New York City , November 5, 2002. On line: katoombagroup.org/documents/.../NYC_H2O_Ecosystem_Services.pdf

measures directly into city planning processes thus mitigating the environmental stress that they are forced to compensate for later.

It is important for cities to take the lead in biodiversity initiatives, projects and programmes. Toronto manages several of them: its Parkland Naturalization and Tree Planting Programmes, its bird and butterfly habitat protection projects as well as Lights Out Toronto, a programme aimed at saving migratory birds. The City of Montreal also manages biodiversity-related initiatives including a project aimed at reducing urban heat islands that includes a collaborative partnership with a NGO specialized in urban agriculture (hydroponic roof gardens). The City of Curitiba, Brazil, launched BioCity, a groundbreaking US$175 million programme that constitutes a concrete example of urban planning: in July 2008, the first vertical garden of ornamental native plants of the city was inaugurated[5]. Municipal governments can set examples, as was the case in Chicago when the city turned the roof of the City Hall into a green roof.

In fact, policies at all levels, including sustainable urban planning strategies and building regulations can have a positive impact on biodiversity, for example, by preventing construction on vulnerable land such as wetland. Cities, with the cooperation of local authorities and national governments can also establish bylaws and incentives to protect and conserve biodiversity. For example, the city of Toronto has mandated that in 2010 green roofs will be mandatory on all new schools, nonprofit hosing, multi-unit residential, commercial and industrial buildings. Complementing the legislation are incentives in the form of subsidies to build green roofs (CDN $1 and subsequently CDN $5 per square foot towards construction of a green roof on existing buildings).

Already, studies have shown that green roofs and green infrastructures have direct benefits on biodiversity by creating habitats for birds, insects, plants and microorganisms. A draft biodiversity research protocol prepared by Green Roofs for Healthy Cities, under the guidance of Dr Brad Bass, aims to demonstrate the relationship between a green roof and its wider environment, the variety of species on the roof and their functional value and the utility and value of biodiversity on a roof. They collected validating results of various studies, for example:

- A biodiversity study of seventeen green roofs in Basel, Switzerland found 78 spider and 254 beetle species. Eighteen percent of those spiders and 11% of the beetles were listed as rare and some were considered as endangered (Brenneisen, 2003).
- In Berlin, Darius and Drepper (1984) found grasshoppers, white grubs, beetles, and a high number of mites on 50-year-old green roofs
- In Switzerland, nine orchid species and other rare and endangered plant species were found on a 90-year-old green roof (Brenneisen, 2004).
- In the UK, green roofs have been found to provide habitat for the Black Red Start, and other endangered bird species (Gedge, 2003).
- In northeastern Switzerland, nine orchid species and other rare and endangered plant species existed on a 90-year-old green roof (Brenneisen, 2004).
- Two years of observations on a green roof located on the York University campus in Toronto, Ontario indicated an increase in biodiversity since the initial installation.

[5] CBD Cities and Local Authorites: case studies. On line http://www.cbd.int/authorities.

Theses examples show not only that green roofs and green infrastructure can create habitats for plants and animals but also that they can contribute to recreating ecosystems, for example by hosting pollinators and allowing birds to disperse seeds. Green roofs can even provide direct ecosystem services such as food: a well known example of food production is the Fairmont Hotel in Vancouver, Canada. This 195 square meter roof garden provides the herbs used in the hotel at an estimated yearly cost saving of 25,000-30,000 Canadian dollars. It also provides a leisurely space for hotel guests and gives rise to higher room rates for those located adjacent to it. In New York City , the top of the building of the organization Earth Pledge hosts a green roof that provides food for use in its sustainable cuisine cooking class, while organic waste from the building is composted and used on the green roof[6].

Moreover, green roofs and green infrastructure can become ideal sites for children and youth living in the city to learn about biodiversity, to promote knowledge and familiarity with the indigenous species and to raise public awareness about their advantages. They can contribute to enlarging vegetation cover thus increasing the chance of native vegetation to be preserved. In fact, Dr Amy Hahs, a scientist working at the Royal Botanical gardens in Melbourne, Australia, demonstrated that cities with less than 30% vegetation cover are more at risk of losing their original floral diversity: "Under current planning and design practices, it is very hard to maintain 30% native vegetation within an urban area, but finding ways around this problem either through innovative design or restoration will help preserve local biodiversity", says Dr Hahs[7]. He goes on to say that plants and people can indeed coexist in urban areas, as long as vegetation is considered as a long term investment rather than a disposable asset.

Experts here at the congress are presenting many more proven environmental advantages of urban greenery, such as improved air quality, reduced heating and cooling costs and thus reduced gas emissions, aesthetic value and added value of up to 20% of surrounding real estate, carbon credits for trade and stormwater management to name a few. Clearly, private or public local initiatives to preserve biodiversity can have a large impact at the local, regional and even international levels and cities and local authorities have a major role to play in supporting those initiatives.

"While our goals are global, they can most effectively be achieved through action at the local level' –Kofi Annan

In April 2002 the national governments that are Parties to the Convention set an ambitious goal: to significantly reduce the rate of loss of biodiversity by 2010 by working through the many programmes of work and cross-cutting issues of the Convention. Today, just before the due date, it appears that in spite of all the valuable efforts and undeniable progress achieved by the Convention's 192 Parties (soon to be 193), many components of the target have not been achieved.

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[6] Nigel Dunnett, Noël Kingsbury "Planting green roofs and living walls", Timber Press Inc., Cambridge 2004.

[7] BBC News, 8 October 2009. On line: http://news.bbc.co.uk/go/pr/fr/-/earth_news/newsid_8295000/8295738.stm

Such a large and critical challenge cannot be met by the efforts of the Parties alone. We need new alliances and partnerships and we need an integrated approach across all sectors of government, civil society, the private sector and the scientific community. Only when all levels of government cooperate under the same objectives, working with all other major groups, will we be ready to take on one of the biggest environmental challenges of our time, the loss of species, ecosystems and biological resources that constitute the *raison d'être* of the Convention.

This is the reasoning behind the creation of the Global Partnership on Cities and Biodiversity, a cooperative platform of city governments, UN agencies, and civil society, with the goal of increasing the level of collaboration among all levels of government and other players for local action on biodiversity. The Partnership, along with a steering committee comprised of four cities; the city of Montreal, the city of Curitiba, the city of Bonn and the city of Nagoya are working toward the development of a Plan for local action on urban biodiversity for the period 2010-2020. Their message will be taken to the next Conference of the Parties in Nagoya in October 2010, where the city of Nagoya and Aichi Prefecture are planning the Nagoya Cities' Biodiversity Summit, October 25 and 26, to contribute to the deliberations of the Parties.

"Think globally, act locally" is a now-famous adage in the environmental movement. The Convention strives to embody this wisdom by acknowledging the critical role of cities and local authorities in struggle to preserve biodiversity. At our 9th Conference of the Parties in May 2008 in Bonn, Germany, we adopted decision IX/28, which encourages Parties to support cities and local authorities in developing strategies and action plans on biodiversity consistent with national policies. It also invites Parties to engage local governments in the application of the CBD programmes of work and in the achievement of the CBD targets. More specifically, paragraph 4 of Decision IX-28 addresses the importance of integrating biodiversity in infrastructure development[8].

Several of the CBD's international partners are engaged in establishing a connection between urban citizens and their natural environment: The Urban Biosphere Network, or URBIS, a joint collaboration between UNESCO and the Stockholm Resilience Centre, is a project that seeks to create an international network of urban areas that preserve biodiversity through the use of local knowledge and interdisciplinary science. ICLEI is a pioneer in the field of urban biodiversity, with its 21 cities cooperating in the Local Action for Biodiversity (LAB) project. Since 2006 these pioneering cities have not only been addressing the problem of biodiversity loss individually but have also been exchanging their results and experiences with each other. As a result, ICLEI-LAB will publish a manual on biodiversity for cities and local authorities and the Secretariat looks forward to cooperating on disseminating the lessons learned. IUCN, along with its German partners, have just launched the competition, 'European Capital of Biodiversity', which invites municipalities to present their biodiversity strategies and action plans and run the chance to win the title of the Capital of Biodiversity. Local authorities are key partners for UNDP and particularly for UN-HABITAT– from technical cooperation projects at the city level to capacity building in collaboration with training institutions and policy dialog at major events like

[8] Paragraph 4 of Decision IX-28 *Invites* Parties, other Governments, regional and international development agencies and banks engaged in projects that include infrastructure development for cities and local authorities, to integrate biodiversity considerations into those projects, where relevant, and explore options for specific capacity-building and programmes on biodiversity for local officials responsible for their implementation and maintenance;

the World Urban Forum. UN-HABITAT's overall aim is to work at the local level to build the capacities of national governments, strengthen the power of decision-makers of local authorities and by promoting the inclusion of the community in the decision-making process.

Awareness-raising as a way to make a difference

It is known that awareness precedes action. Governments that recognize the existence of biodiversity understand the need to do something about it because they are persuaded by the benefits of the intervention. In all successful cases, awareness-raising and advocacy comprise the first step towards a strategy of action that can lead to high-level political and government commitment and that can influence key institutions to take responsibility for implementation.

So how can you contribute? You can engage the research community to promote strategic monitoring of biodiversity and the testing of innovative ideas and solutions; you can strive to make biodiversity information accessible to underpin the decision-making process locally, nationally and globally (at the CBD Conference of the Parties); you can communicate the problem of biodiversity loss as widely as possible so as to involve all stakeholders in its conservation; and finally, as individuals you can organize and take part in the various events of the International Year of Biodiversity (IYB).

IYB will be a defining moment in the history of humanity and a unique occasion to raise awareness on biodiversity at all levels. You are invited to join this global awareness campaign and celebration to safeguard the variety of life on Earth. The slogan and logo for the year, made possible thanks to the financial support of the Government of Canada, is : *Biodiversity is life. Biodiversity is our life*. The logo for the International Year of Biodiversity demonstrates how biodiversity is life and how we as humans are forever part of and not separate from the biodiversity that surrounds us. The logo can be downloaded at: www.cbd.int/2010/brand.

The year will be inaugurated with events in Brazil and Germany. At the Paris headquarters of the United Nations Educational, Scientific and Cultural Organization (UNESCO), an international exhibition will be launched at a high-level event in January. As a key element of this, heads of State will meet on 20 September 2010 at the UN General Assembly to take action and prepare for the Nagoya Biodiversity Summit in October 2010, where governments will set the targets and steps needed to address biodiversity loss. Here in Canada the year will be marked by events organized by an alliance of artists, governments and individuals. The governments of Quebec and Canada have set in motion entire programmes of events for the year that raise public awareness and link with events such as the 2010 Winter Olympics in Vancouver. Discussions at the G8 meeting in Huntsville, Ontario in 2010, where Canada will preside, will also address the biodiversity crisis. In addition, the city of Montreal, where the CBD Secretariat is located, plans a number of initiatives, including a new biodiversity research centre at the botanical garden in partnership with the University of Montreal.

I also invite you, as participants of the CitiesAlive! International Congress, to continue strengthening cooperative links between local authorities and the Parties of the CBD. David Suzuki, who just received the Right Livelihood Award, known as the "alternative Nobel" for his work to raise awareness about climate change, presciently stated: "The time to address this

critical issue is now. The more cities sprawl outward, the more we damage the environment and our health." With biodiversity continuing to be lost at an unprecedented rate and the Nagoya Biodiversity Summit fast approaching, I urge you all to build on the good work you have done to date and find ways to accelerate progress in the fight to save our biological resources.

Thank you for your kind attention.

Life in harmony, into the future

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The logo and slogan for COP 10 to be held in Nagoya, Japan, 18-29 October 2010