



NATIONAL CAPITAL PLANNING COMMISSION

CAPITALS ALLIANCE 2008

# Greening the World's Capital Cities

SEPTEMBER 14-19, 2008

**SUMMARY REPORT**

*Sixth Capitals Alliance Meeting*



The National Capital Planning Commission is grateful for the support of its partners and contributors to *Capitals Alliance 2008: Greening the World's Capital Cities*. Partnering organizations included the U.S. Commission of Fine Arts and the National Building Museum, cosponsors of several of the week's planning sessions. NCPC also thanks the Embassy of Sweden, Mr. Kimon Onuma for his leadership and expertise during the Tshwane BIMStorm™; and the United Arab Emirates Embassy. Lastly, NCPC is grateful for the ongoing support of officials from Brasilia, Canberra, and Ottawa, who along with officials from NCPC, helped launch the Capitals Alliance in 2001.



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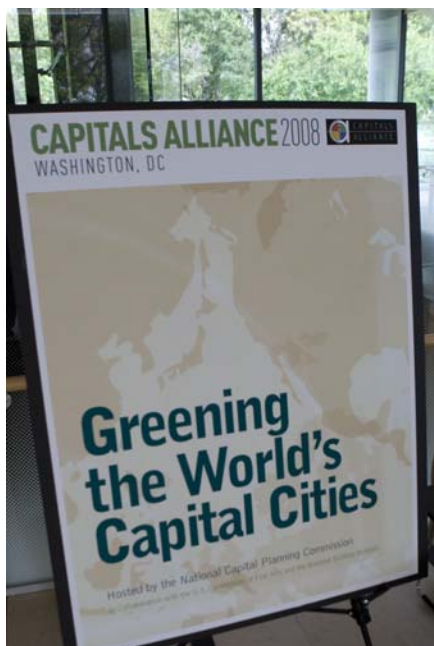
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Capitals Alliance 2002, Canberra



Capitals Alliance 2003, Washington, DC



Capitals Alliance 2004, Brasilia



Capitals Alliance 2005, Ottawa



Capitals Alliance 2007, Canberra



Capitals Alliance 2008, Washington, DC



# The Capitals Alliance

## History of the Alliance

National capitals are special cities. They play a vital role as the seat of national government, as a country's ceremonial center, and in establishing a country's global identity. They have the privilege of representing their country in the national and international communities, embodying a nation's hopes and aspirations, and providing effective spaces for cultural and business needs. Yet until fairly recently, capital city planners could not easily exchange ideas and strategies with their colleagues in other capital cities.

In July 2001, during the annual conference of the Canadian Institute of Planners, the capital cities of Brasilia, Canberra, Ottawa, and Washington, DC met to share ideas and strategies on the planning, design, and programming of their respective national capitals. Recognizing the valuable exchange of relevant and timely information, the cities agreed to form Capitals Alliance as an official network and global forum for capital city planners and designers. Through Capitals Alliance, planners and public policy officials converse with international colleagues on the unique challenges and opportunities that are common in national capitals.

The first official meeting took place in Canberra in March 2002, hosted by the National Capital Authority. Since then, the partners have continued to hold meetings, the most recent of which was hosted by the National Capital Planning Commission in Washington, DC in September 2008.

## Terms of Reference

At the first official meeting of the Capitals Alliance in 2002, the delegates endorsed terms of reference for the newly established organization.

The Capitals Alliance network, an international forum for national capitals will:

- Create linkages and encourage the sharing of visions and ideals for national capitals in the 21st century.
- Provide a forum for the exchange of information, expertise, and ideas on national capitals.
- Promote the story of the past, present, and future of Alliance capitals.

The Capitals Alliance members agreed to hold regular meetings, establish an Alliance identity, maintain an ongoing exchange of information among members, and commit to a concept of staff development in Alliance capitals. Founding members also agreed to invite, by common agreement, other national capitals to become members of the Alliance.



## TIMELINE

### July 2001

- Brasilia, Canberra, Ottawa, and Washington, DC agree to launch Capitals Alliance

### March 2002

- First official meeting held in Canberra

### October 2003

- Second meeting takes place in Washington, DC

### November 2004

- Brasilia hosts third meeting

### September 2005

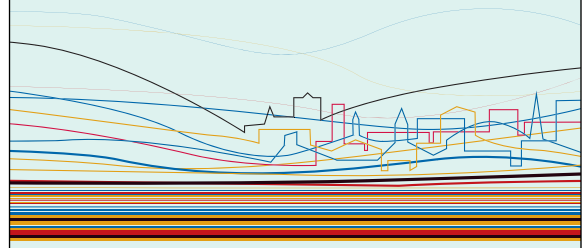
- Delegates gather in Ottawa for fourth meeting

### January 2007

- Fifth meeting hosted by Canberra

### September 2008

- Sixth meeting held in Washington, DC



## 2008 Meeting Overview

From September 14-19, 2008, senior planning officials from fifteen capital cities around the world met with leading experts on green and sustainable design during *Capitals Alliance 2008: Greening the World's Capital Cities*. The conference marked the sixth gathering of the Capitals Alliance since the organization was launched in 2001.

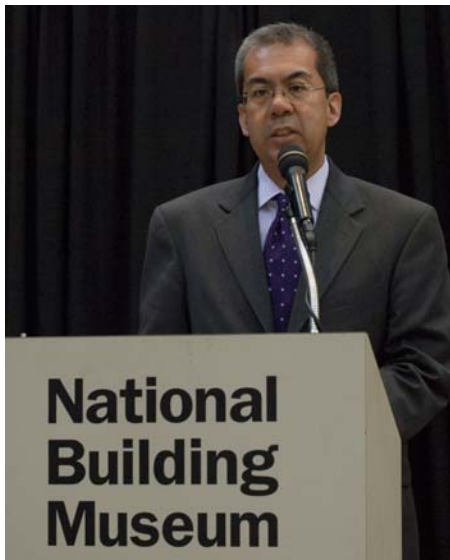
Hosted by the National Capital Planning Commission, the United States government's central planning agency in Washington, DC, the meeting attracted an international group of more than 45 senior government representatives. The U.S. Commission of Fine Arts and the National Building Museum cosponsored several of the week's planning sessions and workshops featuring more than twenty renowned experts in sustainability and green design.

The National Capital Planning Commission conducted the Washington program at several notable venues throughout the city, including the National Press Club, the Donald W. Reynolds Center for American Art and Portraiture, and the National Building Museum. The

weeklong event included visits to key green sites in and around the nation's capital and tours of prominent attractions in the capital city.

The conference produced consensus on a number of issues, including agreement that capital cities bear a special responsibility to lead the way in creating a greener world. As a sign of their commitment, Capitals Alliance delegates signed a green declaration pledging to promote green building design, energy efficient practices, low impact development techniques, protection of open space, and development of mass transit systems that reduce reliance on the automobile.

Following the conclusion of the official proceedings, members of the Capitals Alliance met briefly to determine the timing for the next Alliance gathering. Members tentatively agreed to convene the seventh meeting in Brasilia in spring 2010, when the city will celebrate its fiftieth anniversary.



## Partner Organizations



Secretary Thomas Luebke  
U.S. Commission of Fine Arts

**The U.S. Commission of Fine Arts (CFA)**, established by Congress in 1910, provides expert advice to the President, Congress, and agencies of the Federal and DC governments on matters of design and aesthetics to preserve the dignity of the nation's capital. Seven presidentially appointed members serve on the Commission for a term of four years.

**The National Building Museum** is America's premier cultural institution dedicated to exploring and celebrating architecture, design, engineering, construction, and urban planning. The non-profit institution was created by Congress in 1980 and is housed in the former U.S. Pension Bureau building, completed in 1887. It hosts numerous exhibits and lectures and is recognized for its commitment to promoting sustainable building practices.



President Chase Rynd  
National Building Museum

## Conference Collaborators



Karin Olofsdotter, Deputy Chief of Mission  
Embassy of Sweden



Hagir Elawad, Director of Congressional Affairs  
United Arab Emirates Embassy



Kimon Onuma  
Creator, BIMStorm™

## Conference Venues



The **Swedish Embassy's House of Sweden** opened in 2006 as the crown jewel of the Swedish presence in the U.S. Located in historic Georgetown on the waterfront, the embassy is a symbol of openness and transparency.



The **Donald W. Reynolds Center for American Art and Portraiture** is a National Historic Landmark, built in 1836 to house the U.S. Patent Office. One of the nation's finest examples of Greek Revival architecture, the building has undergone an extensive renovation that showcases its most dramatic architectural features including vaulted galleries illuminated by natural light.



Completed in 1887 to house the Pension Bureau, today's home for the **National Building Museum** is recognized as an engineering marvel. The Italian Renaissance design of the **Great Hall**, with its soaring Corinthian columns, makes it a favored site for gala events, including Presidential Inaugural Balls.



The **United Arab Emirates Embassy** is a modern, multi-use facility that reflects the longstanding traditions of Islamic culture and architecture. A series of connected and landscaped gardens line the rear of the building, which stands 52-feet-tall and comprises more than 50 thousand square feet. The embassy is located in the International Center in Northwest Washington.



The **National Press Club** has been a prominent gathering place in Washington for 100 years. Founded in March 1908 to promote free press, the National Press Club has welcomed leaders from across the globe.





# 2008 Meeting Highlights

“Today, capital cities face a significant challenge to develop and promote green and sustainable policies that will be viable now and in the future. By 2050, three-fourths of the world’s population is expected to reside in cities. Capital cities, as the seat of government and symbolic heart of a nation, are in a unique position to lead the world to a more sustainable future.”

Chairman John V. Cogbill, III  
National Capital Planning Commission  
Washington, DC

## Days at a Glance

**Day 1:** The National Capital Planning Commission launches Capitals Alliance 2008: Greening the World’s Capital Cities during a welcome ceremony at the Swedish Embassy’s House of Sweden.

**Day 2:** Celebrated author and documentary filmmaker Herbert Girardet delivers the opening keynote address on the importance of creating a greener planet. Renowned experts then explore the meaning of green, followed by a tour of innovative and award winning green sites in and around Washington, DC.

**Day 3:** Smart growth veterans share the do’s and don’ts of promoting smart growth policies and winning support for sustainable development. A virtual charrette to design the master plan of Tshwane, South Africa attracts planners from around the globe, and capital city delegates showcase their sustainability efforts during an evening poster session.

**Day 4:** National capital delegates speak about the challenges of creating sustainable capitals that serve as models nationwide and later tour the historic Lincoln Cottage and new U.S. Capitol Visitor Center. Respected world leaders from the United States, Sweden, and Brazil come together to share their views on making the world more sustainable.

**Day 5:** Prominent professionals and academics reflect on the effect of green design on architecture and public space in capital cities. Former Vancouver Planning Director Larry Beasley delivers the closing keynote; founding members of the Capitals Alliance reflect upon the week; and the United Arab Emirates Embassy hosts the closing reception.

**Optional Day:** A tour of the National Mall and its famous memorials and monuments rounds out the week. Delegates visit the U.S. Botanic Gardens’ exhibit, “Sustainability for the 22nd Century.”

## Participating Capital Cities

-  Abu Dhabi, United Arab Emirates
-  Bogotá, Colombia
-  Brasilia, Brazil
-  Canberra, Australia
-  Copenhagen, Denmark
-  Helsinki, Finland
-  Islamabad, Pakistan
-  Moscow, Russia
-  Oslo, Norway
-  Ottawa, Canada
-  Paris, France
-  Stockholm, Sweden
-  Tshwane, South Africa
-  Vienna, Austria
-  Washington, DC, United States of America



*Delegates share their ideas during a virtual charrette for Tshwane, South Africa.*



*Brasilia's delegate, Ivelise Longhi takes questions following her presentation on the city's new federal district.*



*Capitals Alliance participants listen as a translator shares highlights of Moscow's capital profile.*



# Conference Proceedings

“The accidental city will never be a sustainable city. A level of thoughtful control and of strong leadership relating to all the forces of urbanism will be essential.”

Larry Beasley  
Chair, Advisory Committee on Planning, Design & Realty, NCC  
Former Planning Director, Vancouver

## Executive Summary

By 2050, three-fourths of the world's population is expected to reside in cities. While cities occupy only a fraction of the earth's surface, they consume the vast majority of its resources and therefore have a responsibility to lead the way to a more sustainable relationship with the natural environment.

Capital cities, thanks to their visibility, can be beacons of change for other urban areas in their countries. They can take the lead in crafting innovative policies and finding new ways to involve the public. They can demonstrate best practices in building and city planning. In short, they can be models of sustainable urban living, worthy of widespread emulation. With thoughtful planning and governance, urban life can be highly sustainable. A city with mass transit, compact development, and efficient systems to manage energy, water, and waste can dramatically reduce resource consumption and achieve low levels of greenhouse gas emissions.

But which policies are the most effective? How should the public be involved? What can planners do? What special role do capital cities play in the transition to an environmentally sound future? With these questions in mind, the National Capital Planning Commission convened *Capitals Alliance 2008: Greening the World's Capital Cities*.

Delegates from Abu Dhabi, Bogotá, Brasilia, Canberra, Copenhagen, Helsinki, Islamabad, Moscow, Oslo, Ottawa, Paris, Stockholm, Tshwane, Vienna, and Washington, DC met from September 14-19 for a series of panel discussions, workshops, and presentations featuring renowned experts in sustainability and green design. Nearly one thousand people attended throughout the week, demonstrating the public's commitment to learning about green practices and the special role of national capitals in leading the way.

Topics during the week-long gathering examined ways to put more national capitals on the road to a greener and more sustainable future, how to develop winning strategies for successful green practices, the effects of green design on architecture and public space, and the importance of public

input. Delegates also shared experiences from their home cities; outlining sustainability initiatives implemented in their capitals, evaluating the results, and discussing challenges that remain.

The conference revealed broad consensus among participants that cities, which occupy 50 percent of the world's population in urban areas, are the key to bringing about effective change. Further, delegates concurred that immediate and substantial improvements in the built environment are possible; that technology now exists to end fossil-fuel dependence; effective policymaking can change behavior and generate economic opportunities; and public involvement is crucial to bringing about lasting change (see conclusions to *Greening the World's Capital Cities* on page 61.)

Featured speaker Larry Beasley, Vancouver's former planning director, encouraged the national capitals to refrain from accepting one-size-fits-all solutions. “Because everywhere is different, sustainable solutions have to be tailored, if not invented, to the specifics of the place and people and circumstances and scale of every community,” urged Beasley. “Each government has to pose for itself how to convert theory to practice.”

In fact, many delegates agreed that a healthy competition among world capitals can motivate planners and policymakers to improve their efforts, and over time, raise the standards by which success is measured. They also voiced strong support for uniting behind the common goal of creating environmentally, economically, and socially sustainable urban environments. Before convening they signed declarations pledging to promote green practices and policies that will help lead the way to a greener future.

“Today, cities face a significant challenge to develop and promote green and sustainable policies that will be viable now and in the future,” explained NCPC Executive Director Marcel Acosta. “The green declaration demonstrates our commitment to support principles of sustainability as central to the development of our capital cities.”

# Opening Reception Welcome to Washington, DC

Officials from the **National Capital Planning Commission (NCPC)** launched Capitals Alliance 2008 with an opening reception at the House of Sweden, located in historic Georgetown on the Potomac River. NCPC Chairman John V. Cogbill, III welcomed the delegates to America's capital and provided the audience with a brief history of the Capitals Alliance. NCPC Executive Director Marcel Acosta provided an overview of the week's activities and senior representatives of the founding cities each gave brief remarks on the importance of the Alliance.



NCPC Chairman John V. Cogbill, III is joined by Brasilia's Cassio Taniguchi, Canberra's Alison Walker-Kaye, Ottawa's Russell Mills, and NCPC Executive Director Marcel Acosta.

*"There is something much bigger at stake, and the time for action is now."*

Marcel Acosta  
NCPC Executive Director  
Washington, DC



Canadian delegates Larry Beasley and Russell Mills (shown left and center) share planning experiences with Brasilia's Cassio Taniguchi.

# Meet and Greet



Abu Dhabi



Brasilia



Copenhagen



Helsinki



Moscow



Oslo



Ottawa



Paris



Tshwane



# Planning for Sustainability

## Understanding the Complex Relationship Between Cities, People, and the Planet

Monday, September 15



Officials from the National Capital Planning Commission officially convened the conference on Monday, September 15, with a keynote address by renowned author and documentary filmmaker Herbert Girardet. A respected authority on the environment, Girardet is the program director at the World Future Council in London and a recipient of a United Nations Global 500 Award for Outstanding Environmental Achievements. The U.S. Commission of Fine Arts co-hosted the day's sessions.



"While cities are located on only three to four percent of the world's land surface, cities consume 80 percent of the world's resources. [Which means] we have only about ten years to get serious about the environment."

### Summary of Keynote Address

During his hour-long remarks before a full crowd at the National Press Club, Herbert Girardet spoke passionately about the complex relationship between cities, people, and our planet. The urgency of the task according to Girardet is evident: the size of modern cities in terms of population and physical size is unprecedented and urban sprawl is a major concern.

Mr. Girardet explained that developing a sustainable relationship between people and the planet in the years to come is one of humanity's greatest challenges for the new millennium. His key points were that we need to conceptualize how the world's urbanization trends can be brought to a halt; how cities can maintain an equitable relationship with rural areas; and how to design urban structures and systems to function sustainably. Water supply, demand for energy, and global urban food supplies are essential to the way urban systems function.

"A sustainable city enables all its citizens to meet their own needs and to enhance their well-being without damaging the natural world or endangering the living conditions of other people, now or in the future," stated Girardet.

### Fossil Fuels Create Greenhouse Gas Emissions and Climate Instability

According to Mr. Girardet, we are burning more than a million years of fossil fuels every year. The worrying fact is that fossil fuels emit CO<sub>2</sub> and other greenhouse gases. These gases trap heat, which would otherwise be absorbed by the planet, thus leading to warmer temperatures, melting ice and snow, rising sea levels, altered patterns of rainfall, and other climate change instabilities.

"As more and more people move into cities and demand more energy, the problem intensifies. Every year we are depositing about two billion tons of CO<sub>2</sub> in the atmosphere that were until recently absorbed by the oceans, by forest ecosystems, by soils and so on," Mr. Girardet said.

"The important point to make is that we are living on a finite planet. The planet is not growing, and the availability of resources is not growing, and we need to come to grips with this fact."

Fortunately, according to Girardet, there are technological and policy breakthroughs that are happening, particularly in Europe, with respect to renewable energy that are making a major difference in speeding up our ability to provide solutions to the problems.

### Feed-In Tariffs Spur Adoption of Renewable Energy Technologies

The market is growing for solar power, wind power, and biogas. Girardet explained that these technologies have become increasingly affordable, in part because of feed-in tariffs or economic incentives provided by governments for the adoption of renewable energy technologies.



Feed-in tariffs were first implemented in 1978 in the United States. A federally-managed German model introduced in the late 1990s has been the most effective at boosting the adoption of renewal energy technologies.

Under the German model, anyone generating electricity from solar, wind, or hydro power gets a guaranteed payment of four times the market rate. This reduces the payback time on such technologies to less than ten years and offers a return on investment of eight to nine percent. The cost is spread among all households, so the program adds only about 1.2 euros or \$1.50 per household each month.

In Germany 250,000 new jobs have been created as a result of the feed-in tariff and the introduction of renewable energy sources. Nearly 100 million tons of carbon dioxide has been saved and the environmental damage per household has been dramatically reduced. A total of fifteen percent of electricity in German cities is now being produced from renewable energy sources. Variations of Germany's feed-in tariff have now been adopted by 65 countries, 19 of which are in the European Union.

### Reducing Emissions through Renewable Energy Technologies

Many cities, particularly in Europe, have been using renewable technology to meet their energy needs for several years now. Mr. Girardet gave the following examples:

- A total of twenty percent of the electricity supply to major European cities such as Copenhagen is from wind power. Copenhagen was also the first city to use offshore wind turbines rather than land turbines to generate electricity.
- Biogas technology is a form of renewable energy that is being used in Scandinavian countries. This is electricity produced from waste as well as hot water that can be recirculated within cities.

- Solar electricity is still much more expensive than conventional electricity, but its cost is expected to come down rapidly in the next few years. Large-scale government support programs in Japan, Europe, and America now give households and companies substantial financial incentives to install PV cells on the roofs and walls of buildings and in gardens and spaces between houses to retrofit suburbs. A new technology, nanosolar or thin-film solar, shows promise of reducing the cost of solar electricity still more.
- Another renewable technology is biofuels. The U.S. federal government passed legislation encouraging the use of farmland and biofuels. Mr. Girardet said he prefers solar electricity because it is much more efficient. "I would rather keep the farmland producing food for people than food for cars," he said.
- Intermittency has been regarded as a major obstacle in the delivery of renewable energy. But according to Mr. Girardet, there have been major breakthroughs in storing wind and solar power, so it's usable when the wind isn't blowing or the sun isn't shining.

### Creating Greater Energy Efficiency through Retrofitting Buildings

Conventional buildings contribute to CO<sub>2</sub> emissions. To make our cities sustainable once again, we need to retrofit our buildings to be more energy efficient, using some of the latest insulation technologies, such as vacuum insulation panels (for more on this issue, see summary on What it Means to be Green, page 17.)

### Introducing Carbon Neutral Transport Systems

Automobiles are another source of CO<sub>2</sub> emissions. To make our cities sustainable, we need alternatives to vehicles that are powered by the combustion engine. Mr. Girardet cited some of the new technologies that will make this possible.

- Hybrid cars, like those from Toyota and Honda, which are already on the market.
- Electric cars, like the one developed by Daimler Benz; which are coming on the market.
- Fuel cell powered buses, trucks, cars and boats, which convert hydrogen into electricity without combustion. These are expected to be mass produced within a decade or so. These vehicles don't burn fuel when they are stationary.
- Solar car parks, where suburban commuters can leave their cars in the morning, have them powered in solar garages from solar roofs during the day, and then pick them up in the evening. The city of Sacramento, California is developing such a park.





Mr. Girardet also encouraged cities to think creatively about the design of their public transit systems and to take advantage of new technologies for public transit.

- Dedicated bus lanes. Bogota's transit system is modeled after the bus system which was successfully implemented in Curitiba, Brazil 30 years ago. It uses dedicated lanes surrounded by relatively high density buildings to make sure that people can make the most effective use of public transport as they travel through the city.
- Trams. In Europe, trams have always been part of the transportation system. In the United States, trams were written off in the 1940s, 50s, and 60s. Remarkable technological breakthroughs have occurred in the design of the European tram systems. Mr. Girardet said he is pleased to see that Washington, DC is reinstating trams into the public transit system.

Finally, Mr. Girardet urged cities to be more oriented towards bicyclists and walkers.

- Create bicycle lanes and pedestrian friendly walkways. In the 1980s and 90s, a remarkable transformation took place in Copenhagen. Largely car dependent, the city transformed itself into a city that is increasingly favoring cycling and walking. Copenhagen has even developed dedicated pedestrian zones and cycling lanes.
- Renting bicycles for a short period of time is another alternative, implemented some time ago in European cities and recently in Washington, DC.

### Re-introducing Agriculture to Our Cities

Creating sustainable cities requires us to take a close look at urban food supplies. Urban agriculture is a very important part of the future of cities according to Mr. Girardet.

Increasing the efficiency of urban consumption patterns requires us to reintroduce the concept of proximity—reducing the distances of where key resources originate. The bulk of the food consumed in our cities should ultimately be supplied from local growers rather than being trucked in and flown long distance, thereby expending huge amounts of energy in transportation.

### Recycling Waste: Moving from Eco-Technical Systems to Eco-Systems

In order to become sustainable, cities also need to think differently about their waste. Modern cities are ecotechnical systems, not ecosystems. They are essentially linear, with resources being pumped through the system with little concern about their origin or about the destination of wastes.

Food is imported into cities, consumed and then discharged as sewage into rivers and coastal waters. Raw materials are extracted from nature, combined and processed into consumer goods that ultimately end up as rubbish and cannot be reabsorbed. Wastes end up in landfills, where organic materials are mixed indiscriminately with metals, plastics, glass and poisonous residues.



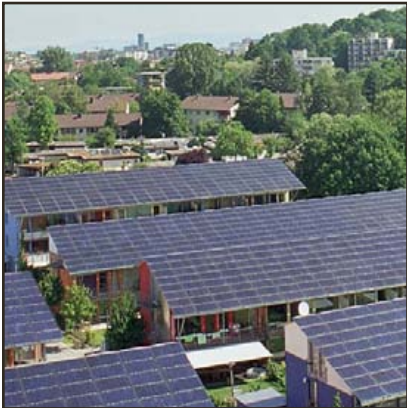
Cities can be redesigned to function in ways that are compatible with the natural world. Nature's own ecosystems have an essentially circular metabolism. To become sustainable, cities have to mimic nature's circular metabolism, using and re-using resources efficiently and eliminating waste discharges not compatible with natural systems.

### Building an Ecocity from Scratch

Mr. Girardet has been working in China on the creation of Dongtan, the world's first major ecocity to be built from scratch. Located on Choming Island, just off Shanghai, Dongtan is about three-quarters of the size of Manhattan Island and will accommodate a population of 500,000. Only 40 percent of the available 86 square kilometers will be developed. Sixty percent will continue to be farmland, assuring that there will be a sustainable food supply and that waste materials can be returned to the land to keep the land productive.

"Building design will be compact, and public transit will be efficient. The city will run on renewable energy; with zero emissions transport and void waste water recycling. The city also will be bicycling and pedestrian friendly," Mr. Girardet explained.

In closing, Mr. Girardet issued the following challenges to capital cities:



### Creating Green Jobs

Sustainable development programs benefit not only the environment but also the economy of cities. Renewable energy, building, and transport industries create a staggering potential for new jobs, Mr. Girardet said. He cited the Apollo Alliance and Green for All, two organizations that advocate for the creation of green jobs.



### Getting the Public On Board

Educating the public and getting the public involved is critical to getting support for sustainable development programs. The public needs to know what it can do on an individual and household level in terms of energy conservation, waste recycling, etc.

It's also important that the public regularly receives information on how their behavioral changes have improved the environmental performance of their city. In Curitiba, Brazil, a sign in a park informs the public how many trees were saved due to recycling of paper, cardboard, and wood.

### Working for Favorable Laws and Policies

Cities cannot achieve sustainable development on their own. They need national laws that provide mandates and incentives for implementing sustainable programs. Without them, changes will not happen rapidly enough. "A lot of changes that happen at the local level come from the general public's influence on national policy," Mr. Girardet said. "So let us reconfigure our cities, making environmental sustainability a key driver for social and economic sustainability."



# Planning for Sustainability

## What it Means to Be Green



This session explored the most important aspects of developing and implementing urban sustainability programs. The panel of experts (pictured left to right) included Jim Huffman, associate principal with Busby Perkins + Will; Frances Beinecke, president of the Natural Resources Defense Council; and Thomas Hicks, vice-president of LEED Neighborhood Development and International Programs at the U.S. Green Building Council. George Hawkins, director of Washington, DC's Department of the Environment moderated the session.

## Summary of Panel Remarks



**George Hawkins, Director  
District Department of  
the Environment**

"Forty years ago, we couldn't wait to get out of our cities into the suburbs, where the air was cleaner and land and resources seemed unlimited. Today, we are not only returning to our cities but we are also talking about them as being the answer to our environmental problems and seeking ways to green them. What a remarkable transformation!"

## What DC Government Is Doing to Green the City's Buildings and Neighborhoods

Mr. Hawkins outlined the many areas in which the District of Columbia—Washington, DC's local government—is leading the way among United States cities in the area of sustainability and greening. He cited the following:

- The District of Columbia has one of the most progressive building laws in the country. It is the first major American city to require both publicly-funded and privately-financed buildings to follow the Leadership in Energy and Environmental Design (LEED) standards of the U.S. Green Building Council and be LEED Silver certified.
- The District has some of the strongest stormwater laws in the country, and through the city's green building advisory council, it is working on greening building, plumbing, and energy codes.
- The District Department of the Environment, the largest urban environmental agency in the country, is prepared to invest millions of dollars to encourage low impact development and energy efficiency, with the assurance that the cost of projects will not outweigh savings.

- Last summer the District ran the largest green collar job program in the U.S., with 37 teams of kids getting green training and working on green projects. “Now, we need a plan to get green curriculum into our high schools, colleges, and trade schools, so the city has the necessary personnel for green jobs in the future,” said Hawkins.
- Greening buildings in transit oriented developments can result in big payoffs in terms of energy efficiency. “We have the spokes on the wheel but we need some greening around the rim.”

**Frances Beinecke, President  
Natural Resources Defense Council**



“While we used to look upon our cities as sources of pollution which needed cleaning up, our cities are now viewed as beacons of change. Through political leadership and demonstration projects, cities are leading the way in terms of greening and sustainability.”

**U.S. Cities Set Targets for Reducing CO<sub>2</sub> Emissions**

- In 2007, 850 mayors in the U.S. joined together in the Mayors Climate Protection Agreement, setting commitments either to reach the Kyoto Protocol greenhouse gas reduction targets or go beyond them.
- Some cities, like Washington, DC, set additional targets. Salt Lake City, the capital of Utah, made a commitment to reduce its carbon emissions by 30 percent through public transit, new housing, and smart growth. New York City committed to reducing emissions by 30 percent in city buildings by 2017 and by 30 percent in all other buildings by 2030.

- At the state level, Beinecke cited the California smart growth law that says each region in California has to create a preferred growth scenario that will minimize greenhouse gas emissions. The law ties state transportation funds to projects that conform to that preferred growth scenario.

**Opportunities to Slash CO<sub>2</sub> Emissions through the Creation of Energy Efficient Buildings**

Ms. Beinecke said that there are enormous opportunities to slash carbon emissions through the creation of more energy efficient buildings. In a study conducted last year by McKinsey and Company that looked at 250 scenarios to reduce greenhouse gas emissions, the activities that cost the least and provided the most economic returns were building sector efficiencies. Knowing this, she urged more builders and developers to create high performance green buildings.

**NRDC Says Affordable Green Housing Can Be Cost Competitive**

No one can benefit more from building sector efficiencies than low-income families. That’s why NRDC and Enterprise Community Partners launched the Green Communities Initiative, a five-year, \$550 million commitment to build more than 8,500 environmentally friendly affordable homes across the country. The initiative, which is in its fourth year, is proving that one can build affordable green housing at a competitive cost.

**Green Jobs are Vital**

Ms. Beinecke agreed with Herbert Girardet and George Hawkins that we need to integrate environmental and economic efforts through the creation of green jobs if we are really to sell the public on smart growth and sustainability practices.

**NRDC Urges Public to Call for Mass Transit and Renewable Energy Legislation**

A primary source of CO<sub>2</sub> emissions is cars. There are laws honoring the car, but not honoring transit, and Beinecke urged the audience to call on legislators to pass more funds for mass transit and fewer funds for roads. Another bill she would like to see people support is one providing investment and production tax credits for solar and wind energy.



**Tom Hicks, Vice President  
U.S. Green Building Council**

*“Buildings play a substantial role in CO<sub>2</sub>. There is much to be done to reduce CO<sub>2</sub> emissions, energy consumption, and ultimately climate change.”*

Mr. Hicks informed the audience that much needs to be done to reduce CO<sub>2</sub> emissions from buildings and to make buildings more energy efficient. He explained that while we usually associate CO<sub>2</sub> emissions with tail pipes and stacks, conventional buildings account for as much as 39 percent of CO<sub>2</sub> emissions. They also account for 39 percent of energy use, 70 percent of electricity consumption, 40 percent of raw material usage, 12 percent of potable water consumption, and 30 percent of waste output.

### **LEED Green Building Rating System and Certification Program**

The Leadership in Energy and Environmental Design (LEED) Green Building Rating System and Certification Program, operated by the U.S. Green Building Council (USGBC), was started in 1994 with the help of the Natural Resources Defense Council. Today, LEED is the nationally recognized benchmark for the design, construction, and operation of high performance green buildings. Mr. Hicks explained how the program functions:

- A company applies for LEED certification for a project and is rated in five key areas: sustainable site development, water savings, energy efficiency, materials selection, and indoor air quality. Depending upon its overall score, the project qualifies for one of four levels of LEED certification: Certified (26-32 points); Silver (33-38 points); Gold (39-51 points), and Platinum (52-69 points).
- Projects that are eligible for LEED certification are commercial buildings involving new construction, existing commercial buildings, commercial interiors, core and shell construction, schools, retail establishments, healthcare facilities, homes and most recently, neighborhood development projects.

### **LEED for Neighborhood Development Considers Building Location**

The LEED for Neighborhood Development program takes into account where a building is located. It emphasizes the creation of green buildings that are in compact, walkable, vibrant, mixed-use neighborhoods. Pilot projects are in locations that are close to existing town and city centers, have good transit access, are infill sites, or are previously developed sites.

### **LEED Certified Green Buildings Deliver Wide-Ranging Benefits**

LEED certified green buildings deliver 30 percent more energy savings, 35 percent or more CO<sub>2</sub> savings, and 50 percent waste cost savings than conventional buildings.

LEED certified commercial buildings are healthier, which contributes to higher productivity and improved employee morale. Commercial properties also have increased occupancy rates and rental premiums in excess of \$11 per square foot. They also command higher asset values in excess of \$170 per square foot in the U.S.

LEED is now being used in more than 75 countries around the world. The Canadian Green Building Council and the Indian Green Building Council have their own versions of LEED, shaped to meet local business practices and construction of buildings.

### **Industry Needs to Develop Stronger Building Codes and Labeling Standards**

There are many areas of the country that do not have green building codes. Mr. Hicks urged that building codes be strengthened and that green building codes be adopted. He also urged stronger enforcement of these codes. He praised the DC government for what it is doing to develop green building standards and he urged the adoption of national standards for labeling and certification of building materials and resources.

In conclusion, Hicks said government at all levels should provide more incentives to developers to build green buildings, whether it's through expedited permitting, tax incentives, or bonuses for density construction. The fundamental reduction in environmental impacts in addition to all of the economic and occupant benefits goes a long way towards making a case for green buildings.



**Jim Huffman, Associate Principal  
Busby Perkins + Will**



“Most emissions are from either vehicles or buildings. The rest is incidental really.”

An architect with the firm that helped develop Docksider Green in Canada, Mr. Huffman described the mixed-use development in Victoria, British Columbia that was built on a former brownfield site.

Docksider is the first project in either the U.S. or Canada to achieve LEED Platinum certification for new construction. It achieved 63 points out of a possible 70, including full points in the categories of sustainable sites, water efficiency, energy and atmosphere, indoor environmental quality, and innovation and design.



Mr. Huffman outlined some of the features of the project:

- A biomass gasification system utilizing wood waste to create all heat energy and hot water;
- Building insulation consisting of high performance glazing and shading leading to significant building energy savings;
- Exhaust air energy (heat) recovery;
- Reduced lighting power densities with energy-efficient fixtures and occupancy sensors;
- Treating 100 percent of wastewater in an on-site plant;
- Dual flush toilets, low-flow fixtures, and use of treated water for flushing toilet, irrigation, and water features;
- Green roofs and a naturalized creek on site, reducing indoor potable water use by over 65 percent.



Mr. Huffman recommended that the U.S. and Canada increase efforts to regulate greenhouse gas emissions through the enforcement of green building codes. He said that the European countries, Australia, and New Zealand are already doing this.

“European countries also have been using transport properly for years. North America should be giving transit subsidies rather than highway subsidies, and developments of the future should be designed without the car in mind.” Mr. Huffman explained that the Kyoto Accord, which Europe signed, set goals to reduce CO<sub>2</sub> emissions, which Europe is on track to meet in 2010.

# For the People, by the People

## Promoting and Sustaining Smart Growth Policies

Tuesday, September 16



Educating the public is critical to building understanding and support for sustainable development. In this session featured speaker Robert Stacey illustrated how a venerable smart growth organization succeeded in uniting citizens in support of a land use planning system that faced staunch opposition from property rights advocates. The U.S. Commission of Fine Arts co-hosted the day's sessions, held in the Nan Tucker Auditorium at the Donald W. Reynolds Center for American Art and Portraiture.

### Summary of Remarks



**Robert Stacey**  
Executive Director  
1000 Friends of Oregon

"If we adopt a great plan for our communities, that plan will remain vital and effective only as long as it enjoys the broad support it had at its birth."

Addressing an audience gathered at the Donald W. Reynolds Center for American Art and Portraiture, featured speaker Robert Stacey gave a brief history of 1000 Friends of Oregon. The group was founded in 1975 to advocate for the enforcement of a new statewide land use planning law that mandated that every city and county adopt a Comprehensive Land Use Plan that met state standards.

1000 Friends worked with the state to insure that local governments complied. It defended the state planning agency's twin concepts of an urban growth boundary—a line drawn around each urban area to constrain outward sprawl—with compact growth inside the boundary and farmland zoning outside the boundary. It sued local governments which did not comply. By the early 1980s, it had won 80 percent of all cases.

The organization developed relationships with homebuilders, who recognized the benefits of statewide planning; timber companies, which realized that the forest land base needed protection from incompatible residential development; and farmers, who consistently supported protective zoning for agricultural land.

The enormous success of the urban growth boundary model was evident in the 2000 Census, which showed that great amounts of growth had occurred inside the urban boundaries, while outside the boundaries, farmland remained intact.

### Property Rights Advocates Counter with Ballot Initiative 37

But not everyone was supportive of the state land use laws. A small but determined group of property rights advocates who opposed it resorted to the ballot box when they couldn't get the law overturned. The 2004 Initiative, Measure 37, required local governments either to pay landowners or to forego enforcement when land use restrictions reduced property value.

Mr. Stacey explained that Measure 37 was about reigning in government abuse, but it was really about giving tens of thousands of rural landowners the ability to claim exemption from the land use laws and from the farmland zoning provisions that had been in place for 30 years. But there was no organized effort to educate voters about Measure 37, and it passed by a 61 percent majority in every county but one.

### 1000 Friends and Other Groups Strike Back with Public Outreach Programs

Elected officials and opinion leaders assumed that a fundamental shift had occurred in popular opinion from support for urban growth boundaries and farmland zoning to opposition. 1000 Friends disagreed, believing instead that the initiative had passed because the new generation of Oregonians had no knowledge of the land use planning law passed 30 years earlier.

So 1000 Friends undertook a two-year, statewide public outreach program, Envision Oregon, designed to inform the public about the future of Oregon and the role of land use planning. During 2006-2007, Envision Oregon recruited 50 state and local partner organizations and held eighteen town halls across Oregon, attended by more than 2,000 people. They also reached out through a website that enabled citizens to share their views and vision for Oregon's future.



### **E-Blasts Show Bulldozers Tearing up Farm Fields under Measure 37**

A secondary campaign got underway to persuade voters to limit and reform the new Measure 37 after polling by 1000 Friends convinced lawmakers that Oregonians continued to support the key goals of Oregon land use planning. But in the meantime, the beneficiaries of Measure 37 filed 7,000 claims affecting three-quarters of a million acres of farm and forest land. 1000 Friends responded with e-mail blasts displaying photos of bulldozers tearing up farm fields for new subdivisions. It also organized rallies and called on lawmakers to work on a replacement measure before Oregon's landscapes were forever destroyed.

### **Legislature Agrees to Ballot Initiative 49**

In the end, the legislature sent a new measure to the voters. 1000 Friends guided the new ballot, which accurately described the contents of new Measure 49, as one that "Modifies Measure 37; Clarifies Right to Build Homes; Limits Large Development; Protects Farms, Forests, and Groundwater." Oregonians expressed that rural property owners should be able to build a house for themselves or relatives on their farm or forest tract, but not full residential development projects or other large developments. And they wanted careful protection for farm and forest land and well drilling and groundwater.

### **TV Ads, Door to Door Canvassing, and GS Mapping Galvanize Donors, Volunteers**

1000 Friends went to work fundraising and building a coalition to pass Measure 49 and attracted broad support from many groups and sectors. It raised and spent over \$3 million in a five-month campaign for a special election. Much of it was spent on compelling TV ads that featured real farmers talking about protecting their land from development. The statewide campaign galvanized and mobilized thousands of people. It attracted 5,000

individual donors and 10,000 volunteers, many of whom went door-to-door in Portland and other cities. They used GS mapping to show the harmful effects of Measure 37 on various parts of the state if it remained in place.

### **Measure 49 Passes; 1000 Friends Continues Dialogue with Supporters**

The election in November 2007 was a stunning success. The measure passed in 22 of Oregon's 36 counties and by a 62 percent statewide margin, higher than the margin by which Measure 37 had passed three years earlier. 1000 Friends of Oregon continues to work to improve the state's land use planning laws. It recently issued a new blueprint for Oregon's future which included a plan to reduce greenhouse gas emissions from transportation.

### **1000 Friends Advocates for Laws on Climate Change and Global Warming**

A current initiative of 1000 Friends of Oregon is rallying people to attend hearings and ask for stronger land use planning laws to address climate change and global warming pollution. The group learned an important lesson from Measure 37.

"It's not enough to adopt a good law or a good plan," said Mr. Stacey. "It's not enough to successfully implement the plan. It's not even enough to cultivate a cadre of key interests who support the plan and will advocate for it or to inform and persuade opinion leaders in your community that the plan is good and working well. Unless that plan belongs to the whole community, it will inevitably lose its power and begin to drop."



## For the People, by the People Building Momentum For Change



This panel session explored how citizens can and should be the chief advocates of sustainable development initiatives. Speakers (seated left to right) included Daniel K. Slone, an attorney and smart growth counsel; Majora Carter, founder and former executive director of Sustainable South Bronx; Tom Murphy, Urban Land Institute fellow and former mayor of Pittsburgh; and Harriet Tregoning, director of the DC Office of Planning. 1000 Friends of Oregon Executive Director Robert Stacy moderated the session and CFA Secretary Thomas Luebke (shown at podium) provided opening remarks.



**Majora Carter**  
Founder, Sustainable South Bronx

“Teaching the skills of environmental restoration, wetland restoration, urban

forestry or cleaning up contaminated land was the easy part. Preparing people to get and to keep jobs, that was the hard part. But when you know you are solving two of the world’s greatest problems at the same time—poverty alleviation and environmental remediation—it’s easier.”

### Providing Green Jobs

Ms. Carter founded Sustainable South Bronx in 2001 with the dual purpose of providing green jobs and alleviating poverty. She said that exposure to greenhouse gas emissions leads to health problems, especially in children, like asthma and even learning disabilities. The children don’t do well in school; they become unfocused and misdirected, and often end up in jail. When they get out of jail, they return to their communities, without jobs and without hope. Many end up back in jail as a result. In New York City, fully two-thirds of them return to

prison. Dirty neighborhoods mean fewer trees, less green space, and less beauty in one’s life. That also means less hope.

### Green Jobs in the South Bronx

Ms. Carter talks about how her neighborhood is overcoming these problems. “Here in the South Bronx, about five years ago, we discovered green jobs and what they could do. We discovered that when you put people to work fixing the environmental problems in our shared world, suddenly men out of jail and women on welfare who have never had access to a job come alive to the world in new ways. I am so proud to have started the nation’s first and probably most successful green jobs training and placement program.”

### Ensuring a Personal and Financial Stake in the Environment

“When you think you have nothing to offer and nothing to gain in a community, violence will happen. When you feel you have a personal and a financial stake in the environment, violence goes away. We need to know that climate change can become a business opportunity in our cities. Environmental justice for all is civil rights in the 21st century.”



**Tom Murphy, Fellow  
Urban Land Institute**

“I have seen change from a number of perspectives,” he said, “and money is always the excuse, but it should never be an excuse. It’s always about whether you have the community will to make the change.”



**Change is about Leadership**

Change is fundamentally about personal leadership, said Mr. Murphy. Somebody needs to stand up with passion and commitment and say we’re going to change this behavior. We’re going to change this approach and be able to communicate that to others.

What I have found in life is that most people don’t like conflict. They want to be loved. In fact, if you are going to do transformational change, you have to love conflict. You have to see it as constructive, not destructive. You have to understand that there are huge forces protecting the status quo. And they are very comfortable.

I always believe that in the chaos of change is opportunity....a huge opportunity for people who understand power, who understand conflict, who understand what leadership is about. We are at a moment in time, I think, in America and in the world when there is opportunity for transformational change.

**Daniel K. Slone  
Smart Growth Counsel and Adviser**

Drawing on his experience as counsel to the U.S. Green Building Council and for the Congress for the New Urbanism, along with his 20 years of work on sustainable development and smart growth, Mr. Slone laid down these principles for building momentum for change.

- Speak truthfully; educate, do not “green wash”—a term for claiming achievements for minimal accomplishments, and lead by example.
- Remove the administrative and regulatory barriers that prevent change.
- Use charrettes, visual preference surveys, storytelling, and e-mails as techniques to involve the public.
- Involve lots of different leaders, from nonprofit groups to government officials to business leaders to community activists.
- Do not talk just about “environmental” sustainability; also talk about “social” and “economic” sustainability.
- Know the meanings of the terms you use; for example the term “sustainable urbanism” is an oxymoron, because agriculture has to be a part of the equation.
- Recognize that government officials, nonprofit groups, and business people all speak a different language; learn to use each group’s jargon.





**Harriet Tregoning, Director  
District of Columbia Office of Planning**

“Our capital cities are the physical vessels for a nation’s aspirations about what it could be, what it should be, and how it wants other nations, other people of the world to perceive it. So what we do ends up being important.”

### Planning Agencies are Vital to Building Consensus

Ms. Tregoning explained that planning agencies play an important role in building broad coalitions to sustain a long-term push for change. The built environment takes a lot of time to change. “The process is longer than the term of any single elected leader and longer than the term of an inexhaustible non-profit leader.”

### Leading Change in the Built Environment

- Create a sense of urgency.
- Build a coalition of different groups, including non-profit groups.
- Develop a vision.
- Constantly communicate that vision.
- Undertake one or two catalytic projects.
- Change the systems and the rules of the game to get more of what we want and less of what we don’t want.



# New Frontiers in Collaborative Design

## BIMStorm™ 2008 Tshwane, South Africa



“BIMStorm™ gives us the opportunity in real life, current situation, to place buildings, shift buildings, and move buildings around. That’s a wonderful opportunity. It’s an opportunity not only to influence the laymen but to influence our decision-makers. That’s where the management part comes into it because if we move a building it can immediately indicate to you what’s the cost factor of moving that building and what’s the underlying infrastructure factor.”

Bernard Hanekom, Town Planner  
Tshwane, South Africa



Architects, planners, and policymakers from around the world took part in a virtual charrette Tuesday afternoon to help design the master plan of Tshwane, South Africa. Using cutting edge technology, participants developed initial design schemes for the Inner City.

The Republic of South Africa, the only country in the world with three capital cities, is in the process of uniting all state functions in Tshwane, formerly known as Pretoria. To accommodate new functions, revitalize neighborhoods, and celebrate both the Republic’s and Tshwane’s post-apartheid identity, the city’s planners have been charged with creating a new master plan.

The key goals of the BIMStorm™ exercise, led by BIMStorm™ creator Ken Onuma and NCPC architect Ken Walton, were to design the Inner City as a functional and symbolic heart of the nation and as a green and sustainable capital.

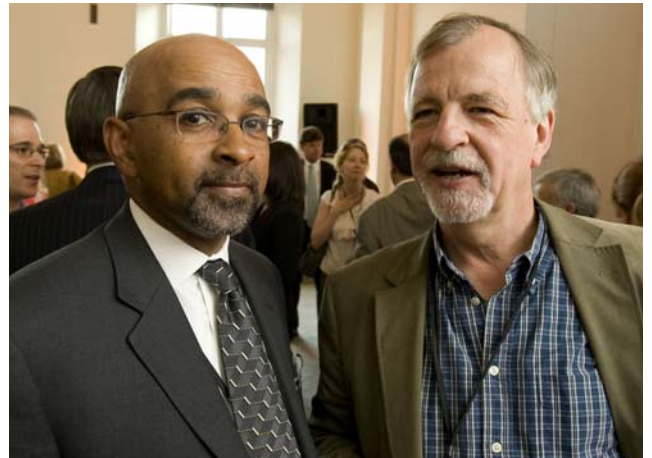
The initial design schemes, created by Capitals Alliance delegates and other design professionals from around the world who participated concurrently via the web, will serve as a launching pad for further development of Tshwane’s master plan.





# Capitals Alliance Poster Session

Participating capital cities who took part in a poster session on Tuesday evening spoke to attendees about sustainability initiatives that are underway in their national capital. Members of the general public and the local and regional planning community mingled with capital city planners at NCPC's offices. Featured cities included Abu Dhabi, Brasilia, Canberra, Copenhagen, Moscow, Ottawa, Vienna, and Washington, DC. All posters were later on public display in the Great Hall of the National Building Museum during the remainder of the conference.



# Capital Cities Leading the Way

Following the poster session, representatives from the founding capitals then presented on sustainability projects in their respective capital city and the challenges of creating sustainable capitals that serve as models nationwide. Topics ranged from developing a new green federal district to reducing the carbon footprint.

## Capital Profiles

### **Brasilia: Noroeste-** The Green Neighborhood

**Population: 2 million**

**Presenter: Ivelise Longhi, Technical Director, TERRACAP**



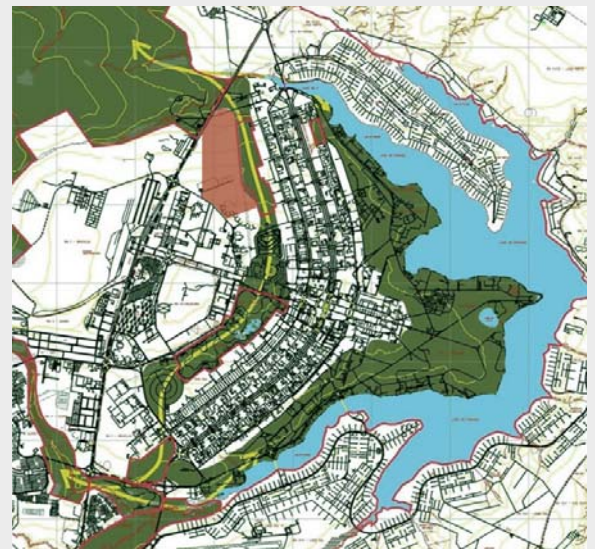
Brasilia is accommodating its population growth by expanding the city's Pilot Plan. Lucio Costa, designer of the city's legendary modernist plan, conceptualized the Noroeste (Northwest) Sector in 1987 as part of Brasilia Revisitada. Ivelise Longhi, technical director of the Federal District's Development Agency (TERRACAP) explained that the neighborhood, due to break ground soon, will eventually house 40,000 residents and provide opportunities for commercial space as well as several retail shopping districts.

Noroeste's design is consistent with the garden city approach of the Pilot Plan, and it likewise zones activities into specialized sectors. The project's mixture of commercial, retail, and residential uses within close proximity is somewhat of a departure from the original plan, however. This is an effort to ensure that people can live near their workplaces and to reduce the long driving commutes for which Brasilia is known.

Noroeste is located between two environmental preservation zones—the Brasilia National Park and the Burle Marx Ecologic Park. The desire to minimize the impact on these parks as well as a concern for global climate change influenced the design of the neighborhood. Motorized traffic is routed away from the parks, native plants and natural soil coverage will be retained, and built areas are limited to a maximum of 38 percent of the terrain.

Water-saving taps and toilets will help reduce water consumption, while rainwater harvesting systems and drainage ponds can provide water for nonpotable uses, such as garden watering. Solar energy and central heating facilities will reduce energy consumption, and architectural design standards will maximize natural ventilation and lighting.

Noroeste will encourage the adoption of greener transportation choices with dedicated lanes for public transit, a pedestrian-oriented urban design, and bicycle paths that will support up to 2,000 bikers per hour.



## Capital Profiles



# Canberra: Water Sensitive Urban Design

Population: 320,000

Presenter: Andrew Smith, Managing Director, NCA



“We must now manage a landscape that was developed with a Eurocentric approach at a time of plentiful water resources.”

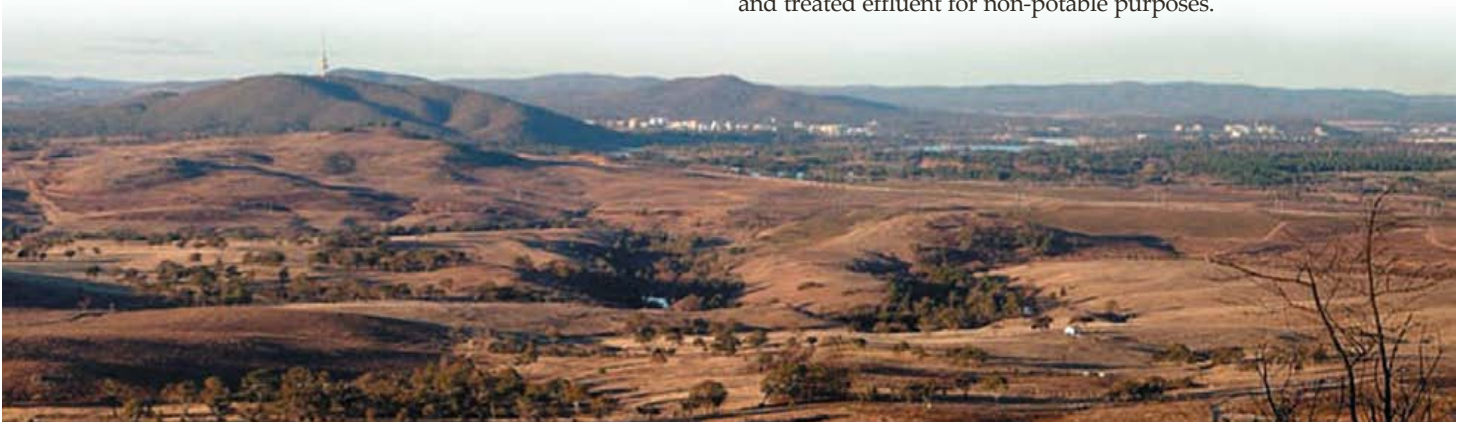


Canberra's National Capital Authority (NCA) has created a planning framework that encourages the development of a sustainable city by promoting increased commercial and residential density as well as mixed-use communities within walking distance of the civic center. Significant challenges remain, however, as the capital struggles to maintain its historic landscape features during a protracted drought that is forecast to worsen over the next two generations as a result of broader climate changes.

“We must now manage a landscape that was developed with a Eurocentric approach at a time of plentiful water resources,” explained Andrew Smith, managing director of Planning, Urban Design, and Projects for the NCA. “And that landscape—with its lawns and trees and hedges and lake—today has heritage value.”

In March 2008, the NCA and the local government planning agency adopted the Water Sensitive Urban Design code (WSUD), which lays out a more sustainable approach to the management of the total water cycle within Canberra's urban environment. It consists of a wide range of measures that can be applied to all development scales, from individual dwelling units to large public spaces.

The WSUD is incorporated into all aspects of the city's planning activities, including land use and estate planning. All development proposals are assessed against this code before they can receive approval. It calls for measures to conserve water; incorporate water retention and rainwater harvesting mechanisms; minimize impervious areas and enhance permeability of other surfaces; and increase the use of gray water and treated effluent for non-potable purposes.





## Capital Profiles



# Ottawa: A Capital by Nature

**Population:** 750,000 (Ottawa-Gatineau Metro area: 1.1 million)

**Presenter:** Marie Lemay, CEO, NCC

At a moment when Canada's National Capital Commission (NCC) is staking out a position of environmental leadership, the federal planning authority has also undergone a major reorganization that will help realize these aspirations. Legislation adopted by Parliament in 2007 has made the Commission's activities more transparent and opened up new opportunities for public participation.

"We believe it is essential to seek Canadian input," said Marie Lemay, chief executive officer of Canada's NCC, about efforts to develop a leading-edge environmental strategy. "We are currently looking at ways to reach out and engage all Canadians."

The natural environment is central to Canadian identity, and Ottawa's urban design reflects this. For over 100 years, the planning of the capital region has emphasized the preservation of the area's green and blue natural features. Today, Ottawa is characterized by an abundance of parks and a robust network of parkways, paths, and waterways connecting the capital's natural resources.

The NCC is the largest landowner in the capital region, and its land management policies already employ many best practices in water and energy efficiency, stormwater treatment, sewage composting, and recycling. The agency is also working with partners to reduce the environmental impact of events and activities in the capital.

The NCC has initiated a review of its environmental strategy. The Environmental Action Plan that will result



"As a capital, we should inspire pride in Canadians on such an important issue."



from this process will, among other things, require LEED certification for new buildings, ensure that heritage buildings and official residences reflect current sustainability standards, promote regionally integrated transportation, and identify opportunities for sustainable redevelopment of brownfield sites.

"I believe we can make a difference," said Ms. Lemay. "As a capital, we should inspire pride in Canadians on such an important issue."



Capital Profiles



# Washington, DC: Planning A Green Capital

Population: 570,000 (Metro region: 5 million)  
Presenter: David Zaidain, Community Planner, NCPC



“Washington, DC ranks among the ten most walkable cities in the country.”



Washington, DC has numerous assets that have put the city on a relatively green path compared with other cities in the United States. With 20 percent of the city’s area occupied by parks and open space, Washington, DC has more green space per inhabitant than any other major city in the United States. An extensive Metrorail network has enabled Washington to have the second highest rate of rail ridership in the country. Washington, DC also consistently ranks among the ten most walkable cities in the country, and 53 percent of the city’s residents walk, bike, or take public transit to work.

However, significant challenges remain to achieving a sustainable urban environment. “Our metropolitan area has the 12th largest carbon footprint in the nation,” said David Zaidain, community planner for the National Capital Planning Commission (NCPC). “And we need to make significant improvements in air and water quality as well.”

The large federal presence in Washington ensures that the federal government will be part of the solution. In cooperation with other federal agencies, NCPC is formulating sustainable development objectives that will address several areas of federal interest including land use, transportation, green infrastructure, stormwater management, federal facility location, and tourism management.

Local planning authorities are developing the city’s first comprehensive sustainability plan with the assistance of the Mayor’s Green Team that assembles representatives from 40 municipal agencies to improve the District’s environmental practices. Recently, the Washington, DC City Council passed the country’s most ambitious green building legislation, requiring all new public buildings to obtain LEED Silver certification. By 2012, private developments over 50,000 square feet also will require LEED certification.

The capital city has also joined the U.S. Conference of Mayors Climate Protection Agreement, which entails a commitment to meet or beat targets for the reduction of greenhouse gas emissions outlined in the Kyoto Agreement.



# Capital Cities Leading the Way

Wednesday, September 17

On the third day of the conference, delegates continued presenting efforts to create green capitals. Topics included developing rating systems for sustainable design, creating environmentally friendly transit systems, and sharply reducing CO<sub>2</sub> emissions.

## Capital Profiles

# Abu Dhabi: Making a Desert a Model of Sustainability

**Population: 1 million**

**Presenter: Jaret Lang, Senior Associate, Urban Planning Council**

Concerned with the rapid rate of Abu Dhabi's population growth and its limited natural resources, the city's leaders have embarked on an ambitious effort to make the desert boomtown a model of sustainability. Several sustainability initiatives are already underway, including Estidama, a sustainable buildings and communities rating program.

In Arabic, Estidama means sustainability. "We are consciously using the term sustainability instead of green, because we don't want people to think that sustainability has to look green," explains Jaret Lang, senior associate with Abu Dhabi's Urban Planning Council. "In our desert location, green takes a lot of water."

In January 2009, the city will release the Estidama guidelines and rating system for the sustainable design of new buildings and communities. The program is similar to LEED and LEED-ND ratings, but tailored to the local conditions and culture. The city's hot, arid climate and lack of fresh water are the capital's primary sustainability challenges. Reducing energy use and minimizing water consumption are therefore prioritized in the Estidama rating scheme.

Until now, Abu Dhabi has had little regulation of development, but the city is now in the process of creating stricter development and building codes. "We have a unique opportunity right now to marry our green initiatives with our development codes," says Mr. Lang. "We are hoping to bring both things on stream around the same time."

Planners are well positioned to shape public attitudes and behaviors as the city's identity takes shape around sustainability. According to Mr. Lang, "A city that accepts and trusts Estidama...and welcomes regulation because it reflects the values and ideas of the nation—that's what it's all about."



Capital Profiles

 **Bogotá: Vision Bogotá 2038**

Population: 7.8 million

Presenter: Bernardo Torres, Architect and Planning District Secretary



Since the 1960s, Bogotá has been faced with a rate of population growth that has often outpaced the city's ability to cope with it effectively. Over the last ten years, however, Bogotá has undergone a renaissance thanks to urban planning reforms implemented under the

leadership of former mayor Enrique Peñalosa. Bogotá's residents now enjoy revitalized, pedestrian-friendly public spaces, one of the largest systems of urban bike paths (ciclorutas) in the world, and an expanding rapid bus system, Transmilenio.

Vision Bogotá 2038 is the city's long-range plan to create a livable, sustainable, equitable city. The plan establishes goals to improve air and water quality; ensure an adequate water supply; increase use of renewable energy; expand the public transportation network; maximize the rate of recycling; and create a model, public green space system.

A high level of particulate matter in the air and impending water shortages are among Bogotá's most pressing challenges that are now being addressed with a variety of initiatives. Planned expansions of the Transmilenio system and the addition of an integrated subway and regional train system will ease traffic congestion, which remains a problem despite the relatively low rate of car ownership and the success of alternative forms of transit.

Efforts are also underway to increase Bogotá's development density, which will reduce traffic and improve air quality. It will also help planners realize their ambitious targets to increase public green space from four square meters per inhabitant to ten square meters by 2038 while the population grows to as many as 12 million residents over the same time. The intended result of these efforts will be a model public green space system with traditional, linear, and natural parks, including forests and wetlands.



## Capital Profiles



# Copenhagen: Eco-Metropole

Population: 500,000 (Region: 1.6 million)

Presenter: Mona Heiberg, Deputy Mayor to Vice Mayor



Copenhagen, which has already defined itself as the environmental capital of Europe, has an even more ambitious goal to be the world capital with the best urban environment by 2015. "We will show the world, especially other major cities, that CO2 emissions can be reduced without affecting economic growth," says Mona Heiberg, deputy mayor of Copenhagen.



To fulfill their global responsibility, city policymakers adopted the Eco-Metropole Plan in 2007. The plan includes measurable goals to reduce carbon dioxide emissions; to become the world's best city for bicycles; to ensure that 90 percent of Copenhagen's residents are within walking distance of a park or recreation area; and to create one of the world's cleanest and healthiest big city environments.

The city is investing heavily to implement the plan. From 2008 to 2010 alone, Copenhagen will spend \$30 million on its climate change program and another \$30 million on cycling improvements. According to Ms. Heiberg, the city is already ahead of its emission reduction targets, and 40 percent of all home-to-work trips are by bicycle.

In December 2009, Copenhagen will host the U.N. Climate Conference, the final meeting before the release of the document that will replace the Kyoto Protocol on climate change and global warming in 2012. At the same time, the city will hold a parallel summit focusing specifically on the responsibility of the world's major urban areas in addressing global climate change.

"It will unite cities behind a strong and clear mission that no national government can annul," asserted Ms. Heiberg.



## Capital Profiles



# Helsinki: Sustainability in a Winter City

**Population: 560,000 (Metro area: 1 million)**

**Presenter: Pekka Sauri, Deputy Mayor, Public Works**

Helsinki has been a leader in sustainability since 2002, when it became the first European capital to adopt an action plan under the United Nations' Agenda 21 program. "Today you can jump into the sea at the center of Helsinki and swim with no problem," says Dr. Pekka Sauri, deputy mayor for the Department of Public Works and the Environment. "Our nitrogen and phosphorous emissions are now close to zero."

A vast improvement in water quality is just one major stride Helsinki has made toward becoming a sustainable city. The residents can also count among their achievements high rates of recycling and public transit use as well as an extensive district heating network. A centralized heating system has proven to be a cleaner, more energy efficient alternative for this "winter city," where the average high temperature never exceeds 70 degrees.

Urban sprawl and greenhouse gas emissions are Helsinki's greatest sustainability challenges, according to Dr. Sauri. "The inner city population has been stagnant for 20 years, while the surrounding communities are growing rapidly," he explains. Some of them are completely without rail connections. Containing sprawl has been difficult, because the regional decision-making authority is weak and municipalities have very strong independent powers.

"Our energy production is still quite coal dependent." The city's greenhouse gas emissions, which, by world standards, are quite low, are high compared to other Nordic cities. "This is our big embarrassment," says Dr. Sauri. "Helsinki is number one [among Nordic cities], and this is certainly a record that we are not proud of."

The good news is that Helsinki is reclaiming the intercity and it will be both ecological and socially sustainable. Construction will be energy efficient. Waste management will be state-of-the-art. We are extending a rail network and new tramway lines that are to be built in rapid succession. The Helsinki principle is that "social sustainability plus ecological sustainability equals quality of life."



## Capital Profiles



# Islamabad: The Nature City

**Population:** 1.2 million

**Presenter:** Kamran Lashari, Chairman, Capital Development Corporation



In 1960 the capital moved from Karachi, an industrial port city, to Islamabad, which is very green. Carved out of a lush, jungle landscape at the foot of the Himalayas in 1960, Islamabad is known as Pakistan's Nature City. It is the only planned city in Pakistan.

More than 55 percent of the capital's territory is green space, but as the young capital transforms itself from an administrative city to a center for cultural and intellectual life, rapid population growth is posing challenges for sustainable development. Another challenge is infusing life and culture into a city devoid of history and vitality.

"Nobody wanted to come here 40 years ago," said Kamran Lashari, chairman of Islamabad's Capital Development Authority. "Now, with eight percent annual growth, it is a challenge to meet the needs of the population without compromising the city's basic green character."

To ensure that Islamabad remains the Nature City, the capital city's planners have introduced the Clean and Green Islamabad Plan. Many of its initiatives are now underway, including extensive landscaping of streets and highways, an urban farming program, and a campaign to plant 700,000 trees per year. Along with a new zoo and environmental awareness center, Islamabad now has an 800-acre Capital City Park as well as 156 smaller urban parks.

The city is also investing in green infrastructure, with a new sewage treatment plant online, a second under construction, and plans for a compost plant. A new public transit system will use compressed natural gas buses.

Islamabad's residents are keen to protect their environment, and this heightened consciousness will likely underpin public support for future sustainability initiatives. In the short term, however, it can present challenges for individual development projects. Islamabad is still only one-third developed and it is a challenge to maintain a balance with urban development. The city is still without a mass transit system and there have been 37 new roads, fly-overs, and interchanges added.

"The moment we build a new road or a new (housing) colony, there is an uproar among the people," says Mr. Lashari. "They remember the 1960s and '70s when fish swam in all the streams."



Capital Profiles

 **Moscow:** Green Space Preservation

**Population:** 10 million

**Presenter:** Igor Voskresensky, Deputy Chief Architect



“The problem of transportation is very acute. It’s a big priority for us with respect to sustainable development of the city.”

Moscow has one of the best ratios of public green space per inhabitant in Europe. Thirty-five percent of the city’s area is green space and 14 percent of the territory is protected as a natural preserve. Since the collapse of communism nearly 20 years ago, the city’s open spaces have been threatened by development.

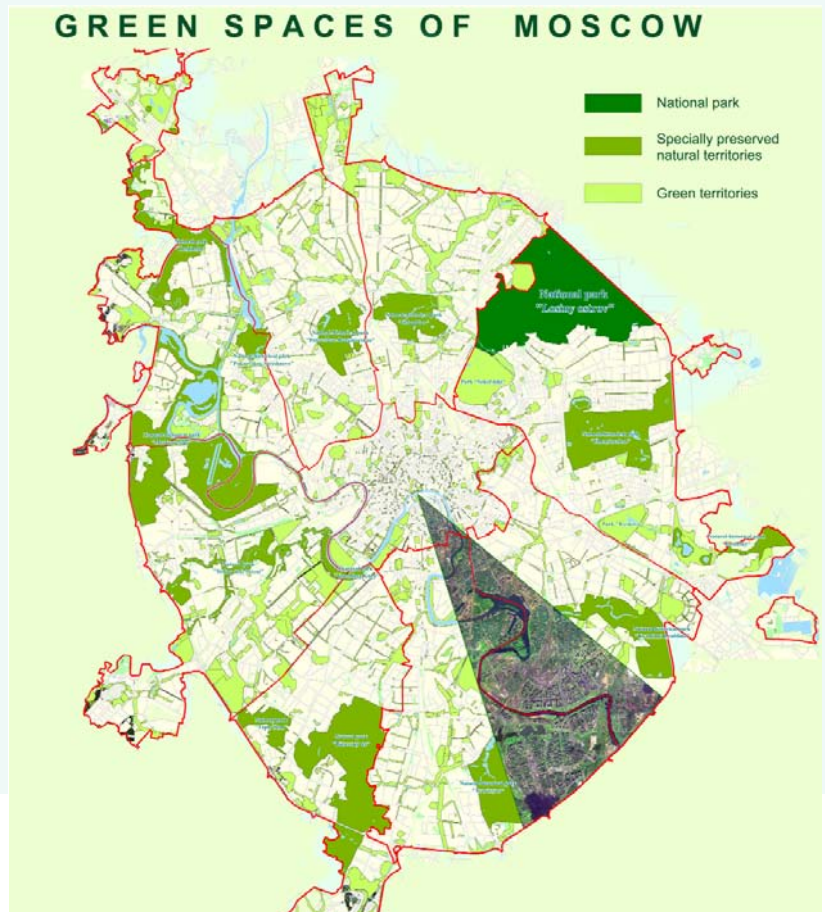
“It has been very difficult to protect green spaces from those who want to build there and make a profit, especially now that we are trying to create more private ownership in our system,” said Igor Voskresensky, Moscow’s deputy chief architect.

The central focus of Moscow’s third master plan, developed in 2005, is the conservation of green spaces, and in the last several years, the city has undertaken a massive campaign to improve parks, refurbish monuments, and plant thousands of trees. The city is planting about 20,000 trees every year and about 200 hectares of open space will have flower beds, lawns, etc. Many prominent sites beloved by Moscovites and visitors alike have received a facelift, including the area around Moscow University and the grounds of the Novodevichy Monastery.

Private development is not the only obstacle to a greener Moscow. Moscow’s population has grown considerably since the lifting of the tight residential permit controls of the Soviet era. Despite the city’s excellent metro system, the rate of private car ownership has exploded, and the roads are now choked with traffic.

“Twenty years ago we never expected that we would have five million cars in the city” says Mr. Voskresensky. “The problem of transportation, of course, is very acute. It’s a big priority for us with respect to sustainable development of the city.”

Last year, the city’s master plan was augmented with a plan for creating new spaces, or wedges, within the city’s radial layout. They are building a third beltway around Moscow to improve the situation as well as fly-overs and bridges.





## Capital Profiles



# Vienna: Intelligent Mobility

**Population:** 1.7 million (Metro area: 2.5 million)

**Presenter:** Kurt Puchinger, Director of Planning for Construction & Technology



In 1999, Vienna launched its most ambitious and comprehensive environmental project, the Vienna Climate Protection Program. It is designed to fulfill Austria's commitments under the Kyoto Protocol, which calls for a 30 percent reduction of carbon emissions by 2012.

Intelligent Mobility (IM) is the transportation component of the program. "The program has not only been developed to reduce greenhouse gases and improve the quality of life in Vienna," says Dr. Kurt Puchinger, director of planning for the Department of Construction and Technology in Vienna. "Its main activities also strengthen Vienna's economy by the creation and protection of jobs."

One of the main goals of Intelligent Mobility is to shift people from cars to more environmentally sound forms of transport. The plan calls for reducing the share of car travel from 35 percent to 25 percent of trips made by Vienna's residents. To accomplish this, the city promotes compact development, extends and improves its public transport system, and invests heavily in cycling amenities such as new lanes, a parking facility, and a free bike program.

"The statistics show that cycling has developed from a purely leisure and sporting activity to an everyday mode of transport," says Dr. Puchinger. Planners expect the proportion of cyclists to double by 2010 as a result of these efforts.

Vienna has also undertaken an aggressive parking management program in the central city, reducing the number of parking permits and limiting parking duration. The program has not only improved Vienna's quality of life, but it has also bolstered the city's budget. Parking revenues are invested in public transport, cycling, and traffic safety, and the policy has helped clear the cars from many of the city's historic squares and streets.



# Capital Cities Leading the Way

## World Leaders on Sustainability



This evening event, co-hosted with the National Building Museum, assembled some of the world's most visionary leaders in the area of green and sustainability. Panelists included (pictured left to right) Cassio Taniguchi, former mayor of Curitiba, Brazil; Stockholm's Chief Executive Officer Irene Svenonius; U.S. Congressman Earl Blumenauer, and moderator Marcel Beaudry, former mayor of Hull, Canada .

### Introduction



**Chase Rynd, President  
National Building Museum**

National Building Museum President Chase Rynd welcomed the audience to the evening program, *World Leaders on Sustainability*, held in the Museum's renowned Great Hall. The event was a collaboration of the Museum's series, *For the Greener Good: Conversations that will*

*Change the World* and NCPC's *Greening the World's Capital Cities*.



**John V. Cogbill, III  
Chairman, National Capital  
Planning Commission**

"For the past seven years we have shared a valuable exchange of ideas and expertise on critical urban growth and development issues, many of which are unique to national capitals."

National Capital Planning Commission Chairman John V. Cogbill, III provided a brief history of the Capitals Alliance program. He shared how the Alliance was formed and talked about the importance of sharing critical knowledge with professionals from other national capitals. He then introduced the moderator of the evening's program, Marcel Beaudry, former mayor of Hull, Canada and former chair of Ottawa's National Capital Commission.



**Marcel Beaudry, Moderator  
Former mayor of Hull, Canada**

"It is rewarding to see that on critical issues like climate change and global warming, there are so many people interested in the subject matter."

Mr. Beaudry set the tone for the panel discussion, emphasizing the importance of capital cities working together to create a greener and more sustainable world. "What can an individual do to create a greener capital?" he asked. "To help us answer this question we have the privilege of having a panel of distinguished persons who have proven to be quite successful in this arena."

### Summary of Panel Discussion



**Irene Svenonius, Chief  
Executive Officer, Stockholm**

"The city of Stockholm has worked for many, many years with sustainability issues. It's not a new thing. And that has given us a lot of experience, of course, of what works and what doesn't work."

## The Swedish Solution

According to Ms. Svenonius, even while Sweden was experiencing growth and economic development, hydrocarbon emissions were cut by employing a combination of methods that include:

- Using a highly developed “district heating,” a central system that provides heat to private homes. The heat is generally produced as a by-product in cogeneration facilities, a power plant that creates electricity and heat.
- Favoring cars that run on alternative fuels. Thirty-six percent of the new cars recently sold in the Stockholm region are alternative fuel vehicles.
- Using legislation to pass a system of congestion taxes and tax breaks for moving the public towards alternative fuels.

## New Thinking Spurred Through Taxation

Ms. Svenonius credits a mechanism that wasn't popular - initially. “At first our citizens did not enjoy the congestion tax. They were opposing that. But after the tax was imposed, and now it's been up and running for a year, people seem to be pretty happy. And we can see that in the polls that now we have a majority of our inhabitants who are in favor of this congestion tax.”

## Real Time Results

“Since 1990 up until today, we have reduced the emissions from 5.3 tons per inhabitant a year to 3.7 tons per inhabitant a year. We're very proud of that but we're not satisfied. We have to take further steps. So, this year we have passed to the city council a new goal. By 2015 we want to get the emissions down to three tons per inhabitant. And as a comparison, I can tell you that the European countries as a whole, have emissions of carbon of eleven tons per inhabitant so we are pretty low, but we still want to take the steps towards the zero.”

## The Importance of Planning and Public Support

Ms. Svenonius concluded her portion of the program by stressing the need for awareness of sustainability issues in conjunction with urban planning and gave credit to the city's inhabitants for adopting the changes.

“We are integrating the sustainability issues into the city planning,” said Ms. Svenonius. “You cannot plan for new city districts, you cannot plan for different things without taking into account sustainability issues. I have to say that one of the most important single factors have been the support of our inhabitants. Without their engagement in the environment I don't think it would have been possible to achieve what we have achieved.”



**Cassio Taniguchi, Former Mayor  
Curitiba, Brazil**

A proposed project creating parkland was at first rejected by the governing militia until Cassio Taniguchi changed the name. He pitched the idea as a “sanitation” initiative that would control flooding.

As the former mayor of Curitiba, a city in Brazil with nearly two million people, and as the Secretariat of Urban Environmental Development in the state capital of Brasilia, Cassio Taniguchi knows all about explosive growth, a challenge he said can be managed along with sustainable design.

## Balancing Economic Development With Environmental Stewardship

“Any city must answer at least two main questions. The first one is to where the city will grow or where we want the city to grow. And what's the structure? What's the urban structure for the city to grow? That means land use, mass transit system or public transportation systems and the road map to them. And most of all, all three factors must be inside the conception of sustainability. Sustainability means to create conditions of balance between the social aspects, culture aspects, the economic aspects and the environmental aspects.”



## The Brazilian Approach

Mr. Taniguchi lauded much of his area's progress in sustainable design onto the humble street bus. They carry a staggering amount of riders which decreases the number of cars on the road.

- In the main corridors during rush hour the buses carry twenty thousand passengers per direction, per hour.
- The buses run in dedicated lanes on the city streets, which were one tenth the cost of implementing a light rail system and one hundred times less than building an underground metro system.
- The nation's transportation systems carry 2 million passengers a day.
- The bus system was planned and implemented relatively quickly.

## All in a Name

Mr. Taniguchi talked about expanding the amount of green space in his city even while the country was being ruled by the military in the 1970s. A proposed project creating parkland was at first rejected by the governing militia until Taniguchi changed the name and pitched the idea as a "sanitation" initiative that would control flooding. "That's why we have three wonderful parks for people to use as a recreation area."

## Solidarity and Management

"Cities are the hub of solidarity. Cities mean people gathering, people discussing and most of all, people means the soul of the cities. So, we must have the participation of people, especially to create partnerships with all of society."

"We must have management that cannot be partially divided among several secretaries of departments or something like that. It must act as an official structure to create conditions for all the officials from the municipalities to work together to have the same targets and most of all to create a condition of synergy to make things happen."

### Earl Blumenauer, Congressman U.S. House of Representatives

"We were the first city in the United States with a comprehensive energy policy."



U.S. Congressman Blumenauer, who represents the third district of the state of Oregon in the U.S. Congress, spoke about the advances made in the city of Portland, and what makes the area unique.

## Portland First

- The first city in the United States to embark upon a conscious policy to reduce greenhouse gasses more than fifteen years ago.
- The first city in the United States with a comprehensive energy policy.
- Oregon was the first state to have a comprehensive land-use state-wide policy and the creation of urban growth boundaries that helped define the scope and extent of urban services.



## Back to the Fundamentals

Congressman Blumenauer reflected on the past when discussing the area's current leadership. "Many of the things that I am most proud of are things that aren't really fundamentally new and different. Our recycling program that doubled our recycling rate literally overnight upon its implementation just brought us back near the recycling rates during World War II. We're proud of having the first modern street car reintroduced in the United States and that's fun and exciting."

## Bikes, Trains and Walking

"I love the fact that we're competing with Houston and Denver to be the wind energy capital of the United States. And that two of the cities that were the most hostile and the most auto-dependent—Houston and Phoenix—are now rail cities. They are looking at land use planning in Houston for heaven's sakes. And in Phoenix before they even opened their first rail line in December, there's six and a half billion dollars of new development along the alignment."

Thursday, September 18

# Green Capitals

## Impact of Green Design on Architecture and Public Space



As more cities embrace sustainability, greater emphasis is placed on green design. In this session, co-hosted by NCPC and the National Building Museum, prominent professionals and academics debated the effect of green design on architecture and public space. Panelists (shown left to right) included Diana Balmori, landscape architect and member of the U.S. Commission of Fine Arts; Laurel Colless, executive director of the Energy Efficiency Partnership of Greater Washington; David Winstead, commissioner of the Public Buildings Service of the U.S. General Services Administration; and Richard Moe, president of the National Trust for Historic Preservation. Roger Lewis, practicing architect, educator, and journalist moderated the discussion.



**Marcel Acosta, Executive Director, National Capital Planning Commission**

“Many cities are dealing with challenges of being green, but capital cities in particular have additional hurdles to overcome.”

### Introduction

NCPC Executive Director Marcel Acosta previewed the panel discussion as a chance to explore both opportunities and challenges associated with greening capital cities. These are related to historic preservation, a growing workforce and population, tourism, and increasing strains on open space and public transportation systems.

- Washington, DC and many capital cities are unique because of their historic fabric. However, this often means more stringent regulations protecting historic buildings, views, and open spaces. So how can capital cities become more sustainable while protecting their historic foundation? What are the impacts of demolition and new construction versus preservation? How do we employ green technologies and preserve the history of earlier generations while rehabilitating older structures?
- What about the design of our cities' landscapes? Sustainable landscapes have enormous environmental benefits, and when green design is applied to the built landscape there are many social benefits, too.
- What impact will green legislation have on our government's building stock and what changes will these regulations mean regarding the renovation of existing buildings and the development of new facilities?

### Summary of Panel Discussion



**Richard Moe, President National Trust for Historic Preservation**

“Forty three percent of all carbon emissions come from the operation of buildings. That is a compelling figure. If we don't deal with this issue it's going to change life as we know it.”

### Buildings as Energy Users

“At the National Trust, we have always thought of historic preservation as the most sustainable of the building arts. Why? Because we're reusing existing materials and energy. Every existing building has what we call embodied energy. That is the energy it took to manufacture the materials that have gone into it, the energy it took to transport those materials to the building site, and the energy it took to assemble those materials.”

Mr. Moe cited a statistic to illustrate how sustainability is directly related to the building arts. Transportation, in the form of cars, trucks, airplanes, and trains, account for about 27 percent of carbon emissions while 43 percent of all carbon emissions in this country come from the operation of buildings.

There are a lot of new buildings that are being certified LEED, that are being built to very high green standards. “That’s wonderful,” said Moe. “But it’s important to remember that any new building makes a new impact on the environment. We have to have new buildings, obviously. But there’s a cost to it, and there’s a much less cost if you keep and reuse our existing buildings.”

### The Washington Situation

Mr. Moe used the evolving landscape of Washington to illustrate the complexity of blending preservation, sustainability, and historic context.

- There are a huge number of significant buildings and landscapes in DC, and they are in federal hands, as you would expect. The federal buildings set the architectural tone for this city, but they’re not governed by local planning ordinances.
- Washington is being revived. We can see the evidence of that all the time. It’s a very healthy thing, for the most part. But in many cases, historic buildings and neighborhoods are threatened by pressure to accommodate more people, particularly near metro stops, what we call transit-oriented development.

### The Correct Density

“The challenge here is to think holistically about encouraging development that is socially, economically, and environmentally responsible.”

- We have to think carefully about where high-density development should be targeted, consider the value of the historic building stock, and the health of the existing community before rushing to higher densities.
- We have to consider economics and remember that rehab projects typically create more jobs than new construction.
- We can take a big step towards creating a more sustainable city by rehabbing abandoned or underused buildings that can shelter people rather than pigeons.

### Federal Leadership

Due to the heavy influence of the federal government in the District, Mr. Moe said he looks to Capitol Hill for a renewed sense of direction.

- Public policy should promote the reuse of existing buildings, reinvestment, and redevelopment in abandoned and blighted neighborhoods.
- There is an urgent need for the federal government to take leadership because many current policies, particularly transit and lending policies, encourage sprawl and create disincentives for reinvesting in existing communities.

### Progress on the Federal Front

Mr. Moe acknowledged that progress was being made at the federal and local levels. He commended the efforts of the GSA, the Green Building Act, and the Energy Efficiency Partnership of Greater Washington.

- Mr. Moe referenced numerous examples of LEED-certified historic buildings including the Visitors’ Education Center at President Lincoln’s Cottage and at a number of GSA properties, including the Metzenbaum Courthouse in Cleveland and the Scowcroft Building in Ogden, Utah.
- In January 2007, President Bush issued an executive order that requires federal agencies to improve energy efficiency and reduce greenhouse gas emissions in federal buildings. “Unfortunately, the government has not yet offered any guidance on how preservation requirements, such as Section 106, and this green building edict will work together, but I’m sure that’s coming.”
- GSA already requires that all new construction projects and substantial renovations must be LEED certified.

### The District Leads the Way

Mr. Moe acknowledged the city’s role in leading the way towards a more sustainable future including its adoption of the Green Building Act in 2006; taking steps to ensure staff are LEED accredited; and developing a climate action plan. The challenge, however, is that the District must think more expansively about how to integrate preservation with its climate action plan; how to incentivize redevelopment in under-utilized areas; and how to eliminate barriers and create incentives for homeowners, especially those at the low and moderate income levels to green their homes.”



**David Winstead**  
**Commissioner, Public**  
**Buildings Service, U.S. General**  
**Services Administration**

“We’re living up to both federal mandates, as well as the overall good policy of achieving better efficiency in our built environment.”

GSA encompasses 365 million square feet of space. There are 8600 buildings in the department’s inventory with more than 1500 owned by the federal government. There are also more than 400 historic properties, and over 60 national landmarks. The agency has a budget of eight billion dollars and is focused on cutting energy bills (the federal government is the country’s largest energy user).

### Progress Towards Sustainable Government Buildings

- Between 2003 and 2007, GSA achieved an 8.2 percent reduction in energy consumption.
- About 1.6 percent of GSA’s inventory is below the operating costs of a normal private-sector office space.
- Because of our aggregation of energy purchasing and the scale of energy we purchase, we’re achieving energy utility costs at about 10 percent below what the private sector is in most urban markets.

### Going for the Silver

“We had a savings last year of almost \$50 million in recycling of materials and renovation and building program. We achieved an eight percent reduction in energy.”

- GSA is aiming at LEED silver for new construction and major renovation.
- Around the country, GSA is building 36 field offices for the FBI, and requiring certification to a LEED silver standard. In GSA’s inventory of 1500 government owned buildings, 118 are now Energy Star buildings.
- Three GSA buildings in the DC area actually qualify for the LEED Gold standard.



### Greening the Roofs in Washington

Over the past two years, four buildings in the National Capital Region have come online with green roofs, and these roofs have sustainably, very substantially reduced wastewater runoff or rain water runoff. They’ve had significant insulation impacts on buildings. The National Oceanic and Atmospheric Administration’s Satellite Operations Center in Suitland, Maryland has a green roof of 110,000 square feet. The Bureau of Alcohol, Tobacco, Firearms and Explosives, designed by Moshe Safdie, has a green roof of 5,500 square feet. And the new Department of Transportation, which is a leased headquarters in Southeast Washington, has a green roof of 6,500 square feet.

### Historically Sustainable

GSA has measured the energy efficiency of historic buildings that it has been renovating over recent years and found that they were 27 percent more efficient than the average of GSA’s other inventory because of the thickness of the walls, the height of ceilings, and the amount of light that can get in.

### Excellence in Design

Since 1992, GSA’s Design Excellence Program has enabled the best architects in the world to not only renovate buildings but to build new ones. And great examples are located in the District.



**Laurel Colless**  
**Executive Director, Energy Efficiency Partnership of Greater Washington**

“I think most of you would agree that this global green revolution that we’re starting to see now, even in the U.S., is really largely going to be driven by policy, innovation, and investment, or what we might call ‘clean-tech’ investment.”

The Energy Efficiency Partnership of Greater Washington is devoted to helping communities become more green. Based at the Alexandria offices of Virginia Tech University, the Partnership’s goal is to reduce greenhouse gas emissions 20 to 50 percent from existing buildings. The university can serve as a facilitator to bring together governments, private enterprise, and non-profit groups.

Ms. Colless shared that she thinks the involvement of multiple sectors underscores the importance of partnership in the global environment.

### Energy Performance Contracting for Better Performance

Energy performance contracting is a system where building owners explore ways to finance energy use improvements.

- The performance contracting method enables a building owner who doesn’t have up-front capital to get a fully green retrofitted, upgraded asset with no capital up-front costs.



- The Partnership is working with 20 buildings in DC. “Owners who don’t want to put up the up-front capital can furnish this retrofitting experience via the electricity savings, which can be between 30 and 50 percent in an average building.”

### Real World Experience

The Partnership has gone beyond the theoretical and is looking for ways to broaden the reach and scope of their effort.

- The Partnership isn’t just holding conferences and sitting around tables discussing it. It is going into buildings and retrofitting them for energy efficiency. “So as we talk, we’re bringing down carbon emissions in DC”
- The University is not moving into the retrofitting business, but they do want academics and innovative research to be more marketable, and they do want more front-lines hands-on engagement with people who are in the market.
- We are looking at possibilities to do education in the green collar workforce with construction school graduates or other graduates from junior colleges and vocational schools.

### Timing is Everything

Ms. Colless shared that basic principles of performance contracting are not a new idea but the concept might be in a position to be more fully realized. She believes the success of her program can be tied to a series of events still underway.

- “Basically, Al Gore got the Nobel Prize on the Friday, and we launched on the Monday, and that was very helpful because the weekend media and attention and discussions was all about green, it was all about sustainability, and we sort of came in and rode on those coattails, which was gratifying.”
- The findings of the IPCC last year, the largest body of global scientists ever gathered, strongly indicated that climate change or global warming is real and up to 90 percent caused by humans. These findings came just months before the Partnership was launched.
- We made sure we offered something easy to implement; both pragmatic and non-partisan solutions.

### Dollars and Sense

Ms. Colless expressed hope about the upcoming election and also about the United States beginning to take the lead on energy awareness around the world. She also talked about approaching sustainability as a business model.

### Defense Spending

To illustrate the size of potential savings, Ms. Colless ran an analysis of a large, local office building. “We did a study before we launched in August last year and we took pretty much a



blueprint of the buildings around greater Washington. We pulled out the Pentagon, which is actually the largest building in the world I found out last week. But we did a study with a very conservative 20 percent energy efficiency savings, put the numbers together, and we came up with 3.6 billion. It is 3.6 billion in projected annual savings available now in this area just by performing a simple 20 percent energy reduction retrofit. So the business case is definitely there.”

### A Critical Mass

Ms. Colless revealed some early successes of the program. They held an event called ‘20 Now’ with a goal of getting 20 buildings pledged. They ended up getting 800 buildings and “GSA threw in 12 buildings that they promised to launch within this fiscal year for retrofitting. And I think you’ve heard from David Winstead that they’ve more than fulfilled that goal.”

### The Future

Ms. Colless discussed her group’s goals in terms of next steps.

- The partnership has shown that it can make a splash, it can energize people. There’s more work being done, and we’re looking at moving to other states and expanding the number of energy services companies we have.
- We’re looking at getting into the education sector using just the core strengths of the university, and we anticipate a spike in demand for construction workers who understand how to construct a green building, and more importantly, to maintain it.
- We are working with local academia but also engaging the business sector and local government.

### Positive Statewide Signs

Ms. Colless sees a positive response coming from individual states placing more emphasis on sustainable design. She said in fact that more than 50 percent of the states in the U.S. have been acting unilaterally and pulling together sound policy changes on sustainable design.



**Diana Balmori, Principal  
Balmori Associates**

“The city becomes an engine for cleaning air, for cleaning water, for making a place hospitable for living things.”

Ms. Balmori began by pointing out that the design of Washington, DC has influenced other world capitals including Canberra in Australia. She challenged the city to continue to be a leader in the “greening of cities.”

- “The aim of what we are looking at is basically rather than putting the nature in the city, as we tried as a way of ameliorating the ills of the city, is rather putting the city in nature.”
- “It means to use and engineer systems learnt from nature in its infrastructure and its architecture and its public space and that you really use the whole idea of the infrastructure as a way of informing both that and programming.”

### River Views

Ms. Balmori went on to talk about the importance of the Potomac and the Anacostia Rivers to the Washington, DC region.

- Cities in the United States, until the mid 19th Century, were on rivers and derived much of which they lived on from their river. But the importance of the river has to do much more with the issue of water. And the bigger focus means that we’re looking at the city and its relationship to water.
- The air of the city has been affected, and on top of a city we always see this curve that rises and becomes a heat island.

### Bringing the Water to the Surface

Ms. Balmori discussed two projects, both of which involved reestablishing the natural flow of water.

- In Hennepin County in Minnesota, houses in an entire neighborhood were being abandoned because basements were flooding and the surface of their lots was always wet.
- Whole neighborhoods and geological maps of the areas were studied and it was discovered that huge areas of water, both ground water and a running stream, had been covered up and had soil on it for building a housing project.
- They realized the water was never going to go away and there was no way of changing the neighborhood so they

looked at moving the houses and building a green system with water running through it and having that water reach the surface.

- Another project in the northern part of Minnesota, 20 miles out of Minneapolis, involved a developer who wanted to put 500 houses on land with a very high water table. The town, because of the floods of the Mississippi that year, wanted a system that involved putting pipes below ground that would empty into the Vermillion River and then into the Mississippi a few miles down the road.
- Balmori Associates proposed an open system that was on the surface, and that collected all the water that fell, that melted at the end of the winter, and that rose from the high level of the ground water. That water system was then made the basis of a park; and, therefore, that infrastructure became a new way of working with water. When the water reaches a certain level, it gets deposited on parts to the left; and, therefore, saves the river from rising to flood level.



## Greening Long Island

Ms. Balmori became interested in a plot of flat roofs she'd seen on Long Island and calculated how much greenspace could be created by transforming them into green roofs. She proposed the concept to the local government.

- "We presented it in Long Island City, and a few people came up to bat. One was the Silvercup Studios that produced 'Sex and the City' and 'Sopranos', and said, 'Okay, we've got this roof of 35,000 square feet; could you do it?'"
- The roof was built for Silvercup Studios. Then a manufacturer of metal furniture, Martin Metal Furniture, asked for the same thing.
- Both businesses happened to be located by the Queensboro Bridge and were therefore highly visible. They served a very educational role in that an enormous number of people asked about the green roofs; what they did, etc.

## Changing Olmsted

Ms. Balmori talked about how we need to think beyond the work of landscape architects of the past.

- "I'm a great admirer of Olmsted, but we have different cities and it's a different moment, and we don't have those pieces of land that he had."
- "In this particular case, what I'm saying is that the whole city needs to be put in nature."
- Within these systems; the buildings and the public spaces become part of the infrastructure so the city becomes an engine for cleaning air, for cleaning water, for making a place hospitable for living things. "And that's what I mean by not putting nature in the city but, rather, putting the city in nature."

# Green Capitals

## Building a City That Fosters Our Green Goals



"We have to make cities that are workable and beautiful and joyful and sociable and humane. We have to make them complete communities. We have to make them places that people will aspire to be in, not feel that they're sentenced to."

Larry Beasley  
Closing Keynote Speaker

"SUSTAINABILITY... sustainability," began Mr. Beasley, who in a rousing closing address, declared it one of the most over-used words in the English language. "But I'm okay with that. It may start as jargon or public relations, but in the end I think we all know that everything we do in the future must be guided by a sustainable and green agenda."



- You have to gear up to become more sustainable, and this requires pervasive commitments and real expertise. You cannot just do business as usual with the same people and the same philosophies from the past.
- In Vancouver, we decided we should set up a department of sustainability. But as we talked, we became more and more skeptical. If you've been in a bureaucracy, you know that if you have a department that's assigned something, all the other departments say, 'I don't have to do that because that's done over by the sustainability department, right?'

### The Cash Crunch and the Capital Advantage

Mr. Beasley acknowledged that funding, inertia of bureaucracy, and limits of local political power are obstacles to creating a sustainable city. He said capital cities possess a key advantage in that they possess preeminent authority of a national government.

You can command attention. You can motivate. You can bring a wealth into the equation that the typical city just doesn't have access to. I think here is where special leadership and initiative by capital commissions can come into play in a very big way. According to Mr. Beasley:

- Most local governments don't have enough money to replace existing infrastructure, much less invest in new technologies of the future.
- You can make the good argument about the triple bottom-line approach where ultimately the long-range savings will pay for the up-front capital costs. But that's not how governments budget. They do it the old-fashioned way and so you have to kind of find a way around that.
- A capital city has a huge advantage over any other city with new funding sources and funding allocations because national governments have funding sources that are bigger and better and a lot more agile than local governments.

## Summary of Closing Keynote Address

How can national capitals shape green cities that also are beloved urban centers? How do we build a city that fosters environmentally sound behavior? In the closing keynote, co-hosted by NCPC and the National Building Museum, Larry Beasley, professor of planning at the University of British Columbia and retired director of planning of Vancouver, explained how experiential planning can help national capitals become models for the best urbanism their country can offer. Sustainability is about both the structure and the infrastructure of our cities. Knowing is not doing and Mr. Beasley provided ideas for implementation and government action.

### The Real World

Mr. Beasley shared how capital cities that are striving to be green are turning ideas and concepts into reality. Admittedly, he said the word means different things in different locales, but there are some universal truths that rise to the top.

- You can't just talk about sustainability. You have to actually re-arrange government so that the priority of sustainability is built right into the system. It can't be a kind of a boutique operation.

## Razing the Standards

Mr. Beasley challenged the delegates to achieve sustainability by altering some time-honored traditions.

- Stop the wasteful spending on obsolete standards that have wrongly shaped our cities for almost a century including transit, parking, building and utility standards. "They're killing us financially, and they're killing us on the ground."
- "To this very day, at exorbitant costs, [engineering street standards] twist our communities of all their vitality just to accommodate the car. But you can do something about these standards. You don't have to accept them."

## Setting an Example

- About five years ago when designing the Athlete's Village for the 2010 Winter Olympic Games, a courageous city council unilaterally cut the streets' widths by ten percent below all vaulted standards. "They didn't do any studies. They didn't ask for reports on impacts. They didn't do any traffic modeling, none."
- "Frankly, they were just desperate to save a bit of money to use for other purposes. And guess what? Nothing happened and nothing is going to happen. The sky did not fall."
- But, actually, a lot is happening. The area has more land for walkways and bikeways and local gardening and many, many of the fine things that are needed to feed sustainability. A lot of wealth that would have been wrapped up in asphalt was in fact liberated for use by much more progressive investment.

## Olympian Progress

Mr. Beasley discussed how the Olympic Games offered the chance to plan a sustainable community from the ground up.

- We started with a neighborhood plan that could support 15,000 people and residents with the normal things that have become de rigeur in Vancouver, such as high density, social mix, public ground, and community amenities; and then we started pushing the boundaries.
- We said this community will have an aggressive energy plan. It will have an advanced water management plan. It will have an innovative waste management plan. It will have green building requirements of a very, very high standard. It will have an urban agriculture initiative to build food production right into the neighborhood. It will have very diverse transportation options, and it will have provisions for environmental stewardship and learning.
- It will be ecologically responsible and hospitable for the people who live there. And it's under construction, and it's selling very well in the marketplace.



## Other Models

Mr. Beasley acknowledged that not every city trying to move towards sustainability has the option of tapping the Olympics to put the plan in motion. But he did offer other real world projects that succeeded.

- The LeBreton Flats project in Ottawa, a soon-to-be model of high density and livability and ecological responsibility that will ultimately reshape the capital. It's a community for 8,000 people close up against the inner city that will push all the limits for a better urbanism. It will offer community amenities, green architecture, walkability and transit-oriented development.
- Masdar, in Abu Dhabi, will be a new community for 100,000 people. It will be a carbon-neutral community that gives us little or no waste to the environment around it. Cars will be banned, and people will move around on a new kind of rapid transit or on foot in an environment that has been tailored for everything a pedestrian would want on a day-to-day basis.

## Courage and Structure

- If you claim that you want to create a green capital, you are going to have to take some role in the structure of your city.
- The first thing you can definitely do is proclaim the right vision through the completion and publication of smart plans and policies that are grounded in clear, well-articulated principles. This gives a common direction for everyone to get behind.
- This means taking up the torch of planning in your capital and then fighting for those plans that result from that process with your citizens.



### Influencing Others

- Most people don't actually make decisions about sustainable infrastructure or green construction in their day-to-day lives. People expect the utilities to be delivered. They just want to wake up and turn on the water and turn on the lights. They don't really think too much about the fabric of buildings, although LEED is helping them to do that more. "Really, most citizens kind of take that as their God-given right."
- There are thousands of people living in dense urban settings in our countries and around the world. But there are hundreds of millions of people that are living in suburban sprawl, and they are living there by choice.
- Think of your citizens. Will, in fact, they change their life patterns and habits to do what needs to be done for a sustainable ecological footprint?

### The Way Things Really Are

- "Most people hate density because, frankly, most density that's been built in this century has been so bad," said Beasley. "They think that mixed-use is really going to hit them negatively. They see diversity as unsafe. Transit is not even in their vocabulary, and they still love the car."
- Mr. Beasley asked the audience to bring themselves into the discussion. "Let's bring this a little close to home. Let's think about your personal situation, every one in this room. How many of you really live in high-density housing? How many of you live in a mixed-use building? How many of you live next door to very low-income people? How many of the people who are local came here today by transit? How many of you drove more than 30 minutes to get here today from a gated community, from a single-family home, in your SUV?"

### Reaching Out

Mr. Beasley urged the installation of outreach efforts to educate consumers about other lifestyle choices and to improve the available options.

- To shift people's actions and the choices they make, offer cities that are more appealing. Offer people urban products that, as consumers, they prefer.
- To offer sustainable urban products that people will prefer, get back into the real process of place-making, and add this to the formula for smart growth.

### The Real Gamble

- Ideas behind sustainable communities come with inherent risk and adjustment. It will be a new way of living for our citizens. It will be dense. It will be mixed-use, and it will be much more crowded than they're accustomed to. It will be a social polyglot.
- We will ask them to get out of their cars. We will ask them to get out of their single-family homes. We will ask them to change long-held consumer habits. The sustainable city will have a settlement pattern that is very different and very far removed from the suburban settlement patterns that most people are accustomed to in our countries for at least the last 50 years.
- Citizens may actually hate this new city, even if it is sustainable, even if it is saving the planet and securing the future for their children. And no matter where you are in the world, no matter what your government is, the people, if nothing else, as consumers, can be a very powerful force. If they hate this new sustainable city, I think they will make sure that it doesn't happen.

### The Ultimate Challenge

- Our fundamental task is to design the city that people can truly relate to, that they can be attracted to, that they can believe in. Do not just focus on the science of sustainability. We cannot just get the systems right for the city to be compatible with the environment.
- We have to get back to really designing our cities again for human occupation in all of its richness and all of its wonderful choices. And this is all about place-making.
- We have to make cities that are workable and beautiful and joyful and sociable and humane. We have to make them complete communities. We have to make them places that people will aspire to be in, not feel that they're sentenced to.

- We have to make the design of our cities to reflect the image of our people and to satisfy the needs and the desires of our citizens.
- We are not doing that in most places now. We still generally take that 100-mile-high view or we see the city as a zoning pattern to be organized or as a machine rather than as a people place, rather than as a work of art.

### The Basic Requirements

- First, convene our citizens in a massive discussion involving thousands of people to dream about the city that they would like to live in, and then to codify that in plans and drawings and words and policies.
- Second, put that dream into our laws for development, making those laws focused on design, on the environment and aesthetics. Don't give incentives for green buildings; make it something that you have to do.
- Third, learn to say no to propositions that are not consistent with our dreams but also have laws that are flexible enough so that when some great splendid new idea comes along we can, in fact, adopt it.
- Fourth, require action to build the public places and the facilities and the institutions that make the city enticing. You must take the reins and shape the city as you wish it to be.

### The Capital Opportunity

Mr. Beasley concluded his remarks by extolling the virtues of capital planning agencies, outlining the challenges ahead of us, and impressing the importance of tomorrow's green capitals. "Capital cities are in a unique position to lead the way towards sustainability. "If you don't do it," Mr. Beasley urged good-naturedly, "you're going to be embarrassed in front of your nation, and your country is going to be embarrassed before the world."

- In all of our capitals, the presence of a proactive capital commission or a similar agency to take the reins and to shape these cities shows beyond a shadow of a doubt that it is possible to make the cities that we want by design. And all national capitals, and all cities, can learn from that.
- No capital city, in fact no city on the planet today, is yet truly green except for maybe Copenhagen. "That might be the exception, and we should use that as a model."
- Like Copenhagen, to be a green city, tomorrow's capital city is going to have to meet the environmental tests. It is going to have to meet the social tests, the economic tests, and the cultural tests. "It is also going to have to meet the experiential test. It must be something that our citizens can fall in love with and they can put their heart into. And it is at that point that we will truly have achieved the great promise of sustainability for our capitals and, in fact, for all of our cities."



# Green Capitals

## Closing Discussion



This panel session featured remarks from a representative of each of the founding Capitals Alliance partners. Pictured left to right are Marcel Acosta, Washington, DC; Michelle Comeau, Ottawa; Andrew Smith, Canberra; and Cassio Taniguchi, Brasilia.



**Cassio Taniguchi**  
**Brasilia**

Mr. Taniguchi talked about the highlights of the week and the importance of adopting practices that enable cities to achieve greater sustainability.



**Andrew Smith**  
**Canberra**

Mr. Smith reflected on how far Capitals Alliance has progressed since it was first launched in 2001.

- I think all public buildings and enclosures of the buildings could be planned or designed as a green building, as a green environment, to give the example to all the populations on how to do this and how to cope with this issue.
- More than 30 years ago when we began planning the city of Curitiba, and asked why have so wide a width for the streets, even if you go through the neighborhood that is typically residential? So just reduce this width and gain the sidewalks, the green areas, and the trees.
- Please don't follow the rule of the transportation engineers. Please, don't do that. They don't understand cities. With a sectorial approach, not only engineers and architects, sociologists, all together to make things happen. Sustainability will only be achieved through a sectorial approach.
- The public transportation is so important for the mobility of a population that Mr. Jaime Lerner has a very creative saying about cars, 'Cars are like our mother-in-law. You must respect her, you must treat well, but never let her drive your life and command what you need to do.'
- I used to say that planning is to breach dreams and reality. So good planning may change the world.
- It has been fascinating to watch the evolution of the conference from a fairly informal get-together to a conference that really discusses some substantive issues in planning. This one, of course, being on environmental themes.
- What has been clear to me is that some of the fundamentals of good planning are absolutely essential to maintaining environmental sustainability. It appears that we're on the cusp of a new planning language. We saw some examples from various presentations where things across cities were being examined and met for pretty much the first time. I find that particularly fascinating.
- It appears that it's in the systems and in the engineering, that real solutions to environmental sustainability in an urban environment are going to be absolutely critical.
- I think the importance of leadership and bravery has come through. Larry [Beasley] talked at length about the Copenhagen model, and I think what struck me was the fact of its brevity. Most of us have corporate plans that, you know, you could ski down, they're that tall. But in a very small, probably five-page, document, the entire city's corporate direction has been set through sustainability initiatives, and I found that absolutely remarkable.



**Michelle Comeau**  
Ottawa

Ms. Comeau talked about the value her delegation received from participating in the program and how she looks forward to putting ideas into action.



**Marcel Acosta**  
Washington, DC

Mr. Acosta thanked all of the Capitals Alliance partners and NCPC staff. He then concluded with a summary of the program's accomplishments and revelations.

- We are going back to our capitals knowing that the time to act is now, knowing that as capitals, we may not have all the tools but we do have tools to affect change. We have planning powers. We have policies. We may have land. We may have buildings. We have various authorities, but, certainly, one of the things that we do have is the power to influence.
- “We have also learned, through other people’s examples, that there is real strength in partnerships. Partnerships can be with the private sector or with other organizations. But there are also partnerships with the public. People themselves as individuals, and collectives, have power. And that’s a very important notion that we can all take back to our respective capitals.
- Another thing that we’ve talked about and [which] really has come home is that sustainability and greening is not just about the environment. It’s about economic and social dimensions of sustainability. So it’s like the full Monty. It’s the whole package, and you need to look at it from that point of view.
- I think that another very important lesson [is] we need to lead by example. How can we ask people to behave in a certain way or to do certain things for the greater good if as organizations we can’t demonstrate that we are doing that as well?

- It was a great opportunity for all of us to understand the complexity of this issue. I think, as many people have said, sustainability is quite the buzz word out there, greening is quite the buzz word out there. But I think every city has approached it in a very different fashion.
- One of the lessons that we learned was really that we have to apply it to our situation and that the outcomes may be different and the problems that we’re trying to solve are, essentially, problems that are local.
- I think the one message is, collectively, that we need to all do this, that there is something bigger at stake, and that the time for action is now. Whether it is for climate change, for economics, or for energy reasons, we have to act now for future generations. As planners, that is our job, and this is essentially what we have to do.



# Green Capitals

## United Arab Emirates Embassy Event

### Abu Dhabi's Plans for a New Green Capital District

The week-long Capitals Alliance activities culminated with a closing reception hosted by the United Arab Emirates (UAE) Embassy on the evening of Thursday, September 18.

Hagir Elawad, director of Congressional Affairs for the UAE Embassy and His Excellency Falah Al Ahbabi, general manager of Abu Dhabi's Urban Planning Council (UPC) warmly welcomed the delegates and their invited guests to the embassy. The 50-thousand square foot building, located in the International Center in Northwest Washington, DC is a modern, multi-use facility that reflects the traditions of Islamic culture and architecture.

Once the guests were seated, His Excellency Al Ahbabi thanked members of the National Capital Planning Commission for organizing the 2008 conference. He then asked Michael White, the senior planning manager at the UPC to present on the Council's plans for developing a green and sustainable capital.

Mr. White provided a detailed presentation on Abu Dhabi's strategic framework plan and outlined the agency's goal for developing a green capital that will be renowned both for its architecture and sustainable features. Guidelines include emphasizing energy reduction and water minimization, promoting landscape designs that use little to no water, developing a public transit service, implementing recycling and solid waste management programs, and designing mixed-use development where people can live, work, and play.

Following Mr. White's presentation, NCPC Commissioner Herbert Ames delivered closing remarks on behalf of the National Capital Planning Commission. He thanked the hosts for their graciousness and hospitality and acknowledged the various entities and individuals who helped make the week a success. Commissioner Ames then officially closed the 2008 meeting of the Capitals Alliance.



# Site Visits



Throughout the week, Capitals Alliance delegates toured a number of prominent sites in the nation's capital including new and future green destinations, iconic buildings and monuments, and the city's newest attractions.

## Green DC Tour

On Monday, September 15, participants visited key sites that represent innovative approaches to sustainable design in the District of Columbia. NCPC Commission members Mike McGill and Jose Galvez III, and NCPC staff member David Zaidain led a bus tour, pointing out many of the city's newest public and private sustainable development projects along the way. Areas of mixed-use development, federal sites, parks, and an award-winning Platinum-certified school were among the designated stops.

The first stop was at Sidwell Friends School, a kindergarten through 12th grade private school in metropolitan Washington, DC where staff conducted a tour of the LEED Platinum facilities. The school features locally manufactured and/or recycled materials, natural ventilation, a green roof, a grey water system, indigenous plantings, low flow plumbing fixtures and a geothermal HVAC system. It is the first K-12 school in the United States to achieve a Platinum rating and the first Platinum rated building in the District.

Second stop of the tour was at Kingman Island, which is surrounded by the Anacostia River in Southeast Washington, DC. Adjacent to the smaller Heritage Island, both islands were created in 1916 from river mud dredged by the U.S. Army Corps of Engineers. The area had been neglected for decades, but tidal marshes are currently being restored and future plans call for the restoration of natural wetlands in addition to the creation of trails, canoe tie-ups, and a playground. A LEED Platinum Education Center is also in the works along with a memorial tree grove dedicated to school children killed at the Pentagon on September 11, 2001.

The third and final destination of the afternoon was a visit to the new Washington Nationals Baseball Stadium. Opened in March 2008, the structure is the first LEED Silver certified stadium in the country. Serving as a development catalyst for the Southeast neighborhood, the stadium uses underground sand filters to protect the Anacostia River from runoff and rubbish. During construction, 80 percent of the debris was recycled and over 20 percent of the building materials were manufactured with recycled content. The stadium also employs energy saving lighting, a green roof above the left field concession stand, and reflective roof coatings to mitigate solar heat gain. Marshall Purnell, president of the American Institute of Architects and a design principal who worked on the new baseball stadium led the tour.



### Lincoln Cottage and U.S. Capitol Visitor Center

On Wednesday, September 17, the group toured the newly restored Lincoln Cottage, located on the grounds of the Armed Forces Retirement Home in Northwest Washington. The cottage has played host to four U.S. presidents including Abraham Lincoln who stayed on site during the summers of 1862-1864. The cottage recently underwent a \$15 million makeover sponsored by The National Trust for Historic Preservation. The tour included a walk through of the adjacent Visitor Center, housed in a 1905 Beaux Arts building that is a model of green historic preservation.

Delegates then went to the U.S. Capitol Visitor Center, most of which is constructed underground to retain sight lines to the Capitol dome. Delegates were given a preview of the 580,000 square foot center, which did not officially open until December 2008. The facility contains two theaters, an auditorium, retail shops, and office space for members of the U.S. House and Senate. Staff from the Office of the Architect of the Capitol discussed how green features were incorporated into the largest construction project in the Capitol's 215-year history. They also heard how the U.S. Congress is working to reduce its carbon footprint through the 2007 Green the Capitol Initiative.

### The Nation's Front Yard

For those whose schedules permitted an extra day in Washington, delegates enjoyed a tour of the National Mall, home to many of America's most iconic memorials and public buildings. NCPC staff member Nancy Witherell talked to the group about how the Mall has evolved over time, becoming the most important venue for public assemblies, commemoration, and recreation. Delegates then lunched at the National Museum of the American Indian before taking in the U.S. Botanic Garden's sustainability exhibit, "One Planet-Ours! Sustainability for the 22nd Century."





# Outcomes

## Green Declaration

“When you take too much time discussing if a forest or a wood must be preserved, both may be destroyed. It is important to give examples of how to ‘green’ the city through attitudes and a real change of the life style-consuming less and in a smarter way. All the population must be participating in the process to make a city green.”

Secretary Cassio Taniguchi  
 Department of Urban and Environmental Development  
 Brasilia

Delegates closed out the week-long conference, *Greening the World’s Capital Cities*, with a pledge to promote green practices and policies that will lead to a greener and more sustainable future. The declaration demonstrates the commitment of Capitals Alliance participants to support principles of sustainability as central to the development of our capital cities. Representatives from Abu Dhabi, Bogotá, Brasilia, Canberra, Copenhagen, Helsinki, Islamabad, Moscow, Ottawa, Stockholm, Tshwane, Vienna, and Washington, D.C signed the declaration.





## *Capitals Alliance 2008: Greening the World's Capital Cities Non-binding Declaration*

National capitals are special cities that play a vital role in establishing a country's identity and in serving as models for cities worldwide. As a symbolic sign of our mutual goal to build sustainable communities, members of the Capitals Alliance can sign this declaration, which serves as a non-binding commitment to our desire to build and promote sustainable communities. It will provide the Alliance with a collective of key principles that can serve as a basis for future work in the greening of the world's capitals.

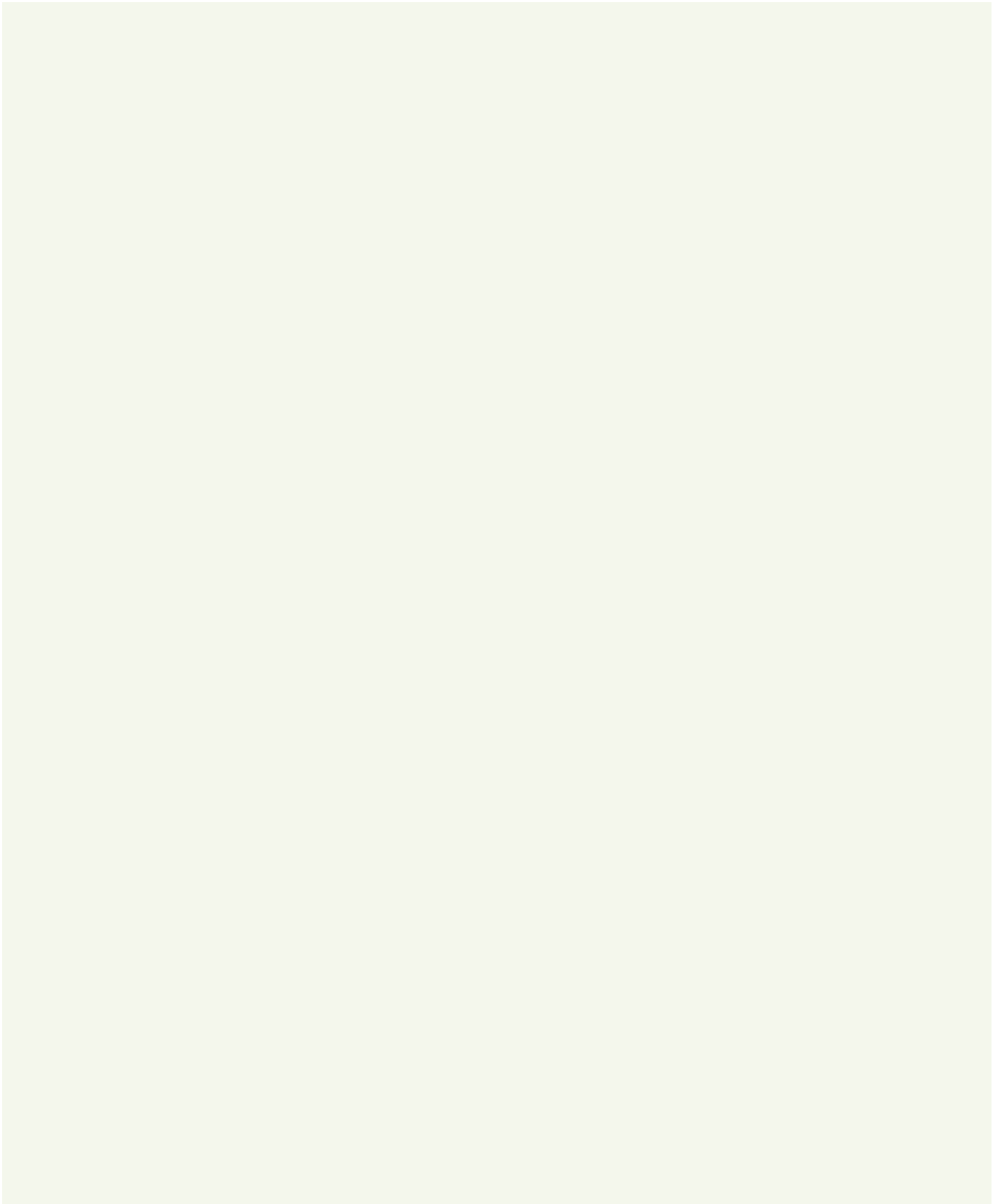
Founding members of the Capitals Alliance recommend that:

- Capitals Alliance participants continue to share their respective experiences and information regarding a variety of projects, initiatives, research, and case studies.
- Proactively help sister capital cities on planning issues that are unique to national capitals through ongoing symposiums, charrettes, etc. regarding the management of capital city interests and assets.
- Welcome new capitals to participate in the Capitals Alliance network.
- Support principles of sustainability as central to the development of our national capitals as set forth in the 2008 non-binding Green Declaration.

Capitals Alliance 2008 Green Declaration:

*Capitals Alliance Delegates will*

1. Support principles of sustainability as central to the development of our capital cities.
2. Encourage green building design and construction; energy efficient practices; and low impact development techniques.
3. Promote compact mixed-use development near transit to create more walkable vibrant neighborhoods that reduce reliance on driving and therefore reduce greenhouse gas emissions.
4. Promote continuous and accessible streetscape networks that balance the needs of pedestrians, bicyclists, mass transit users, and vehicles.
5. Promote protection of open space and natural resources to help improve air quality, reduce noise pollution, prevent erosion, and provide critical habitat for species to thrive.
6. Support and encourage coordination and partnerships with local government entities; the private sector; and citizen and advocacy groups to make communities more sustainable.





## Toward a Sustainable Future

This section summarizes the primary conclusions of *Capitals Alliance 2008: Greening the World's Capital Cities* as interpreted by staff of the National Capital Planning Commission. It was prepared with the help of event transcripts and recordings as well as notes taken at the sessions. Capital city delegates neither reviewed nor approved this report and therefore, it should not be assumed that every participant subscribes to all of its recommendations, observations, and conclusions.

### CONCLUSIONS

- Immediate and substantial change is possible
- Cost-effective technologies can end fossil fuel dependence
- Effective policymaking is critical to long-term change
- Sustainable cities require planning and measurable actions and goals
- Public involvement is vital if policies and plans are to succeed
- Political leadership—commitment, courage, and tenacity—is a key ingredient to change

### WHAT NEEDS TO BE DONE

- Cities should strive for environmental, economic, and social sustainability—the “triple bottom line”
- Improve the energy efficiency of buildings, the “silent killers”
- Design infrastructure so it mimics the systems of nature
- Embrace new technologies like tidal power stations and thin-film solar cells that make it increasingly viable to adopt renewable energy practices
- Clearly articulate why people should change their lifestyles
- Devise well-crafted economic incentives to jumpstart activity
- Establish measurable goals and objectives
- Assume a leadership role and lead by example

## Immediate, Substantial Change is Possible

With the greening of buildings on the rise, delegates agreed that change is well underway, but acknowledged that the more important transformation of urban infrastructure will inevitably be more difficult to achieve.

### Buildings are the Beginning

When people think of greenhouse gas emissions, they tend to think of filth billowing from smokestacks or a haze of exhaust hovering over a traffic jam. Cars and factories are indeed major sources of pollution, but few realize that buildings, “the silent offenders,” are responsible for 39 percent of carbon dioxide emissions.<sup>1</sup>

Many cities are currently adopting building codes that reduce the environmental impact of new development. For example, Washington, DC. has recently adopted the most stringent code in the United States, which requires all new public buildings to have LEED (Leadership in Energy and Environmental Design) certification from the U.S. Green Building Council. By 2010, all private development over 50,000 square feet must also be LEED certified.

In addition to developing sustainable guidelines for new buildings, retrofitting existing ones is just as important. At the first panel discussion of the conference, Frances Beinecke, president of the Natural Resources Defense Council cited a study that evaluated 250 measures to reduce greenhouse gas emissions. According to Ms. Beinecke, the study found that retrofitting existing buildings with energy-saving devices was one of the most cost-effective, and often profitable, ways to reduce emissions relative to the magnitude of impact on the world’s environmental health.<sup>2</sup>

Fellow panelist Thomas Hicks, a vice president of the U.S. Green Building Council (USGBC), agreed that building owners can reduce operating costs with energy-efficient buildings while reducing their environmental impact significantly. “Green buildings reduce energy consumption by 30 percent and carbon dioxide emissions by 35 percent,” he said, adding that it also makes sense for developers to adopt sustainable practices. “They deliver tangible economic results in the form of higher occupancy rates, premium rents, and increased asset values.”

One of Mr. Hicks’ most interesting revelations was the fact that green buildings contribute to a healthier workforce, which increases quality of life and improves the social and economic sustainability of a community. “Green buildings are delivering scientifically documented productivity gains...and reducing symptoms for respiratory illnesses,” he said.

However, buildings of particular cultural or historical value can pose challenges for green retrofitting, because their appearance cannot be altered. This presents a problem for capital cities, where there are numerous historic and culturally significant buildings. On the last day of the conference, Richard Moe, president of the National Trust for Historic Preservation, reassured the audience that the technical issues associated with “greening” a historic building can usually be resolved to the satisfaction of both preservationists and building owners.

In fact, as Dave Winstead, commissioner of the Public Buildings Service of the U.S. General Services Administration noted, historic buildings often have a natural advantage when it comes to sustainability because of their thick walls and natural light and ventilation. “[We] went out and measured the energy efficiency of historic buildings that we have been renovating over recent years,” he said, “and we found that... these buildings [were] 27 percent more efficient than the average of our other inventory.”

Mr. Moe instead encouraged the delegates to think about historic preservation, not only on a building-by-building basis, but also as part of a broader perspective on urban development. “Any new building makes an impact on the environment,” he said. “At the National Trust, we have always thought of historic preservation as the most sustainable of the building arts, because we’re reusing existing material.”

“[We] went out and measured the energy efficiency of historic buildings that we have been renovating over recent years and we found that these buildings [were] 27 percent more efficient than the average of our other inventory.”

David Winstead  
General Services Administration

1 U.S. Green Building Council (<http://www.usgbc.org/News/USGBCNewsDetails.aspx?ID=3037>), citing U.S. Energy Information Administration. *Emissions of Greenhouse Gases in the U.S.* (2005).

2 For the full report, see <http://www.mckinsey.com/client-service/ccsi/greenhousegas.asp>



## Mimic the Systems of Nature

Improved energy efficiency alone is not enough to achieve the reduction in greenhouse gas emissions necessary to stop global climate change. The infrastructure that currently supports our cities must be changed for them to function sustainably, and natural ecosystems such as forests and coral reefs provide an excellent model. These systems sustain themselves through circular metabolism—converting waste products into nutrients for growth. To become sustainable, cities must apply this logic to the development or overhaul of its infrastructure.

A city with circular metabolism minimizes consumption and recycles as many materials as possible into new products. Such a city conserves and reuses water rather than discharging it into the sewer system. It also uses solid wastes for other purposes such as compost, biogas, or the production of energy. It captures the heat normally lost in the process of power generation and uses it for heating and cooling large districts within the city. And a city with a circular sewage system recovers valuable effluents like phosphates, which are then used in fertilizers.

Holistic, closed-loop design is much easier to undertake in new developments than in existing urban areas, but many opportunities exist in brownfield (abandoned industrial) sites. For example, Docksider Green, a 1.3 million square foot mixed-use development in Victoria, British Columbia is a LEED for Neighborhood Development pilot project that converted a brownfield site into a model for sustainable communities. Jim Huffman, associate principal with Busby Perkins+Will and lead designer on the project, explained that a development can be its own sustainable city within a city when it is large enough to achieve economies of scale. “Once you get to [Docksider’s] scale, you can have district infrastructure on the site and not have to rely on the city for [water, sewer, energy generation, and heat].”

Docksider Green is also widely admired as an example of how the most ecologically sound developments can also be economically viable. “This was a fairly standard way of doing a project from the developer’s point of view,” Mr. Huffman said. “The economics were the most important, but this bottom line was just one element of a broader, triple bottom line—economic, environmental, and social sustainability.”

Sometimes it is not possible to circumvent existing infrastructure, as in New York City, where Diana Balmori, member of the U.S. Commission of Fine Arts and award-winning green roof designer, has her landscape architecture practice. She encouraged a different approach, putting forth the somewhat abstract idea that the entire city, including its buildings and public spaces, should be part of a comprehensive green infrastructure. “Rather than putting the nature in the city, as Olmsted did in the 19th century,” she said, “we must put the city in nature.”

In practice, according to Ms. Balmori, this means that things like parks, green roofs, and specially designed hardscapes should reduce stormwater runoff and help cleanse it before it reaches a natural body of water. Trees and other plantings should be used to help pull carbon dioxide from the air. In the fullest realization of this ideal, “The city is an engine for cleaning air, for cleaning water, for making a place hospitable for living things.”

“Rather than putting the nature in the city, as Olmsted did in the 19th century, we must put the city in the nature.”

Diana Balmori  
Balmori Associates



## Cost-effective Technologies can end Fossil Fuel Dependence:

Even with a well designed circular metabolism, cities will still have a need for additional energy. Heavy reliance upon fossil fuels ignores their fundamental limitations; it is becoming more costly to extract them, and, sooner or later, they will run out.

Today's cities are possible only through the unsustainable exploitation of the earth's natural resources. "We are burning more than a million years of fossil fuels every year," Mr. Girardet said. "[So] the critical issue is how cities in the 21st century can create a sustainable relationship with the global environment."

The earth's annual solar income is 15,000 times greater than the current annual energy consumption from fossil fuels. Making use of this readily available sunshine, as well as wind and water power, is the only sustainable way to solve the problems of resource depletion and climate change, and many countries have already made substantial progress. According to Mr. Girardet, 15 percent of households in China have solar hot water systems, and 15 percent of Germany's entire electricity supply comes from renewable resources. The European Union, he added, expects that 20 percent of its energy will come from renewable sources by 2020.

While some have promoted nuclear energy as a clean alternative to fossil fuels, this does not solve the problem of resource depletion. Nor is it an entirely clean technology, because disposal of radioactive waste continues to be a problem. And, as Mr. Girardet noted, it takes ten years to build a nuclear power plant and bring it on line.

"Until a few years ago it was assumed that perhaps we have 20 years, maybe 30 years, to get serious about dealing with climate change," he said. "But now we have maybe eight years to really make a significant difference in terms of the action that is required in order to get to grips with the frightening situation facing us."

### Technological Innovations

Despite the abundance of renewable resources, widespread acceptance of renewable energy technologies has been hampered by high installation costs and relatively long periods of return on the investment. However, recent technology and policy breakthroughs have facilitated the rapid adoption of renewable energy in several parts of the world.

According to Mr. Girardet, wind turbines that once produced 20-100 kilowatts of electricity have been replaced by those that

generate 5 megawatts. As a result, wind power is an increasingly viable option for large-scale production. Copenhagen's offshore wind farm, which supplies 20 percent of the city's energy needs, is an excellent example of the potential.

New technologies like tidal power stations are enabling the capture of renewable resources in more places than ever before. Tidal power stations, like those already operating off the coast of Northern Ireland, use the force of ocean currents against underwater turbines to generate electricity.

"We are burning more than a million years of fossil fuels every year. [So] the critical issue is how cities in the 21st century can create a sustainable relationship with the global environment."

Herbert Girardet  
World Future Council

The most revolutionary technological advances have occurred with solar energy. Breakthroughs in photovoltaic technology enable the production of solar energy on a larger scale and at a lower price than ever before. These advances have led to the creation of solar farms that can power several thousand homes.

Although solar farms occupy a lot of space, the land may still be used for other purposes such as pasturing, as Mr. Girardet showed with examples from Germany. He also noted that the surface area required to produce solar electricity is about 200 times smaller than the area needed to produce the equivalent amount of energy in biofuels.

"It does not make sense to produce biofuels if you can produce so much more energy from a given surface area," he said. "We could keep that farmland productive as food for people, rather than food for cars."

Another technology, light and flexible thin-film solar cells, offers enormous opportunities to convert everyday objects into energy production sites. The film can be applied to almost any surface, including fabric, and according to Mr. Girardet, it can offset some of the problems of urban sprawl by turning low-density suburbs into "solar suburbs"—their own self-sustaining solar farms.

Solar thermal technology, Mr. Girardet said, can also facilitate the large-scale production of renewable energy. With this technology, used in several places around the world including the U.S., reflective mirrors concentrate sunlight onto a central receiver, which produces steam that generates electricity with a steam engine.

1 U.S. Green Building Council (<http://www.usgbc.org/News/USGBCNewsDetails.aspx?ID=3037>), citing U.S. Energy Information Administration. *Emissions of Greenhouse Gases in the U.S.* (2005).

2 For the full report, see <http://www.mckinsey.com/client-service/ccsi/greenhousegas.asp>

## Solving Intermittency

In addition to high costs of production, renewable energy has also been plagued by the problem of intermittency; how to generate a consistent flow of electricity when the sun is not shining or the wind is not blowing. Improvements in storage systems and transmission technology are beginning to address this issue, however. Air pressure storage, already in use in Germany and Denmark, stores surplus electricity as air pressure and then runs it through turbines when production is inadequate or there is a surge in demand.

Plans for direct current (DC) grids are already in the works in the U.S. and Europe. Direct current grids minimize energy loss over long-distance delivery, which enables the cost-effective transmission of electricity produced in places where it can be generated to places where it temporarily cannot. As Mr. Girardet explained, "Wind power from the North Sea can be linked up with solar power from Spain or even from Morocco...so that there is always a sustainable energy supply available from somewhere."

## Effective Policymaking

The day-to-day activity of a city is comprised of millions of decisions undertaken by its inhabitants. "Unless we can convince our citizens to change their lifestyles and this vast gluttony of consumerism, we stand very little chance of achieving any sort of a green city," said Larry Beasley, Vancouver's retired director of planning, during the conference's closing address.

## Regulation

Direct regulation is one element of the policymaking equation. It can have an immediate impact on individuals' behavior and bring about the magnitude of change necessary to ameliorate global climate problems. However, without public support, regulations can be difficult to adopt and costly to enforce, and they can also be repealed at a later time if public opinion shifts. Through public education and ongoing communication, people can understand how regulations improve their lives, making them more likely to comply.

In 2007, Stockholm became the second city in Europe (after London) to implement a congestion charge, a toll for driving a vehicle into the central part of the city during peak travel hours. According to Irene Svenonius, CEO of the city, who spoke at the World Leaders on Sustainability forum, the measure was not popular until people began to appreciate its effects. "Traffic reduction in the city was twenty percent and the air quality improved fourteen percent," she said. "Now that it's been up and running for a year, people seem to be pretty happy...[opinion] polls show that a majority of our inhabitants are in favor of the congestion tax."

"Traffic reduction in the city was twenty percent and the air quality improved fourteen percent. [Now] polls show that a majority of our inhabitants are in favor of the congestion tax."

Irene Svenonius  
City of Stockholm

In the United States, enormous cultural changes have resulted from pairing public information campaigns with more stringent laws regarding seatbelt use, littering, and smoking. Appearing at the same World Leaders forum, U.S. Congressman Earl Blumenauer noted that education campaigns need not be limited to adults, and that part of the city of Portland's early success with its recycling program can be attributed to children. "Young people in many families are the enforcers," he said. "They helped lead the charge."

With ESCOs to defray the initial investment, "a building owner who doesn't have upfront capital can get a fully green-retrofitted, upgraded asset with no upfront cost"

Laurel Colless  
Energy Efficiency Partnership  
of Greater Washington

## Incentives

Installing energy-saving upgrades and adopting renewable energy technologies require large initial investments that take a long time to recoup, and this has prevented their widespread implementation. "People know that conserving energy saves money in the long-run," said George Hawkins, director of Washington, DC's Department of the Environment and moderator of the first day's panel discussion. "The challenge is how you find the money upfront."

Well-crafted economic incentives can help align short-term individual interests with the long-term public good. Simple tax incentives can jumpstart activity, often with relatively little expenditure of public funds. New York City, for example, offers a property tax abatement to partially offset the cost of installing green roofs. According to landscape architect Diana Balmori, the results have been dramatic. "The most modest incentives can change the field completely," she said. "In New York there were two producers of green roof systems...there's now about eight."

More complex incentives like Energy Service Companies (ESCOs) and Feed-In Tariffs (FITs) have proven remarkably effective in facilitating the installation of energy-saving building retrofits and the adoption of renewable energy technologies. Both incentivize "going green" by changing the cost-benefit calculation. ESCOs reduce upfront expenditures, while FITs increase the long-term revenue stream over time.

ESCOs are currently used primarily for improving the energy efficiency of existing buildings. An ESCO works by first determining how a building owner can best save money through

adopting energy-saving technology. The ESCO then "loans" the owner the money by paying all of the costs of the retrofit. In return, the building owner turns over some percentage of the total energy cost savings to the ESCO as payback for the loan.

With ESCOs to defray the initial investment, "a building owner who doesn't have upfront capital can get a fully green-retrofitted, upgraded asset with no upfront cost," explained Laurel Colless, executive director of the Energy Efficiency Partnership of Greater Washington.

The ESCO business model, known as performance contracting, has existed in the private sector for more than 20 years, but according to Ms. Colless, only four percent of building owners take advantage of them. Collaboration among public, private, and nonprofit entities can play an essential role in promoting ESCOs and providing the upfront capital, and the Energy Efficiency Partnership has already met with tremendous success. At one luncheon program, 800 buildings were pledged to participate in the program. The Partnership's goal was 20.

In contrast to ESCOs, feed-in tariffs encourage the adoption of renewable energy technology by shortening the time in which the initial investment pays for itself. Implemented in 46 countries, feed-in tariffs require energy companies to buy excess renewable energy from producers like households and businesses. The unit price for this renewable energy is set slightly above market value to guarantee the producers a sufficient income stream to accelerate the payoff of the initial investment.

According to keynote speaker Herbert Girardet, feed-in tariffs have been very successful wherever they are implemented. In Germany, a solar roof can pay for itself within 12 years, and as the cost of renewable energy technology decreases, the payback period will get shorter. The additional cost to German consumers for this clean, renewable energy amounts to only about \$1.50 per household per month.

## New Economic Opportunities

The most significant, lasting changes occur when the interplay of regulations and incentives generates demand for new products and opportunities for employment. Regulation ultimately becomes invisible when the day-to-day activities that support people's livelihood are the same as those that make cities more sustainable.

"It is absolutely extraordinary what has been achieved as a result of the technological breakthroughs that were driven by policy development across Europe," Mr. Girardet said, noting that regulations requiring the use of renewable energy coupled with feed-in tariffs have created 250,000 jobs in Germany since 1999.

Policy innovation in other parts of the world has already created economic opportunities in the United States, where much of the renewable energy technology has been developed and is produced. Implementing similar regulations and incentive structures in the United States will help ensure that this market expands and production remains here. It will also help create jobs in America's cities, where they are most needed.

"You know, little green fairies are not going to come out of the sky and do this work for us," said Majora Carter, founder and former executive director of Sustainable South Bronx, the first and most successful green-collar jobs program in the country. Green-collar jobs benefit the environment, and they include activities like manufacturing photovoltaic panels, laying permeable pavement, and installing green roofs.<sup>3</sup>

"When you put people to work fixing the environmental problems in our shared world," Ms. Carter said, "you are solving two of the world's greatest problems at the same time, poverty alleviation and environmental remediation."

"When you put people to work fixing the environmental problems in our shared world, you are solving two of the world's greatest problems at the same time, poverty alleviation and environmental remediation."

Majora Carter  
Sustainable South Bronx

## A Sustainable City is a Planned City

Planners play an essential role in the creation of a sustainable city. Of all the public and private entities responsible for shaping urban life, planners are the most likely to recognize the importance of sustainability. "We know what needs to be done," said Larry Beasley. "Planners and managers now have to figure out how to make sustainability real on the ground."

### Establish Goals and Measures

The most comprehensive sustainability plans are organized around a measurable, overarching goal such as the need to reduce greenhouse gas emissions to comply with the Kyoto Protocol.<sup>4</sup> Good plans spell out the actions to be undertaken to achieve the long-term goal and provide ways to measure progress. These actions touch on virtually every city function, specifying ways to:

- generate and use energy more efficiently;
- improve sewage treatment to minimize harmful effluents and recover useful wastes;
- conserve and reuse water;
- recycle solid waste and convert it to useful inputs;
- promote higher density, mixed-use development;
- provide easier ways to walk, cycle, and ride public transit;
- ensure access to local food sources;
- foster social cohesion;
- ensure the economic viability of the community;
- enhance a city's cultural vitality and protect its distinct character;
- preserve the city's green spaces and ecosystem.

3 <http://www.nyecospaces.com/2007/04/green-roofs.html>--Starting in 2007, to encourage installation of green roofs, NYC enacted a property tax abatement to offset 35% of the installation costs.

4 The Kyoto Protocol is an international agreement linked to the United Nations Framework Convention on Climate Change. It sets binding targets for 37 industrialized countries and the European community for reducing greenhouse gas (GHG) emissions. It was adopted in 1997 and entered into force in 2005. See [http://unfccc.int/kyoto\\_protocol/items/2830.php](http://unfccc.int/kyoto_protocol/items/2830.php)

Specific programs vary from place to place, because the strategy for sustaining a city grows out of a broader agenda for making it a desirable place to live. Indeed, the plans presented by delegates to Capitals Alliance 2008 varied in scope and reflected a wide range of priorities, from water conservation in Canberra and Abu Dhabi, to efficient heat generation for Helsinki, and renovating Moscow's public parks and greenspaces (see capital spotlights).

## Articulate a Vision

The nuts and bolts of a sustainability plan are communicated through a vision that presents an inspiring, motivating ideal for the future. It should tap into the community's existing identity while reshaping it more explicitly around the values and practices associated with sustainability. A well articulated vision is more than just icing on the cake, it helps people make sense of policy goals and eventually embrace them as their own.

"There is an old saying that paradigms can't be destroyed, they can only be replaced," said Harriet Tregoning, the director of Washington DC's Office of Planning, who has had extensive experience implementing Smart Growth development projects. "It's not enough to be against something, you have to actually be putting forward a positive vision."

In several places around the world, new cities are being built from the ground up entirely around a vision of sustainability. Dongtan Eco-City, outside of Shanghai, China, aspires to be the first environmentally, socially, and economically sustainable city in the world, while Abu Dhabi's Masdar project intends to be the first carbon-neutral, car-free city. Critics scoff that such utopian cities will not meet their stated goals, but Larry Beasley, who is also advising Abu Dhabi's Planning Council, believes that the vision each puts forth has its own independent value.

"I'm not sure that these examples will achieve everything that they've set out to do," said Mr. Beasley. "But it doesn't really matter. The fact is that they will achieve a lot more than conventional development is doing right now."

## Keep the Vision Alive

Authority for most urban functions; building roads, treating sewage, delivering water, removing waste, and managing parks, is usually dispersed among many offices of city government. Planning agencies can be a consistent force over time to get them all on board and keep them moving in the right direction. Planners are also well positioned to build the necessary

coalitions among public, private, and nonprofit entities to sustain a long-term, comprehensive push for change.

"The built environment takes a lot of time to change," Ms. Tregoning noted. "[The process] is longer than the term of any single elected leader. And longer than the term of an inexhaustible nonprofit leader."

Keeping the vision alive is also important, even after a plan is implemented. "Eventually, the plan will become bureaucratized," warned Robert Stacey, executive director of the smart growth advocacy group 1000 Friends of Oregon. Recounting his own experience, Mr. Stacey explained how special interests nearly succeeded in gutting Oregon's renowned planning laws because the public did not understand how the laws, 30 years after their implementation, still contributed to their quality of life.

"The building or renewing of a great city is the work of decades...and the only way to sustain a plan over time is by regularly revisiting [it] and reengaging the public."

## Public Involvement

"One of the most important single factors has been the support of our inhabitants. Without their engagement in the environment, I don't think it would have been possible to achieve what we have achieved."

Irene Svenonius  
City of Stockholm

## Why Involve People?

It is important to involve citizens in the planning process, first and foremost, in order to understand their needs and perspectives. "It is an exciting time to be a city planner," said Robert Stacey with 1000 Friends of Oregon.

According to Mr. Stacey, planners today know where cities need to go and they are eager to forge ahead as quickly as possible, but this, he believes, is precisely the time to slow down and take stock of the situation. "We have a rich history of making monumental mistakes when we combine professional expertise with only our own insights," he said.

The mistakes of mid-20th century urban planning are legendary; highways that cut cities off from their waterfronts; the segregation of the poor and racial minorities; and development of the built environment that impairs natural ecosystems. Many of these mistakes, which cities are still trying to fix today, might have been avoided if the public had been involved in the planning process.

Public participation is also necessary for the consistent expression of the public will over time. Elections are an imperfect mechanism, because they are too infrequent and they revolve around numerous issues that may garner more attention than urban planning. In a pluralist democracy, politicians and other policymakers pay heed to interests that are expressed continually and consistently throughout the election cycle. If the voice of the people is to be heard, it must be organized, focused, and routinely communicated to all branches and levels of government.

### Inclusionary Decision Making

To develop an accurate understanding of the public will, many groups and individuals must be included in the planning process. This is easier said than done sometimes. As Tom Murphy, former mayor of Pittsburgh, observed from his early days as a community organizer, society is divided along many lines, and each group essentially speaks a different language. “Whether you are in banking or computers will in some ways determine whether I can understand you or not,” Mr. Murphy said. “And these languages separate us in a way that really impedes our ability to move forward.”

Attorney and Smart Growth advocate Daniel Slone agreed. “The language of [city] administrators of [infrastructure] systems is a different language from normal humans,” he said. “We have to learn to speak in the different languages to move forward with the kind of momentum we want.” Through openness and flexibility, planners can not only understand a broad spectrum of social actors, but they can also facilitate communication among the various groups.

All the contributors to the “Building Momentum for Change” panel agreed that it is important to engage group leaders from many walks of life, including community activists, business leaders, politicians, city administrators, and nongovernmental organizations, particularly those that speak for the natural world and the well-being of future generations. To really reflect the will of the people, however, planners must also seek out those who are unorganized or part of under-represented publics.

“We have to learn to speak in the different languages to move forward with the kind of momentum we want.”

Daniel Slone  
Attorney and  
Smart Growth Advocate

## Empowerment Through Participation

Public meetings and design charrettes are routinely used to communicate planning principles, to harvest ideas from citizens, and to begin the process of reconciling ideas from the grassroots with a vision put forth by planners. Visual preference surveys, showing people pictures of alternative scenarios and asking them to select a favorite, can be a very useful way to organize public input. Most people can identify what they like or do not like, but few can express themselves through the language of planning, zoning, and spatial relations.

More elaborate models of participation, like the transition towns movement pioneered in Great Britain, involve groups of citizens gathering for in-depth discussions on how to create a sustainable city and bring the community together around this goal.<sup>5</sup>

The usefulness of these methods is limited, however, because they tend to attract people who are already motivated to participate and have the time and resources to do so. Since this is typically a small fraction of the population, the question remains, as one audience member put it, “How should we reach out to unorganized or under-represented communities to foster meaningful—rather than token—participation?”

According to Majora Carter, who has been organizing people in the Bronx around environmental justice issues for nearly ten years, “you have to meet people where they are.” Instead of trying to rally people around the threats of rising sea levels and endangered polar bears, she rarely talks about the environment. “It’s a word that I rarely use,” she said, explaining that she focuses on problems that people have experienced directly to draw them into action. “We connect the impact of [polluting] facilities to their kids’ health ... or the fact that the city was planning on building jails in our community, rather than creating jobs.”

Tom Murphy pointed out that in the past, stereotyping has hampered the meaningful inclusion of many people. “Much of the problem comes from how we’ve historically dealt with poor and minority communities,” he said. “We think of poor people as not having the same expectations that we all do.”

When Mr. Murphy was the mayor of Pittsburgh, the city undertook an initiative to build a riverfront bike trail that ran through a public housing development, and it provided subsidies for a Whole Foods grocery store to locate in a poor neighborhood. People were skeptical that either could succeed, because they believed that poor people would not use the trail and would not want to shop at a Whole Foods. Instead, Mr. Murphy said, “We transformed people’s lives by building a bike trail there, because people who hadn’t exercised got bikes.” Whole Foods was also successful, Mr. Murphy noted, and in its first years of operation, “it [collected] the highest number of food stamps of any store in America.”

In Victoria, British Columbia, the model eco-community Dockside Green was built on a brownfield site that had previously been inhabited by indigenous people who were displaced from their land and consequently suffered high rates of unemployment and other social ills. Jim Huffman, the Canadian architect who headed up the project’s design team, said that the development provided an opportunity to reach out to them. “[The developer] brought them in, trained them, began to employ them, and began to change their lives,” he said. “This is what this movement is about for me. It’s not just about green buildings; it’s about our impact on people.”

Involving people in charting the direction of their own communities empowers them, which ultimately contributes to a city’s economic, social, and environmental sustainability. “When you put people to work fixing the environmental problems in our shared world, [people] who have never had access to a job in their lives suddenly become alive to the world in new ways,” Ms. Carter explained. “They know that they have traveled the road from societal burden to environmental hero and they feel great.”

## Political Leadership

*“The technology is there. The know-how is there. The crisis is certainly there. But do we have the will, the determination and the leadership to really make the change that the planet requires?”*

Frances Beinecke  
Natural Resources Defense Council

Bureaucratic resistance, weak public acceptance, and lack of funding are the primary impediments to achieving sustainable city. Overcoming these challenges depends upon the commitment, courage, and tenacity of political leaders.

Attorney and Smart Growth advocate Daniel Slone agreed. “We see almost no place that succeeds in which government does not first begin by moving itself,” he said. “Why is that? That is because of credibility.”

In the United States, the federal government has started to lead by example. The General Services Administration (GSA), which oversees 1,500 owned buildings and 180 million square feet of leased space, requires that all new construction projects and substantial renovations be LEED certified.

<sup>5</sup> <http://www.transitiontowns.org>



"I think GSA is very proud of our efforts in this regard," said David Winstead, commissioner of GSA's Public Buildings Service, which is the largest property manager in the world. "We have a burden to be a leader in the issue of sustainability."

According to one audience participant, the federal government's example can sometimes be more powerful than regulation. When Washington, DC was revitalizing a neighborhood in 2005, there was bureaucratic resistance to sustainability regulation. After GSA set new energy efficiency standards for leased properties, developers eagerly met them so that they would not lose the opportunity to rent space to the federal government. "Of the four million square feet under construction, at least 90 percent is LEED-certified," the audience member said. "Just that one action by GSA transformed the market more than what any of us could have done at the [local] government level."

Good leadership that confronts resistance wherever it appears can make all the difference in the world. Without it, regulatory barriers such as road standards designed for a car-centric society and zoning ordinances that limit the density of development are difficult to remove.

Larry Beasley provided an example of courageous leadership in Jamal Al Hosini, the director of planning of the Emirates' Urban Planning Council. "I watched him stand up to every auto biased argument and every standard that was thrown at him by a roomful of engineers," Mr. Beasley related. "[He] pushed to make those streets narrower...with a smaller cross-section that would expand the pedestrian realm, that would integrate transit, and that would build in the diversity of landscape and art and embellishments that are needed by a great capital."

"Wow!" Beasley exclaimed, finishing his story. "That is a really good public official."

In contrast, the absence of solid political leadership can prove fatal to sustainability initiatives. "I have been in too many charrettes where the politicians hung back because they were afraid to make a commitment," said Daniel Slone, attorney and Smart Growth advocate. "I have seen too many plans disrupted because they would not step up and tell the engineers that they were going to move forward."

By assuming a leadership role within their own countries and striving to be the greenest on the world stage, capital cities are in a unique position to lead the world to a more sustainable future. "If you don't do it," Mr. Beasley urged good-naturedly in his rousing appeal to the international delegates, "you're going to be embarrassed in front of your nation, and your country is going to be embarrassed before the world."

Capital planning authorities can be important agents of sustainability policy, and in this capacity, they can help demonstrate best practices and identify priority projects worthy of federal government support. "A capital city has a huge advantage over any other city," Mr. Beasley said, contending that it can serve as a sort of proving ground for new policies. "By piloting a new infrastructure investment model for the capital [in cooperation] with the national government...a national capital can lead the way for all the other cities in your country to do things differently."

"Capital cities are in a unique position to lead the world to a more sustainable future. If you don't do it, you're going to be embarrassed in front of your nation, and your country is going to be embarrassed in front of the world."

Larry Beasley  
Featured Speaker

WASHINGTON  
**BUSINESS JOURNAL**



**OnSpec**

WHAT'S DEVELOPING  
IN THE COMING MONTHS

Friday, February 22, 2008

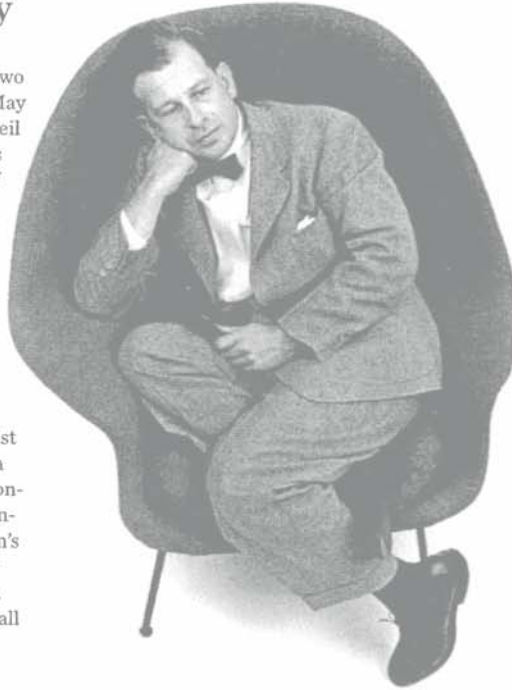
ON SITE

Page 14

**Modernists on display**

› When it comes to modernism, not too many architects left larger legacies than two featured in upcoming local exhibits. On May 3 the National Building Museum will unveil the first major retrospective on the works of Eero Saarinen, at right, the architect of the Dulles airport Main Terminal. It will feature full-scale building models, never-before-seen drawings, furniture, photographs and films covering his career from the 1930s to his early death at the age of 51 in 1961. The exhibit runs through Aug. 3. *{For more on Saarinen's work at Dulles, see page 18.}*

The Kreeger Museum in D.C. will explore the work of another noted modernist architect, Philip Johnson, starting March 15. The museum will showcase the relationship between art and architecture in Johnson's later works. Paintings from Johnson's own collection, including those of Jasper Johns and Andy Warhol, will be featured. The show runs at the Kreeger, 2401 Foxhall Road NW, through July 31. *{For more on Johnson's work in D.C., see page 72.}*



ARNOLD NEWMAN  
VIA GETTY IMAGES

**Designing debutantes**

› The Architectural League of New York will bring its popular Emerging Voices series to D.C. this March, hosting four discussions on young architecture firms trying to make names for themselves. Programs will be held March 4 at Howard University, March 11 at Catholic University, March 20 at Virginia Tech's Alexandria campus, and March 27 at the University of Maryland. The discussions are part of the National Building Museum's Spotlight on Design series. For more information, visit [www.nbm.org](http://www.nbm.org).



**Capital greenings**

› The National Capital Planning Commission is hosting a major international conference this September called Greening the World's Capital Cities. The event is scheduled for Sept. 14-18. Confirmed speakers include the mayor of Stockholm; chair of the World Council of Renewable Energy; and the executive director of 1,000 Friends of Oregon. Herbert Girardet, director of programs for the World Future Council in London, will deliver the keynote. For more information, visit [www.ncpc.gov](http://www.ncpc.gov).

**And don't miss ...**

› An exhibit of photos by Maryland photographer and architect James Stokoe will close March 27 at the American Institute of Architects headquarters gallery, 1735 New York Ave. NW. The free exhibit explores the transient nature at several local construction sites, including the Chinese Embassy, Newseum and convention center sites.

**WASHINGTON  
BUSINESS JOURNAL****August 15, 2008**

## The World is Coming to Washington in September

A major conference will attract planning and policy officials from around the globe as part of an alliance of capital cities.

The conference, Greening the World's Capital Cities, kicks off Sept. 15 with a keynote address at the National Press Club by Herbert Girardet, an author, filmmaker and environmentalist. Forums and panel discussions continue throughout the week at various venues, including the National Building Museum, the National Portrait Gallery and the offices of the lead organizer, the National Capital Planning Commission.

DC Planning Director Harriett Tregoning, General Services Administration official David Winstead and Roger Lewis, an architect who writes "Shaping the City" for The Washington Post, are among the local luminaries who will be featured.

The free events are open to the public. For more information, go to [www.ncpc.gov](http://www.ncpc.gov).



**September 16, 2008**

**The Federal Drive**

# Capitals Alliance 2008

This week the National Capital Planning Commission is hosting the 2008 Capitals Alliance Conference: Greening the World's Capital Cities. Today we talk with NCPD Director of Public Affairs Lisa MacSpadden about the conference and what the 15 participating capital cities hope to learn.

# WASHINGTON BUSINESS JOURNAL

September 19, 2008

## Green conference in D.C. closes with a pledge

By Tierney Plumb Staff Reporter

A week-long green conference closed with city planners pledging to lead by example in creating a healthier planet.

D.C. hosted the conference for the second time since the international alliance was founded in 2001 to help top cities create sustainable communities.

Cities cover only 2 percent of the Earth's surface – and consume 75 percent of its resources.

Representatives from 15 national capitals attended the conference, which was hosted by the National Capital Planning Commission. The National Press Club and National Building Museum hosted a bulk of the week's events.

NCPC is one of four founding members of the alliance, along with its sister agencies in Brasilia, Canberra and Ottawa.

In signing the declaration, the delegates agreed to promote green building design, energyefficient practices, low impact development techniques, protection of open space, and the development of mass transit systems.

"Today, cities face a significant challenge to develop and promote green and sustainable policies that will be viable now and in the future," said Marcel Acosta, NCPC executive director. "The declaration demonstrates our commitment to support principles of sustainability as central to the development of our capital cities."

Taking part in the week-long discussion were delegates from Abu Dhabi, Bogota, Brasilia, Canberra, Copenhagen, Helsinki, Islamabad, Moscow, Oslo, Ottawa, Paris, Stockholm, Tshwane, Vienna, and D.C.

Local speakers throughout the week included George Hawkins, director of the D.C. Department of the Environment and Harriet Tregoning, D.C.'s planning director. The week's closing session focused on what impact green design will have on capital city architecture.

The next gathering is tentatively scheduled to take place in Brasilia in March 2010.

# The Washington Post

September 27, 2008

## Thinking of Bolder Shades of Green

By Roger K. Lewis

How green can we get?

Architects and their clients increasingly pursue "green" ratings as a measure of the environmental sustainability of their buildings.

To do so, they employ multiple tactics: reusing aging structures, configuring new buildings compactly, installing effective insulation and energy-efficient mechanical systems, harvesting the sun's energy and maximizing use of daylight and natural ventilation, using recycled materials, recycling construction debris, conserving water and vegetating roofs.

Homeowners are also going for green by installing compact fluorescent light bulbs; replacing energywasting windows; upgrading heating and air conditioning equipment; buying hybrid vehicles; and walking, biking or riding transit instead of driving.

But can we go beyond this to make an entire city green? That means addressing the complex web of public infrastructure that affects sustainability – transportation, utilities, open space.

In Washington last week, leaders from around the world focused on this question at the annual Capitals Alliance conference, titled "Greening the World's Capital Cities." Hosted by the National Capital Planning Commission in collaboration with the U.S. Commission of Fine Arts and the National Building Museum, the conference brought together representatives of capitals including Abu Dhabi, Brasilia, Canberra, Copenhagen, Helsinki, Moscow, Oslo, Ottawa and Stockholm.

“By the year 2050, three fourths of the world’s population is expected to live in cities. The consequences of this shift—strained resources, traffic congestion, pollution—will reduce our quality of life and contribute to global climate change. Clearly, the time has arrived for capital cities to lead the way to a more sustainable future.”

For five days, attendees heard presentations, took excursions in the District and learned about greening efforts in other cities.

A primary lesson emerged: Sustainability has yet to become a public policy priority in the United States. Our cities have not adopted adequate sustainability goals and standards, nor have they eliminated such barriers as outdated zoning ordinances, building codes and regulatory practices.

There was consensus that regulatory reform and economic incentives, along with strong design guidelines, are absolutely necessary. Only then will costly yet essential environmental actions be vigorously pursued throughout private and public sectors, for cities as well as buildings.

Greening a city entails multiple strategies adapted to the city's conditions and needs:

- Plan and regulate future development – smart growth – so that land use and density are determined by and closely linked to existing and planned infrastructure, especially road and transit networks.

- Create and maintain a fine-grain pattern of streets to promote pedestrian and bicycle traffic as well as accommodate cars and surface transit. Set up traffic-management policies and technologies to ensure

safety and mobility. For example, car access to severely congested parts of cities could be limited at designated times.

- Invest in state-of-the-art transit options – bus and rail – to complement road systems, including parking facilities that provide commuters access to transit stations.

- Line streets with trees that provide shade and reduce solar heat absorbed by paving and buildings. Properly planted areas along roads can also absorb and filter rain, thereby reducing and slowing runoff.

- Expand, preserve and maintain city-wide, interconnected networks of open space—rivers and streams, steep valleys, wetlands, woodlands, parks and plazas. These networks can include parkways for cars and pathways for hikers and bikers.

- Upgrade and reconstruct rainwater collection systems to maximize use of open drainage swales and ground absorption, rather than underground piping. This recharges ground water while diminishing pollutants flowing into rivers, lakes and bays.

- Fully exploit renewable energy technology—wind turbine farms and solar cell arrays—to generate electricity on a metropolitan scale, especially as hybrid and electric vehicles proliferate.

“By the year 2050,” the conference program noted, “three-fourths of the world's population is expected to live in cities. The consequences of this shift—strained resources, traffic congestion, pollution—will reduce our quality of life and contribute to global climate change. Clearly, the time has arrived for capital cities to lead the way to a more sustainable future.”

*Roger K. Lewis is a practicing architect and a professor emeritus of architecture at the University of Maryland.*

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## Capitals Alliance Delegates Sign Declaration to Lead the Way in Green Design & Sustainability

Delegates from 15 national capitals attended the Capitals Alliance 2008: Greening the World's Capital Cities, hosted by the National Capital Planning Commission (NCPC), Sept.15-19.

NCPC is one of four founding members of the Alliance, along with its sister agencies in Brasilia, Canberra, and Ottawa. The delegates signed a declaration agreeing to promote green building design, energy efficient practices, low-impact development techniques, protection of open space and the development of mass transit.

"Today, cities face a significant challenge to develop and promote green and sustainable policies," said NCPC Executive Director Marcel Acosta. "The declaration demonstrates our commitment to support principles of sustainability as central to the development of our capital cities."

By 2050, three-fourths of the world's population is expected to reside in cities. Cities cover only two percent of the Earth's surface, but consume 75 percent of its resources. Capital cities, as the seat of government, need to create and maintain sustainable communities. Taking part in the week-long discussions were delegates from Abu Dhabi, Bogota, Brasilia, Canberra, Copenhagen, Helsinki, Islamabad, Moscow, Oslo, Ottawa, Paris, Stockholm, Tshwane, Vienna and Washington, D.C.

Speakers for the week-long event included Frances Beinecke, president of the Natural Resources Defense Council; Majora Carter, founder and executive director of Sustainable South Bronx; George Hawkins, director of the D.C. Department of the Environment; Thomas Hicks, v.p. of LEED Neighborhood Development and Int'l Programs at the U.S. Green Building Council; Robert Stacey, director of 1,000 Friends of Oregon; Tom Murphy, former mayor of Pittsburgh; and D.C.'s planning director Harriet Tregoning.

A featured event included a joint program with the National Building Museum with U.S. Congressman Earl Blumenauer; former Curitiba, Brazil mayor Cassio Taniguchi and Stockholm's CEO Irene Svenonius. The three speakers highlighted the innovative approaches taken in their cities to create greener communities. Marcel Beaudry, the former chairman of Canada's National Capital Commission facilitated the discussion.

"When you take too much time discussing if a forest or a wood must be preserved, both may be destroyed," noted Cassio Taniguchi, the former mayor of Curitiba, Brazil.

"Forty three percent of all carbon emissions come from the operation of buildings," said National Trust President Richard Moe. "That is a compelling figure. If we don't deal with this issue it's going to change life as we know it." "It was extremely beneficial to hear about the challenges our sister cities face in greening their capitals and how they are coping with these challenges," said NCPC's Marcel Acosta.

"The Alliance network enables us to share our respective experiences and to learn from other cities about strategies that work, as well as those that don't."

The next gathering of the Capitals Alliance is scheduled for Brazil in March 2010.

**"Today, cities face a significant challenge to develop and promote green and sustainable policies."**

Marcel Acosta  
Executive Director, NCPC

# Resources

## Capitals Alliance Delegates

### ABU DHABI United Arab Emirates

#### FALAH AL AHBABI



Falah Al Ahababi serves as general manager of the Urban Planning Council (UPC) in Abu Dhabi. Created in 2007, the UPC is leading the efforts to create a new green capital district that will establish Abu Dhabi as a global national capital renowned for its architecture as well as its sustainable features. As general manager, Mr. Al Ahababi ensures that development proposals are consistent with the overarching plan for the development of the city.

#### JOANNE PROFT



Joanne Proft joined the Urban Planning Council in 2007 as the planning manager responsible for the Capital City District planning program. Prior to this, she was a senior project manager with TransLink in Vancouver, British Columbia, where she managed a number of complex urban design, planning, and transportation projects.

#### JEAN-PHILIPPE COULAUD



Jean Philippe Coulaud joined the Urban Planning Council in 2008 as director of the Corporate Communications Department. He is responsible for marketing the 2030 Capital City District Plan. Prior to this, he held international marketing and communications positions with several automakers, including General Motors in France, the USA and Switzerland; the BMW Group in Switzerland; Bentley in the United Kingdom; and Ferrari Maserati in Italy.

#### MICHAEL WHITE



Michael White is a senior planning manager at the Urban Planning Council. He is responsible for planning in the Mainland area, including the capital city of Abu Dhabi and the city of Al Ain. Before joining the UPC, he worked for 10 years for the city of Vancouver, British Columbia. He participated in the design of Neighbourhood Centres, which placed new housing within walking distance of shops, services and transit.

He also coordinated the city's EcoDensity Initiative which called for adding density to neighborhoods without sacrificing sustainable building design, infrastructure, and amenities.

#### DESIREE DREWITT



Desiree Drewitt is assistant planning manager for the Mainland Policy Group of the Urban Planning Council. Since joining the UPC in July 2007, she has managed several projects, including Downtown Extension Coordination, Phase I of the Capital City Concept Plan, and preliminary work creating a governance & management plan for a National Capital Commission for the United Arab Emirates.

Prior to moving to Abu Dhabi, she was employed by the city of Vancouver, British Columbia, where she worked on land use and transportation planning and rezoning issues.

#### SALEM AL SALEH

Mr. Salem Al Saleh is the deputy general manager for the Emirates Real Estate Corporation. His bio and photo were unavailable at the time of printing.

### BOGOTÁ Colombia

#### BERNARDO DE JESUS PARRADO TORRES



Bernardo de Jesus Parrado Torres is an architect for the municipality of Bogotá, planning district secretary, director of Main and Complementary Plans, and coordinator of Master Plan of Equipments. He specializes in urban planning which includes public services and parks, project administration, revitalization, and projects for education, health, safety, and well-being for Bogotá's

residents. In addition, he has wide experience in public administration, town planning, and development. He was responsible for updating the city's mass transit system by implementing the Transmilenio.

#### JARET LANG



Jaret Lang is a senior associate with the Urban Planning Council. He is responsible for planning large-scale and complex projects throughout the United Arab Emirates. Prior to joining the UPC in 2007, he worked as an Urban Design Specialist for the Manukau City Council in New Zealand. He implemented Manukau's first urban design panel and led a nodal development team focussed on neighborhood

regeneration and sustainable urban development.



## Capitals Alliance Delegates

### BRASILIA Brazil

#### MAURICIO GOULART



Mauricio Goulart is manager of the Central Area of the Federal District Urban Development Secretariat. In this capacity, he leads the planning and management for the urban heritage sites of Brasilia. Previously, he worked for Monumenta, a program for Brazilian heritage sites supported by the Inter-American Development Bank and the Brazilian Ministry of Culture. He also has worked as an architect at the Agency for the Environment in Uberlandia, Brazil.

#### IVELISE LONGHI



Ivelise Longhi is the technical director and director of fiscalization for the Public Land Company of Brasília (Terracap). She also has held several high-level positions with the Federal District government. She has been assistant secretary, secretary of Infrastructure, secretary of Urban Development and Housing, secretary of Labor, Districtal Representative, president of the Institute for Urban and

Territorial Planning; and leader of Government at the local parliament. She coordinated the first Director Plan of Territorial Land for the Federal District and implemented the Housing Politic for the Federal District.

#### GISELE MOLL MASCARENHAS



Giselle Moll Mascarenhas is a senior advisor for the Secretariat of Urban and Environmental Development, a post she has held since 2007. Prior to that, she was deputy secretary of Urban Planning and Preservation. She also has been in charge of urban planning and design for several satellite cities of the Federal District, including Samambaia, Gama and Guará. She is a specialist in the management of cultural

heritage and was a Brazilian representative at the Comprehensive Urban Planning Training program in Japan in 2001.

#### CASSIO TANIGUCHI



Cassio Taniguchi is Brazil's secretary for the Department of Urban and Environmental Development. From 1997 to 2005, he served as mayor of Curitiba, Brazil, a city recognized as a model for good urban planning and progressive ecological policies. As Curitiba's mayor, and in his previous capacity as the city council's chief engineer, Mr. Taniguchi was a driving force behind expanding the city's park system;

implementing a rapid bus system; and improving the city's economic base through the recruitment of nonpolluting industries.

### CANBERRA Australia

#### CATHERINE CARTER



Catherine Carter was named executive director of the Australian Capital Territory Division of the Property Council of Australia in January 2005. The Property Council is the leading advocate for the interests of the Australian property industry. Previously, Ms. Carter held senior corporate communication positions within the private and public sectors, including holding the post of adviser to a

senior government minister for New South Wales.

#### JOANNA NELSON



Joanna Nelson joined the National Capital Authority of Canberra in 2005 as a senior architect. She is currently working on the Canberra Central Parklands Master Plan. The master plan seeks to invigorate the much loved parklands north of Lake Burley Griffin's central basin, including Commonwealth Park, Rond Terraces and Kings Park. The first project to be implemented under the master plan is a

two-kilometer promenade along the edge of the lake. It is currently under construction. Prior to joining NCA, Ms. Nelson ran a solo architectural practice for 17 years in Melbourne.

#### ANDY SMITH



As acting managing director of Projects for the National Capital Authority, Andrew Smith is responsible for the NCA's five-year capital works program. This program includes buildings, landscaping, and commemorative, engineering and maintenance works. His work also covers multiple aspects of property, construction, cultural and heritage management. Mr. Smith has had extensive

experience implementing capital works programs in other public and private sector positions.

#### ALISON WALKER-KAYE



Alison Walker-Kaye is managing director, International Relations and Leasing, for the National Capital Authority. She works with the diplomatic and international community and is responsible for leasing and licensing issues related to diplomatic and national land. Prior to taking this position, Ms. Walker-Kaye was for seven years manager of NCA's public exhibits, events and information resources.

Earlier in her career, she worked with the Commission of the European Union and the European Union's diplomatic corps.

## Capitals Alliance Delegates

### COPENHAGEN Denmark

#### TINE ERIKSEN



Tine Eriksen has worked in the international department of City Hall since 2007. Her main area of responsibility is intergovernmental relations. She oversees Copenhagen's memberships with European organizations, such as Eurocities and the Union of Capitals in the European Union. She is working with the Mayoral Summit to plan the UN Climate Change Conference in Copenhagen in 2009.

#### MONA HEIBERG



Mona Heiberg has served as deputy chairman of the Copenhagen City Council since January 2006. She was first elected to the council in November 1989. She represents Copenhagen on the executive committee of Eurocities, is a member of the Committee of the Regions in the European Union, and represents Copenhagen on the Committee of International Affairs in Local

Government Denmark. She has been actively involved in the development of the capital city for nearly two decades.

### HELSINKI Finland

#### PEKKA SAURI



Dr. Pekka Sauri is deputy mayor, Public Works and Environmental Affairs, for the city of Helsinki with responsibility for public transport, environmental protection, and procurement. He is a member of the Green League of Finland and was chairman of the League's executive committee from 1999-2001. He also is a columnist and a cartoonist for the Green League's news organ, Vihrea

lankä. He has written and edited a number of scientific books and articles. Previously he served as chairman of the City Council.

### ISLAMABAD Pakistan

#### KAMRAN LASHARI



Kamran Lashari has been chairman of the Capital Development Authority since 2003. Previously, he held several management positions with the government of the Punjab region in Lahore. He was director general of the Parks and Horticulture Authority from 1998-2001 and secretary of the Environmental Protection Department in 2002-2003.

### MOSCOW Russian Federation

#### MARINA MORINA



Marina R. Morina has been the director of Landscape Architectural Design and Environmental Planning for the city of Moscow since 1998. Her department focuses on the renovation and restoration of parks, gardens, boulevards, plazas, and other areas in the central part of Moscow. Completed projects include the renovation of Bolshoy Theatre garden; the historical renovation and

restoration of Aleksandrovsy garden bordering the Kremlin; and the renovation of the historical park and palace complex "Tsaritsino."

#### KONSTANTIN PETROV



Konstantin Petrov joined the International Relations Department (Protocol Section) of the city of Moscow in 2004. In 2008 he was promoted to be the official contact for developing and maintaining Moscow's relations with Great Britain, Canada and the USA. He is a graduate of the Academy of National Economy in Moscow.

#### IGOR VOSKRESENKY



Igor Voskresensky is the deputy chief architect for the city of Moscow. He also oversees architectural landscaping and some aspects of city planning. He has been the director of more than 100 building projects in Moscow, the Russian Federation, and overseas. He is a member of the Union of Russian Architects and several international architectural academies. His doctoral dissertation topic was

Principles of Green Areas Organization in Large Cities.

### OSLO/Royal Norwegian Embassy

#### JANNICKE JAEGER



Jannicke Jaeger is counselor of the Communications Department at the Royal Norwegian Embassy in Washington, DC since 2007. Prior to that, she was minister counselor at the Norwegian Embassy in Ottawa for four years. She also has worked in the Canadian Ministry of Foreign Affairs, first as advisor in the section for Bilateral Relations with Europe and then as principal

officer for Bilateral Relations with North America.

## Capitals Alliance Delegates

**MARIANNE FOSLAND** Marianne Fosland is the cultural attaché for the Royal Norwegian Embassy. Her photo and bio were unavailable at the time of printing.

**ANNE MYKLEBUST** Anne Myklebust is the cultural affairs officer for the Royal Norwegian Embassy. Her photo and bio were unavailable at the time of printing.

## OTTAWACanada

### LARRY BEASLEY



As the retired director of planning for Vancouver, Larry Beasley is highly regarded for his land use and transportation plans that transformed Vancouver's inner city and revitalized its neighborhoods. He is the recipient of numerous awards, and is currently a distinguished practice professor of planning at the University of British Columbia. He also serves as chairman of the

Advisory Committee on Planning, Design and Realty for the National Capital Commission in Ottawa and as a special adviser to the Urban Planning Council in Abu Dhabi.

### MICHELLE COMEAU



Michelle Comeau has served as vice-president for Environment, Capital Lands and Parks at the National Capital Commission since 1998. She is responsible for the protection, management, and maintenance of 470 square kilometres of lands and public facilities in Canada's Capital Region. These include Gatineau Park, a vast natural reserve; the Greenbelt, one of

the largest urban parks in the world; and six official government residences. Under her lead, the NCC has adopted a Corporate Environmental Stewardship Strategy, developed an Integrated Asset Information Management System, and received government funding to preserve and rehabilitate the residences.

### PIERRE DUBÉ



Pierre Dubé has been with Ottawa's National Capital Commission for more than 25 years. Currently, he is director of Planning, Design and Land Use, providing leadership and direction with regard to the preparation and implementation of plans and the conservation and development of federal lands in the National Capital Region. He directed the Commission's 2005 Core Area Sector Plan for Canada's Capital, which received an award from the Canadian Institute of Planners in 2006. He has participated in several joint government studies and provided direction on transportation and transit strategies in the national capital.

### MARIE LEMAY



Marie Lemay became chief executive officer (CEO) of Ottawa's National Capital Commission in January 2008. Prior to joining the NCC, she served for seven years as CEO of Engineers Canada, a national organization that represents 160,000 engineers and 12 provincial and territorial regulatory bodies. Previously, Ms. Lemay worked for the city of Gatineau and the municipality of Chelsea. In 2005, Gatineau's

Chamber of Commerce named Marie Lemay Engineer of the Year and, recently, Ottawa Life Magazine listed her as one of the top 50 people to watch in Canada's Capital.

### PETER MCCOURT



Peter McCourt, director of Real Estate Management at Ottawa's National Capital Commission, is responsible for the leasing and property management of over 600 types of property, including farming, recreational, institutional, residential, and commercial. His responsibilities include acquisition, disposal, and exchange of properties and property easements and licensing in support of the NCC's role as the major landholder in the National Capital Region.

### RUSSELL MILLS



Russell Mills was appointed chair of Ottawa's National Capital Commission in 2007. He has had a distinguished career in the newspaper industry spending his early years with the London Free Press and the Oshawa Times. He joined the Ottawa Citizen in 1971 and rose to editor, general manager, and then publisher. He became president of Southam Newspaper Group in 1989. Mr. Mills has an honorary Doctor of Law degree from

Carleton University, is a Harvard University Nieman Fellow, and serves as executive dean, Faculty of Arts, Media and Design at Algonquin College.

## PARISFrance

### THOMAS VONIER



Thomas Vonier is a Paris-based architect and founding member of the International Centre for Urban Security (ICUS) where he serves as an Advisory Board member. Mr. Vonier helped set the terms of debate on new security measures for city centers in Europe and North America with a series of articles, "Mean Streets: Going from Protected Enclaves and Urban Control Zones." He was a member of the international advisory group

to the Federal Triangle security design criteria project in Washington, DC, cited for a Presidential Design Award. He also was appointed as an independent architect to lead groundbreaking research on improving the security of US foreign mission buildings.

## Capitals Alliance Delegates

### STOCKHOLM Sweden

#### CHARLOTTE BROBERG



Charlotte Broberg has served as chief of staff to the mayor of Stockholm since March 2007 and has worked for the city since 1999. During 2004-2005, she assumed the position of head of coordination for Mr. Fredrik Reinfeldt, president of the Moderate party who is today the prime minister of Sweden. Ms. Broberg is also an elected member of the Stockholm County Council.

#### SUZANNE LILJEGREN



Suzanne Liljegren has been the city of Stockholm's international director since 2001. Between 1984 and 2000, she held various positions in the IT and telecommunications industry, including director of expansion in a project for Ericsson; project manager for Inward Investments in the Stockholm Region; expert in the IT Commission, government of Sweden; and marketing communications

manager of Datapoint Sweden.

#### IRENE SVENONIUS



Irene Svenonius has been chief executive officer (CEO) of the city of Stockholm since October 2006. She has held various positions in the city since 1998. Between 2003 and 2006 she was managing director of the Department of Research and Statistics; between 2000 and 2002, she was finance director; and between 1998 and 2000, she served as head of the Mayor's office.

### TSHWANE South Africa

#### BERNARD HANEKOM



Bernard Hanekom is a town planner who has been working with the inner city of Tshwane, South Africa in various capacities for the last 17 years. Currently, he is the project coordinator for the Re Kgabisa Tshwane Programme. This is a multi-billion dollar project that aims to transform the capital city of South Africa and improve the physical work environment of Tshwane's public service within the inner city.

#### ZUKISWA NTSIKENI



Zukiswa Ntsikeni is currently the regional executive director for the Central Region in the City Planning, Development and Regional Services Department in Tshwane. She is charged with leading integrated planning, from spatial planning to business and operations planning. In addition she serves as a liaison between the administration and community; works to guide growth and development; and

works to create an attractive, urban environment that celebrates the capital city. Previously she led the city's financial division.

### VIENNA Austria

#### DR. KURT PUCHINGER



Kurt Puchinger has been director of planning in the Executive Group for Construction and Technology in the city of Vienna since 2006. He is responsible for the overall coordination of planning for the city. Prior to that, he had his own regional planning office for more than 20 years. It focused on urban planning; regional policy, economics, and development; community planning; location analysis; and project/program development, monitoring, and evaluation. From 1979 to 1985, Dr. Puchinger researched regional planning issues at the Vienna University of Technology.

## Capitals Alliance Delegates

### WASHINGTON, DC United States

#### MARCEL ACOSTA



As executive director of the National Capital Planning Commission, Marcel Acosta directs the agency's planning programs and makes policy recommendations on projects affecting the federal interest in the National Capital Region. He joined NCPC in 2001 as deputy executive director and served as acting director prior to assuming his current position in April 2008. Mr. Acosta has provided oversight to the review of numerous

federal and local design projects and guided many of the agency's award winning initiatives. Previously, he served as senior vice president of planning and development for the Chicago Transit Authority and as deputy commissioner for the Chicago Department of Planning and Development. He is a 2001 Loeb Fellow of Harvard University's Graduate School of Design.

#### DIANE SULLIVAN



Diane Sullivan joined the National Capital Planning Commission in the fall of 2007. Her role as a planner at NCPC focuses primarily on sustainability projects and security design issues, and she devotes some time to plan and project review. Ms. Sullivan previously worked with the Anacostia Waterfront Corporation and prior to that spent six years working on waterfront redevelopment projects for the Portland, Oregon Office of Planning. She began her career at the San Francisco Planning Department.

#### LISA MACSPADDEN



Lisa MacSpadden joined the National Capital Planning Commission in 2001 as the director of public affairs. She provides expert counsel to the Commission and senior staff; manages public and media outreach; and serves as the agency's spokesperson. Ms. MacSpadden is the primary liaison for international activities including the agency's participation in Capitals Alliance.

Previously she served as the assistant secretary for public affairs at the U.S. Department of Housing and Urban Development. She began her career as a television producer and reporter.

#### KEN WALTON



Ken Walton is an architect and urban designer with the National Capital Planning Commission. He joined the agency in 2000, working on a variety of urban design projects and the development of the agency's design technology. He served as coordinator for the BIMStorm charrette for Tshwane, South Africa during Capitals Alliance.

Prior to NCPC, he worked for the architectural firms of RTKL Associates, HOK Architects, and Walt Disney Imagineering Virtual Reality Group.

#### CHRISTINE SAUM



Christine Saum is the chief urban designer at the National Capital Planning Commission. Her area of expertise includes architecture, urban design, land use, and the environment. Prior to joining NCPC in 2003, she was executive director of the Mayors' Institute on City Design, an initiative established by the National Endowment for the Arts to improve the design of cities by educating elected leaders. Ms. Saum is a 2008 Loeb Fellow at the Harvard

University Graduate School of Design.

#### DAVID ZAIDAIN



David Zaidain is a certified planner with ten years of experience who works in the Project Plan and Implementation Division at the National Capital Planning Commission. While at NCPC, Mr. Zaidain has served as the lead planner on numerous key planning initiatives, including the site redevelopment study for the Robert F. Kennedy Stadium and the Freight Railroad Realignment Feasibility Study.

# Resources

## Conference Speakers

### FALAH AL AHBABI



Falah Al Ahababi serves as the general manager of the Urban Planning Council in Abu Dhabi, the capital of the United Arab Emirates. Created in 2007, the UPC is leading the efforts to create a new green capital district that will establish Abu Dhabi as a global national capital renowned for its architecture as well as its sustainable features. As general manager, Mr. Al Ahababi ensures that

development proposals are consistent with the overarching plan for the development of the city.

### DIANA BALMORI



Diana Balmori is a noted landscape scholar and principal of Balmori Associates, a landscape and urban design firm in New York City. She is a faculty member at Yale University in the School of Architecture and the School of Forestry and Environmental Studies. Dr. Balmori has written extensively on cities, the environment and the history of design. She is a senior fellow of the

Dumbarton Oaks Garden and Landscape History Institute at Harvard and is presently serving a second four-year term on the U.S. Commission of Fine Arts in Washington DC.

### LARRY BEASLEY



As the retired director of planning for Vancouver, Larry Beasley is highly regarded for his land use and transportation plans that transformed Vancouver's inner city and revitalized its neighborhoods. He is the recipient of numerous awards, and is currently a distinguished practice professor of planning at the University of British Columbia. He also serves as chairman of the Advisory Committee on Planning,

Design and Realty for the National Capital Commission in Ottawa and as a special adviser to the Urban Planning Council in Abu Dhabi.

### MARCEL BEAUDRY



Marcel Beaudry served as chairman of Canada's National Capital Commission (NCC) from 1992 until 2007. Prior to his tenure at NCC, Mr. Beaudry served as mayor of Hull, Canada. A lawyer by profession, he has served on the boards of numerous companies, financial institutions, universities and charities, including the Board of Governors at the University of Ottawa.

### FRANCES BEINECKE



Frances Beinecke is president of the Natural Resources Defense Council (NRDC) where she has worked for more than 30 years. Under her leadership, NRDC has launched campaigns to curb global warming, reduce America's oil dependency, revive the world's oceans, save endangered wild places, stem the tide of

toxic chemicals, and accelerate the greening of China. She is the recipient of numerous environmental awards.

### EARL BLUMENAUER



Congressman Earl Blumenauer (D-Oregon, 3rd District) was elected to the U.S. House of Representatives in 1996. A member of the Select Committee on Energy Independence and Climate Change, he is a strong advocate for the environment and sustainable development. He first served in the Oregon House of

Representatives and spent ten years on the Portland City Council. His innovative accomplishments in transit, planning, and the environment have helped Portland earn an international reputation as one of America's most livable cities.

### MAJORA CARTER



In 2001, Majora Carter founded the nonprofit environmental justice corporation Sustainable South Bronx (SSBx). Under her leadership, SSBx launched the South Bronx Greenway; started a green-roof business; and pioneered a highly successful green-collar job training and placement system. She has received widespread

recognition, including a MacArthur "genius" Fellowship, and is currently advising the public and private sector on how to unlock their green-collar economic potential.

### LAUREL COLLESS



Laurel Colless is executive director of the Energy Efficiency Partnership of Greater Washington, a program at Virginia Tech that is devoted to helping communities become more green. She sits on the board of the Institute for Sustainable Communities and is a member of the Steering Committee of the Women's Conservation Forum at

Conservation International. Previously, she served as director of financial communications and corporate reporting for Nokia in Helsinki, Finland. She is married to Pekka Lintu, Finland's ambassador to the United States.

## Conference Speakers

### HERBERT GIRARDET



Renowned author, consultant, documentary filmmaker, and recipient of a United Nations Global 500 Award for Outstanding Environmental Achievements, Herbert Girardet currently serves as director of programmes at the World Future Council, an international advocacy group championing the right to a sustainable future. He is senior adviser to the pioneering Dongtan Eco-City project on Chongming Island, Shanghai and an honorary fellow of the Royal Institute of British Architects.

### ROGER LEWIS



Roger K. Lewis, FAIA, is a practicing architect, planner, educator, and author based in Washington, DC. Professor emeritus of architecture at the University of Maryland School of Architecture, Planning and Preservation, he is also an award-winning journalist. "Shaping the City," his illustrated column on architecture and urban design, has appeared in *The Washington Post* since 1984. A frequent guest lecturer and panelist at conferences and symposiums, he serves regularly on regional and national design award juries and design review committees.

### GEORGE HAWKINS



As director of the Department of the Environment for the District of Columbia, Mr. Hawkins is responsible for strengthening environmental protection standards. He launched and chairs the Mayor's Green Team, and chairs the Green Building Advisory Council, which oversees the implementation of the nation's most progressive green building law. He is also a member of the Mayor's Green Collar Jobs Advisory Committee, and a board member of the Washington Area Sewer Authority (WASA), which runs the world's largest advanced wastewater treatment plant.

### RICHARD MOE



As the seventh president of the National Trust for Historic Preservation, Richard Moe is the leader of America's historic preservation movement, which aspires to save the nation's historic places and create more livable communities. Since Mr. Moe assumed the presidency in 1993, the National Trust has become an outspoken advocate of controlling sprawl and has launched initiatives to demonstrate preservation's effectiveness as a tool for community revitalization.

### THOMAS HICKS



As a vice president of the U.S. Green Building Council, Tom Hicks oversees the Council's LEED (Leadership in Energy and Environmental Design) program, a benchmark system for the design, construction, and operation of energy efficient buildings. Mr. Hicks previously served at the U.S. Environmental Protection Agency, managing the Energy Star for Buildings & Plants program.

### TOM MURPHY



Tom Murphy is a senior resident fellow at the Urban Land Institute and a former mayor of Pittsburgh, Pennsylvania. As mayor, he led efforts to secure funding for a new convention center that is the first and largest LEED certified convention center in the world. Mr. Murphy also oversaw the development of new riverfront trails and urban green space as well as the transformation of more than 1000 acres of blighted, abandoned industrial properties. In 2002, Murphy received the Outstanding Achievement of City Livability Award from the U.S. Conference of Mayors.

### JIM HUFFMAN



As an associate principal with Busby Perkins+Will for more than 21 years, Jim Huffman's portfolio includes urban planning, commercial, and residential projects for both public and private interests. He has been instrumental in the success of key sustainability projects, including the LEED Platinum Dockside Green Development in Victoria, British Columbia. Currently Mr. Huffman is design principal of the GM Place Tower, a 23 story tower that is targeting LEED Platinum certification and projected to be the first carbon-neutral office building in North America.

## Conference Speakers

### IRENE SVENONIUS



Irene Svenonius has been chief executive officer (CEO) of the city of Stockholm since October 2006. She has held various positions in the city since 1998. Between 2003 and 2006 she was managing director of the Department of Research and Statistics; between 2000 and 2002, she was finance director; and between 1998 and 2000, she served as head of the Mayor's office.

### CASSIO TANIGUCHI



From 1997 to 2005, Cassio Taniguchi served as mayor of Curitiba, Brazil, a city recognized as a model for good urban planning and progressive ecological policies. As Curitiba's mayor, and in his previous capacity as the city council's chief engineer, Mr.

Taniguchi was a driving force behind expanding the city's park system; implementing a rapid bus system; and improving the city's economic base through the recruitment of nonpolluting industries. He is now Brazil's secretary for the Department of Urban and Environmental Development.

### DANIEL K. SLONE



As an attorney and consultant, Daniel Slone has worked for more than 20 years to build new urban and smart growth communities throughout the United States. He has helped localities develop regulatory policies to facilitate sustainable development and he serves as the national counsel for many prominent organizations devoted to sustainable

development practices, including the U.S. Green Building Council and the Congress for New Urbanism. He also serves on the board of the National Charrette Institute.

### HARRIET TREGONING



Harriet Tregoning, director of the DC Office of Planning, is currently spearheading initiatives to restore the city's waterfront; upgrade its water and sewer system; refit buildings with green roofs; and create green-collar jobs. Ms. Tregoning served in Maryland as the nation's first state-

level cabinet secretary for smart growth, and prior to that, she helped launch the National Smart Growth Network at the United States Environmental Protection Agency.

### ROBERT STACEY



Bob Stacey is executive director of 1000 Friends of Oregon, a 30-year-old public advocacy group for smart growth approaches to land-use planning. Long active in city, regional, and state-level policymaking, Mr. Stacey has served as the director of Portland's Bureau of Planning; executive director of policy and planning at Portland's regional transit agency;

senior policy advisor on urban growth management to Oregon Governor Barbara Roberts, and chief of staff to U.S. Congressman Earl Blumenauer.

### DAVID L. WINSTEAD



As Commissioner of Public Buildings for the General Services Administration, Mr. Winstead oversees a real estate portfolio of more than 340 million square feet in 8,000 public and private buildings accommodating more than one million federal workers. His career spans more than 30 years in the public and private sectors during which time he

served as the State of Maryland's secretary of transportation and as executive director of the Washington/Baltimore Regional Association, a private sector economic development alliance. Prior to his arrival at GSA, he was a partner with the law firm Holland & Knight. Mr. Winstead has also been active in numerous professional organizations including the Urban Land Institute and the Washington Board of Trade.





# Resources

## Contacts

For inquiries regarding the Summary Report for *Capitals Alliance 2008: Greening the World's Capital Cities*, please contact Lisa MacSpadden at the National Capital Planning Commission by email at [lisa@ncpc.gov](mailto:lisa@ncpc.gov) or call 202-482-7263.

For general information about the Capitals Alliance organization, or about future meetings, please visit the Capitals Alliance website at [www.CapitalsAlliance.org](http://www.CapitalsAlliance.org). You may also contact representatives from the four founding Capitals Alliance agencies. Contact information is provided below:

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# Greening the World's Capital Cities

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