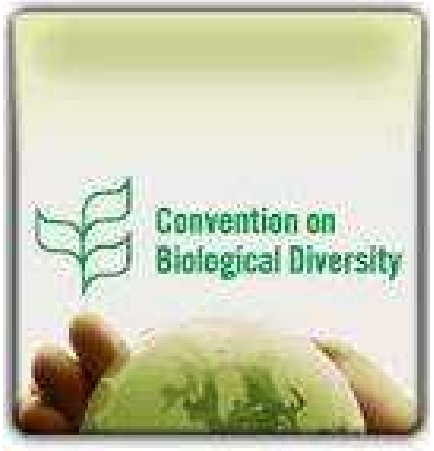
Biodiversity in Cities

A Biodiversity Exhibition Project Among Leader Cities

ICLEI
Local Governments for Sustainability

CBD



Project Background

- Following the adoption, at the Nagoya Biodiversity Summit last October 2010, of a plan of action to involve sub-national and local governments in the implementation of the new ten-year Strategic Plan of the Convention on Biological Diversity, the first meeting on the Implementation of the Plan of Action on Sub-National Governments, Cities and other Local Authorities on Biodiversity was held at Montpellier, France, from January 17th to 19th, 2011, at the invitation of the City of Montpellier and the Government of France, with the support of the Convention of Biological Diversity (CDB).

- A total of 38 participants attended, representing more than 2,100 cities and regions all over the world, including government representatives from France, Brazil, Sweden, Portugal, Singapore and South Africa and from the cities of Mexico, Montreal, Bonn and Curitiba. This meeting was also attended by representatives from international agencies such as ICLEI UN-HABITAT and IUCN, and leading research institutions such as the Stockholm Resilience Centre.

- During the meeting, collaborative projects were defined by participants to be monitored as part of the Global Partnership's activities. One of the resulting projects was entitled "Biodiversity in Cities: A Biodiversity Exhibition Project Among Leader Cities ". The main objective of this project is to create awareness about biodiversity, through an exhibition of representative wildlife species of participant cities. The following slides explain in detail its content and the proposed strategy for its implementation.

Bonn

Curitiba

Durban

Joondalup

Mexico City

Montpelier

Montreal

Nagoya

Paris

Singapore

Project Objetive

- To promote public awareness of the unique biodiversity of the Cities of Bonn, Curitiba, Mexico City, Montpellier, Montreal, Nagoya, Paris, Durban, Joondaloop and Singapore through the development of an exhibition of the cities most representative species of fauna and flora.

Project Strategy

- The exhibition will provide information regarding the Global Partnership Committee, the value and importance of biodiversity , the role of cities in biodiversity conservation and the key role of public awareness and direct participation.
- Each participant City will include a message from its Major about the City´s biodiversity and images of its most representative flora and fauna, including those endemic and highly endangered species.
- Images should be accompanied by a brief text, indicating the species scientific name, and describing key information about the species in concern.
- A leader committee will integrate the images and information of participant Cities to develop a first draft of the exhibition, which will send to program participants for final review.
- The final exhibition will be sent electronically to program participants for its presentation in key public areas. The exhibition will also be presented in Mayor International Forums of CBD, ICLEI, UNEP, Cities and Biodiversity, etc.

Exhibition Design and Production

Images and Texts Characteristics:

- Images in electronic files with a minimum of 300 DPI (resolution)
- JPG or PDF format for photographs
- Texts with no more than 50 to 60 words

Printing and Mounting Characteristics:

- Dimension of Photographs: 110 x 130 cm
- Prints on satin photographic paper
- Mounting, plates and framing:
- Mounting on: acrylic, aluminum, sintra (trovicel), foam board or acid free cardboard. Plates UV protected with different calibers, with bright, matte or semi matte finish; wooden or aluminum frames.











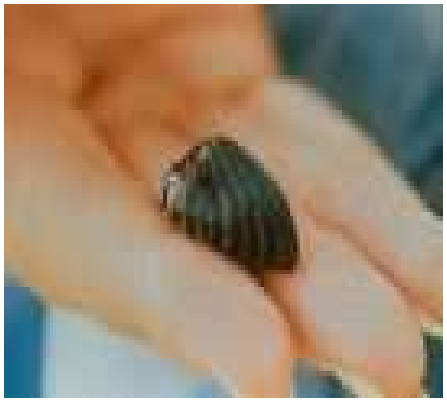
Biodiversity

Biological diversity - or biodiversity - is the term given to the variety of life on Earth and the natural patterns it forms. The biodiversity we see today is the fruit of billions of years of evolution, shaped by natural processes and, increasingly, by the influence of humans. It forms the web of life of which we are an integral part and upon which we so fully depend.

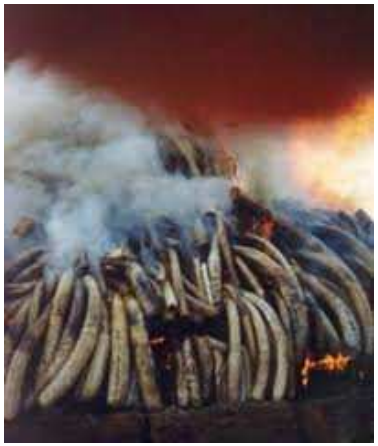
This diversity is often understood in terms of the wide variety of plants, animals and microorganisms. So far, about 1.75 million species have been identified, mostly small creatures such as insects. Scientists reckon that there are actually about 13 million species, though estimates range from three to 100 million.

Biodiversity also includes genetic differences within each species - for example, between varieties of crops and breeds of livestock. Chromosomes, genes, and DNA-the building blocks of life-determine the uniqueness of each individual and each species.

Yet another aspect of biodiversity is the variety of ecosystems such as those that occur in deserts, forests, wetlands, mountains, lakes, rivers, and agricultural landscapes. In each ecosystem, living creatures, including humans, form a community, interacting with one another and with the air, water, and soil around them.


Biodiversity in Peril



Species have been disappearing at 50-100 times the natural rate, and this is predicted to rise dramatically. Based on current trends, an estimated 34,000 plant and 5,200 animal species - including one in eight of the world's bird species - face extinction.

While the loss of individual species catches our attention, it is the fragmentation, degradation, and outright loss of forests, wetlands, coral reefs, and other ecosystems that poses the gravest threat to biological diversity.

About 45 per cent of the Earth's original forests are gone, cleared mostly during the past century. Up to 10 per cent of coral have been destroyed, and one third of the remainder face collapse over the next 10 to 20 years. Coastal mangroves, a vital nursery habitat for countless species, are also vulnerable, with half already gone.

Global atmospheric changes, such as ozone depletion and climate change, only add to the stress.. Global warming is already changing habitats and the distribution of species. Scientists warn that even a one-degree increase in the average global temperature, if it comes rapidly, will push many species over the brink. Our food production systems could also be seriously disrupted.

The loss of biodiversity often reduces the productivity of ecosystems, thereby shrinking nature's basket of goods and services, from which we constantly draw. It destabilizes ecosystems, and weakens their ability to deal with natural disasters such as floods, droughts, and hurricanes, and with human-caused stresses, such as pollution and climate change.

Importance of Conserving Biodiversity

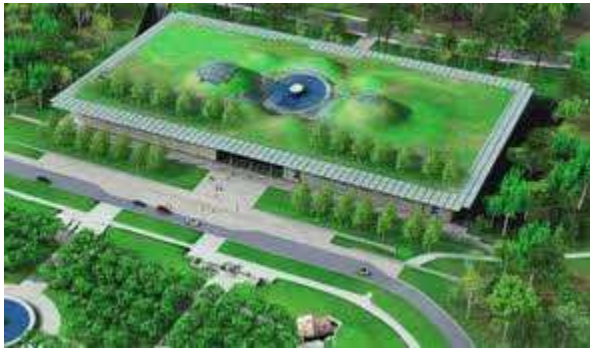
Protecting biodiversity is in our self-interest. Nature's products support
diverse industries as agriculture, cosmetics, pharmaceuticals, pulp and p
horticulture, construction and waste treatment.

Our personal health, and the health of our economy and human society
on the continuous supply of various ecological services that would be e
costly or impossible to replace.

"Goods and Services" provided by ecosystems include:

- Provision of food, fuel and fiber
- Provision of shelter and building materials
- Purification of air and water
- Detoxification and decomposition of wastes
- Stabilization and moderation of the Earth's climate
- Moderation of floods, droughts, temperature extremes and wind
- Generation and renewal of soil fertility, including nutrient cycling
- Pollination of plants, including many crops
- Control of pests and diseases
- Maintenance of genetic resources as key inputs to crop varieties and livestock breeds, medicines, and other products
- Cultural and aesthetic benefits
- Ability to adapt to change

Biodiversity has also a great cultural, psychological, ethical and spiritual value.



Cities and Biodiversity

Cities in particular are home to more than half of the world's population, and are responsible for a disproportionately large ecological footprint, which threatens the health of the planet's ecosystems. At the same time local authorities have a profound potential to affect positive change.

Biodiversity and ecosystems need to be valued and managed as part of cities' infrastructure and integrated into all aspects of local governance including urban planning, financial planning, transportation, trade and economic incentive mechanisms, procurement policies, infrastructure development and service delivery.

In order to promote biodiversity conservation, Cities should:

1. Manage the urban environment to benefit biodiversity
2. Implement strategic city and regional planning to reduce urban sprawl
3. Manage the entire landscape, through an ecosystem approach
4. Manage urban agriculture and nurture supply links to city markets
5. Facilitate sustainable consumption of resources that impact on biodiversity
6. Establish synergistic partnerships with government and the private sector
7. Raise biodiversity awareness and importance amongst the public
8. Supporting global or regional networks of cities and local authorities with common missions related to biodiversity, such as the ICLEI and IUCN's LAB programs , the ASEAN Working Group on Environmentally Sustainable Cities and others.

Plan of Action of Subnational Governments and Cities for Biodiversity

The Plan of Action on Subnational Governments, Cities and Other Local Authorities for Biodiversity under the Convention on Biological Diversity, adopted at COP 10 in Nagoya, is intended to support Parties, their partners and local authorities in implementing the Strategic Plan for Biodiversity 2011-2020, the Aichi Biodiversity Targets and relevant decisions of the Conference of the Parties., though the following objectives:

- Increase the engagement of subnational governments and local authorities, in support of their Parties, in the successful implementation of national biodiversity strategies and action plans, the Strategic Plan for Biodiversity 2011-2020, the 2020 target and the programs of work under the CBD;

- Improve regional and global coordination and exchange of lessons learned between Parties to the Convention on Biological Diversity, regional and global organizations;

- Identify, enhance and disseminate policy tools, guidelines, and programs that facilitate local action on biodiversity and build the capacity of local authorities to support their national Governments in implementing the Convention on Biological Diversity;

- Develop awareness-raising programs on biodiversity for local residents (including major groups such as business, local administrators, non-governmental organizations, youth and indigenous and local communities) in line with communication, education and public awareness strategies.

パートナーシップ事業

COP10 AICHI-NAGOYA

Life in harmony, into the future

COP10/MOP5 AICHI-NAGOYA, JAPAN 2010

Message From the Major

Mexico City: A Biodiverse Megacity

Lic. Marcelo Ebrard Casaubon

Major of Mexico City

Mexico City is located in the geographical region called “Basin of Mexico” located in the middle of the American Continent border, between the Neartic and Neotropical bioregions.

The surface of the city is 1, 479 km^2, 41% urban area, 59% rural area (under conservation status). It is one of the largest cities of the world with 8.8 million inhabitants in the city and around 22 million in its metropolitan area.

Mexico City hosts around the 2% of the total taxonomically classified species of the world: 3,000 species of plants, 350 species of mammals, 316 species of birds and many species of aquatic flora and fauna, from which numerous are endemic to the region.

The main threats to biodiversity are urban area expansion, deforestation for agricultural and livestock activities, air pollution, acid rain, regional and global climate change and the introduction of alien or exotic species.

A very populated and biologically rich city, with considerable challenges and successes.

Mexico City Fauna Species

Mexican wolf
(*Canis lupus baileyi*)

Coyote
(*Canis latrans*)

Bobcat (*Lynx rufus*)

Raccoon
(Procyon Lotor)

Grey fox
(*Urocyon cinereoargenteus*)

Volcano rabbit
(*Romerolagus diazi)*

Mexican red knee tarantula
(Brachypelma smithi)

Golden eagle
(*Aquila chrysaetos*)

Mexican axolotl
(*Ambystoma mexicanum*)

Ringtail cat
(*Bassariscus astutus*)

Mountain stream salamander
(*Ambystoma altamirani*)

Sierra Madre sparrow
(*Xenospiza baileyi*)

Montezuma leopard frog
(Lithobates montezumae)

Lesser long-nosed bat
(Leptonycteris yerbabuenae)

Mountain bluebird
(*Sialia currucoides*)

Common opossum
(*Didelphis marsupialis*)

Harris hawk
(P*arabuteo unicinctus*)

Mountain horned lizard
(*Phrynosoma orbiculare*)

Ladder-backed woodpecker
(*Picoides scalaris)*

Barn owl
(*Tyto alba*)

Mexico City Flora and Fungus Species

Fly agaric
(Amanita muscaria)

Enchilado
(*Lactarius salmonicolor)*

Blad Cypress
(*Taxodium mucronatum ten*)

Oyamel Fir
(*Abies religiosa*)

Pine
(*Pinus ayacahuite*)

Táscate
(Juniperus deppeana)

White cedar
(Cupressus lindleyi)

Birch
(*Alnus acuminata)*

Sauce or Ahuejote
(*Salix bonplandiana)*

Capulin
(*Prunus serotina*)

Hawthorn
(*Crategus pubescens*)

Public Participation
Creating Awareness and Conservation Action

Citizens can have an active role for biodiversity by:

- Obtaining information about the biodiversity of their city.
- Understanding the responsible factors for biodiversity loss.
- Reducing consumption, reusing materials, and recycling waste.
- Avoiding the use of products harmful s to the environment
- Reducing the energy and fuels use in everyday life.
- Promoting environmentally responsible productive systems.
- Communicating the value and biodiversity importance.
- Participating in activities for conservation biodiversity
- Joining national and international biodiversity organizations