GLOBAL AGENDA

'S FOREIGN POLICY AND THE ENVIRONMENT • VOLUME 3, NUMBER 2 •

Preserving Biological Diversity:

CANADA AND THE WORLD SUSTAINING THE WEB OF LIFE

Earth's biological diversity, which extends from microscopic organisms to plants and animals of every kind, is an interdependent web of life that includes all living beings. Preserving it means more than attending to the needs of individual species, it means conserving the wide range of genetic traits that exist, and maintaining the many habitats that are essential to life. Breaking one strand of the web can have unpredictable, and disastrous, effects on seemingly unrelated species.

Retaining Earth's biodiversity and using biological resources sustainably are huge challenges. Pressure on species, habitats and genetic types around the world is immense. And yet, the benefits of maintaining biodiversity are significant enough to demand action.

IN THIS ISSUE

Most people appreciate the value of wild habitats and the species they shelter. We can also understand genetic diversity as a form of natural insurance although many of the tangible benefits of biodiversity to humans are unpredictable. For example, plant species have given us valuable drugs in the fight against cancer. The Purple Foxglove, a flower native to Western Europe and Morocco, is used to help treat heart disease. Others offer the potential of important food sources. Maintaining biodiversity keeps this vast storehouse open and thriving, while we find out just how rich it is.

The search for a mechanism to encourage protection of biological diversity came with preparations for the United Nations Conference on Environment and Development. In addition, the global community had other goals: the sustainable use of biological resources and a fair and equitable sharing of the benefits of genetic resource use. The overall goal was a binding convention covering all countries.

Negotiations were complex. Success was in doubt, until Canada's Prime Minister announced that Canada would sign the convention. He urged other developed countries to show leadership by doing the same.

The momentum from that action led to the Convention on Biological Diversity. Canada then became the first industrialized country to ratify the Convention. Since 1992, Canada has taken many steps to meet its obligations. The most important has been the development of the Canadian Biodiversity Strategy.

The Strategy is the result of consultation with all sectors of society with a strong interest in policies that affect biodiversity. The federal, provincial and territorial governments have worked closely with conservationists and agriculture, business, labour and Aboriginal groups to chart a workable course.

The Strategy offers a vision of a "society that lives and develops as part of nature, valuing all life, taking no more than nature can replenish and leaving to future generations a nurturing and dynamic world, rich in its diversity of life." It sets out guiding principles that are a foundation for turning the strategic directions of the Strategy into actions.

One key element in the Strategy is a commitment to international co-operation. Canadians recognize that progress in achieving the goals of the Convention demands that co-operation. Canada has already taken steps to share its expertise with developing countries. It has been a key player in building the international mechanisms the Convention requires.

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Biotechnology: Ensuring Environmentally Sound Approaches

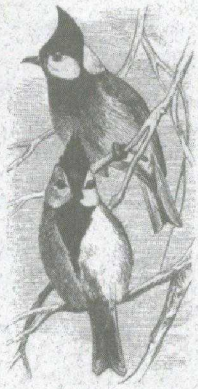
Biotechnology, the application of science and engineering to living organisms, is already helping to feed people and to make them healthier. But it also sparks concern about the chance of negative impacts on people and the environment. Canada and other countries are working to ensure the benefits, while controlling the risks.

In Canada, biotechnology research often involves co-operation among governments, environmental non-governmental organizations, research centres, universities and the private sector.

Canadian governments and industry have co-operated to set up three National Environmental Technology Advancement Centres. The Centres help firms in research and development, business planning, and technology demonstration and transfer. This will help the work being done to export Canadian expertise and technology.

Ensuring the safety of products of biotechnology requires national and international action. Governments in Canada have developed a series of biosafety laws, regulations and policies.

However, domestic action is not enough. Canada contributes to stronger environmental protection related to biotechnology products through co-operation with other countries and international agencies. At the recent Biodiversity Convention meeting on Biosafety held in Madrid from July 24 to 28, the majority of countries agreed to request that the second Conference of the Parties in Jakarta in November consider negotiating a Protocol on the safe transfer and handling of modified organisms. Canadian experience in working with other countries and international organizations, such as the Organization for Economic Co-operation and Development (OECD) and the United Nations Environment Program (UNEP), on biosafety issues will ensure that we are able to contribute effectively to a Protocol that helps developing countries build their capacity to benefit from biotechnology. Co-operation with developing countries already is an important element of biotechnology work in Canada. The Canadian International Development Agency ensures that grants related to biotechnology development now contain advice on environmental protection to help build local capacity in assessing risks from products of biotechnology.



The environmental risk assessments performed in Canada on releases of biotechnology products may also be useful for other countries, building a standard that can be used and creating confidence that biotechnology will not cause accidental harm.

Continued from page 1

November's Conference of the Parties to the Convention will choose a site for the Permanent Secretariat. The Secretariat co-ordinates and performs the work of the Convention and monitors global progress on behalf of the countries that have ratified the Convention.

Canada believes that Montreal offers all the logistical benefits the Secretariat will need. More important, Canada would be pleased to play host to an organization addressing a set of issues that it has made a priority.

Preserving biological diversity means keeping the web of life whole for future generations. It means learning more and using resources wisely. Although this is not a simple commitment, Canada believes it is a vitally important one.

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The Convention on Biological Diversity: Our Living Legacy

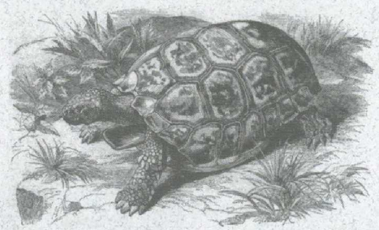
The Convention on Biological Diversity (CBD) was one of the major achievements of the United Nations Conference on the Environment and Development held in Rio de Janeiro, Brazil, in June 1992. Increasingly, the global decline of biodiversity is being recognized as one of the most serious environmental issues facing humanity.

Worldwide recognition of this inspired the global community to negotiate the CBD, or the Biodiversity Convention, as it is more commonly known. Canada was among the first to sign the Convention at Rio and was the first industrialized nation to ratify it. To date 118 countries have ratified it.

Biological diversity, or "biodiversity," is the term used to describe the variety of life on Earth. It encompasses three concepts. "Species diversity" describes the variety of animals, plants and micro-organisms that exist on our planet. "Genetic diversity" refers to the range of possible genetic characteristics found within a particular species and amongst different species. "Ecosystem diversity" describes the variety of natural ecological systems found in a region, a country and on the planet.

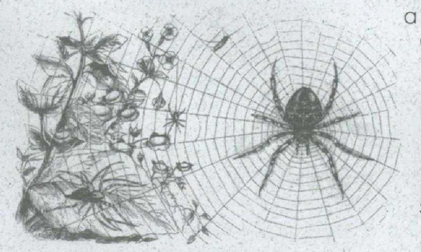
Scientists estimate that the total number of species of animals, plants and micro-organisms on Earth ranges between 10 and 100 million. Still, today only 1.4 million species have actually been identified.

Some observers believe that up to 100 species become extinct every day. These losses are caused by the ever-growing demand for food, fuel, and industrial products generated by the rising expectations and needs of a growing population. All of these factors lead to the destruction of precious habitat, over-harvesting of resources and pollution.

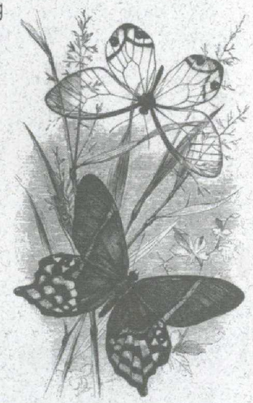


The Biodiversity Convention provides an international legal framework for the conservation of the planet's biological diversity, the sustainable use of biological resources and the equitable sharing of benefits derived from the use of genetic resources.

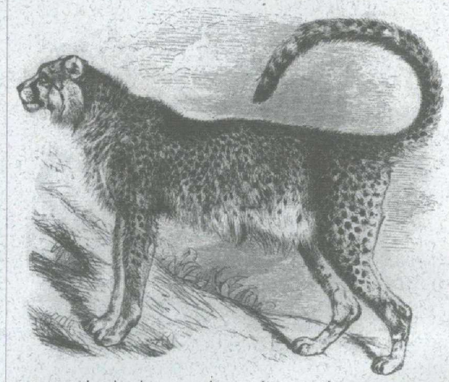
Development of national biodiversity strategies is the first step in implementing the CBD. These strategies should set out the approach each country will take to conserve its biodiversity and to use its biological resources in a sustainable way. The Canadian Biodiversity Strategy is a joint effort by federal, provincial and territorial governments and will soon be released.



More than half of the world's species live in tropical countries in the developing world. These countries rely on the wealth of their biological resources to develop their economies and to improve the living conditions of their citizens.



Canada recognizes that biodiversity conservation will depend on building partnerships with other countries, particularly developing countries. The establishment of a consistent framework for sharing knowledge, technologies and the benefits of biological resources is one of the key results of the Biodiversity Convention.



Canada believes that ultimately all countries will benefit from the conservation and sustainable use of Earth's biodiversity. Moreover, if we fail to recognize the link between biodiversity loss and human well-being, future generations will suffer significant ecological, economic and social costs.

Forest Biodiversity

Forests cover nearly half of Canada's land area and are likely home to two thirds of the 300 000 species of plants, animals, insects, fungi and micro-organisms estimated to exist in Canada. New species continue to be discovered: in recent years, for example, scientists working in British Columbia's Carmanah Valley have identified more than 60 new insect species in the canopies of coastal old-growth forests. Forests are therefore a key element in Canada's efforts to conserve its biodiversity.

Conserving the natural diversity of forest species preserves the potential to discover and develop new products for medicine, biotechnology, forestry and agriculture.

Canada has taken steps to conserve the diversity of its own natural ecosystems. It has already set aside 7.9 per cent of its land base (12.5 per cent of the world's total protected area) and is committed to nearly doubling that area. Furthermore, 5.5 per cent of Canada's forest land is protected by law from harvesting; an additional 6.6 per cent of forest land, composed of shallow or rocky soil, steep slopes and waterway reserves, is excluded from harvesting by provincial policy.

Taking Action on Biodiversity

by the Honourable John Fraser, PC, QC
Canada's Ambassador for Environment and Sustainable Development

"They can't see the forest for the trees," is a time-honoured expression in English. For a long time it applied to issues surrounding biological diversity. Many people looked at wild forests but only saw lumber. They looked at mountains but only saw minerals.

Natural resources such as those are important. They are the building blocks of our economy. However, we have broadened our vision to see that the environment offers us many more benefits than those alone. In Canada, as around the world, we have come to understand how interconnected living things, species, habitats and ecosystems are. We now understand that policies and practices must take the values and the complexity of the natural environment into account.

The path to that recognition has not been simple. Canada is old enough to have suffered the loss of some important species and habitats. Many are under pressure. But we are also young enough to have a great deal left to conserve. That is why Canadians care and expect their governments to follow through on commitments they have made to protect the biological diversity we still enjoy. I know that people around the world expect us to show leadership on this issue.

Domestically, the Canadian Biodiversity Strategy represents a major step forward in meeting our commitments to the international community, and to ourselves. It recognizes the responsibility and the need for action that we all share. We play a role in stewardship of this immense portion of the planet. Internationally, our work with partners in developing countries does the same. But we might not even have had a Convention on Biological Diversity to guide that work, if not for Canada.

I recall that the final stages of negotiations on the Convention centered on complex and difficult issues. Some G-7 countries began to indicate they might not sign it. Canada announced that, regardless of their positions, it would support the Convention. That broke the log jam. Earth will reap the results.

Shortly, the international community will decide where to locate the Permanent Secretariat of the Convention. Canada has offered Montreal as its host. That city has already become a centre of international environmental activity. It is home to the Montreal Protocol Secretariat and the North American Free Trade Agreement Environmental Co-operation Commission.

Montreal is a city in which English and French are at home. It is a crossroads for many cultures, serving well as a site for international organizations, e.g. the International Civil Aviation Organization. As a country with a strong commitment to international environmental co-operation, Canada looks forward to providing a home for the Permanent Secretariat.

Unlike the old saying I quoted at the beginning, we are learning to see the forest and everything in it. The Permanent Secretariat will be an important tool to help the world do the same.

Plant Genetic Resources - A Key To More Food

The study of plant genetic resources enables researchers to understand and draw on the immense biological diversity in domesticated and wild varieties of many plants. That research helps produce new crop varieties with improved yields and/or the ability to better withstand pests and extremes of weather.

This work is an international challenge. The genetic traits needed to create an improved variety of rice or wheat may come from many sources around the world. This underlines the value of multilateral approaches to the sustainable use of these resources.

The International Plant Genetic Resources Institute (IPGRI) is a network of base collections of major food crops within which Canada is responsible for preserving the world base collections for barley and oats. Canada also maintains the duplicate base collections for pearl millet, a staple in much of Africa, and Brassica oilseeds, such as canola.

These collections of genetic resources also make international co-operation simpler by permitting scientists to pursue research and breeding.

Farmers in Burkina Faso are seeing the benefits of Canadian co-operation on plant genetic resources. Didier Balma, a Burkinabe PhD student at Laval University in Quebec, used the pearl millet collection in Canada to find varieties that had disappeared from his country. He used repatriated varieties that now enable farmers in his homeland to improve their harvests.

Canada believes in building on that kind of co-operation. The development of a global strategy for co-operation in this field should be based on a process for exchanging information and genetic material freely. This would enable the world to benefit from an important element of its biodiversity.

Canada Bids for Biodiversity Secretariat

Canada has proposed Montreal as the site for the Permanent Secretariat for the Convention on Biological Diversity.

The Secretariat supports the work of the convention that was finalized at the 1992 Earth Summit in Rio de Janeiro. With the co-operation of the Quebec government and the City of Montreal, Canada is offering a substantial package of benefits for the new secretariat.

For example, the federal government has pledged to provide US$4 million over five years to support the work of the Secretariat. The Secretariat would also benefit from free office space during its first five years, as well as contributions in cash, furnishings and equipment.

Montreal has become home to about 45 international organizations. The number has grown quickly because of low operating costs, high quality of life and convenience to other major cities.

The site will be chosen at the next Conference of the Parties to the Convention to be held in Jakarta in November.

Facts and Stats

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From earliest times, people have made use of extracts from wild plants and animals. Nowadays, when we go to the pharmacy to have a prescription filled, few of us think about the connection between our medicine and biodiversity. For instance, did you know that:

- an active ingredient in aspirin comes from the white willow;
- the rosy Periwinkle, a flower found in Madagascar, could help treat childhood leukemia;
- bee venom could be used to treat arthritis;
- the Purple Foxglove, a flower native to Western Europe and Morocco, helps treat heart disease;
- several algae have antibiotic and anti-carcinogenic properties;
- corals, sea anemones, sponges and molluscs all include species exhibiting antibiotic activity;
- of the 134 native tree species of Canada, about one third have one or more recorded pharmaceutical or medical uses ascribed by Aboriginal, folk or modern medical sources;
- the porcupine fish and the puffer fish have yielded substances that ease the pain and discomfort of those with terminal cancer;
- research on black bears during hibernation has provided clues to curing human kidney disease.

Source: *Canadian Biodiversity Strategy, Report of the Biodiversity Working Group*, and *Biodiversity, A Guidebook for Canadian Businesses, November 1994.*

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Montreal - A Home for Biodiversity

CANADA'S BID FOR THE PERMANENT SECRETARIAT OF THE CONVENTION ON BIOLOGICAL DIVERSITY

In November 1995, the Conference of the Parties to the Convention on Biological Diversity will decide where to establish the offices of the Permanent Secretariat.

Canada has offered to host the Secretariat in Montreal. The combination of:

- the support that governments are offering;
- the benefits that Montreal offers naturally; and
- the support the governments of Canada and Quebec have shown for protecting biodiversity at home and internationally

all show that Montreal will be an excellent location.

CANADA'S OFFER

The Secretariat can count on substantial support in Montreal.

It will get 1000 m^2 of space in a prestige building with free rent until at least 2001. It will be near the new International Civil Aviation Organization (ICAO) building with its conference centre and other services.

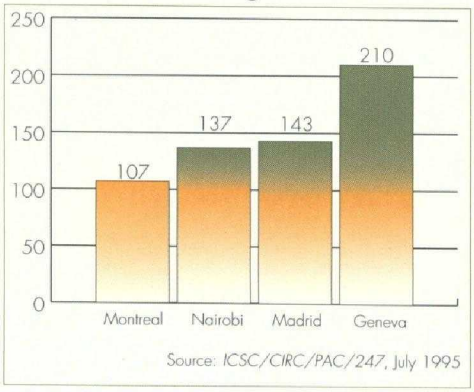
The Secretariat will receive free office furniture, telecommunications equipment and professional services such as management or administrative support.

The governments of Canada and Quebec are also offering contributions to the Secretariat for operational costs. Canada will provide US$4 million over five years. Quebec will provide US$1 million over the same period.

THE BEST CHOICE FOR COSTS AND BENEFITS

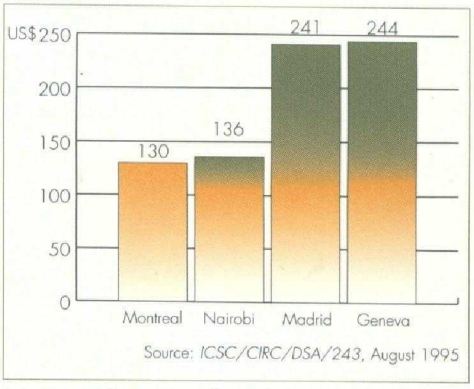
Montreal is among the most reasonably priced international cities. That has helped draw more than 25 international organizations to Montreal during the past five years.

The UN cost of living index shows Montreal's advantage.



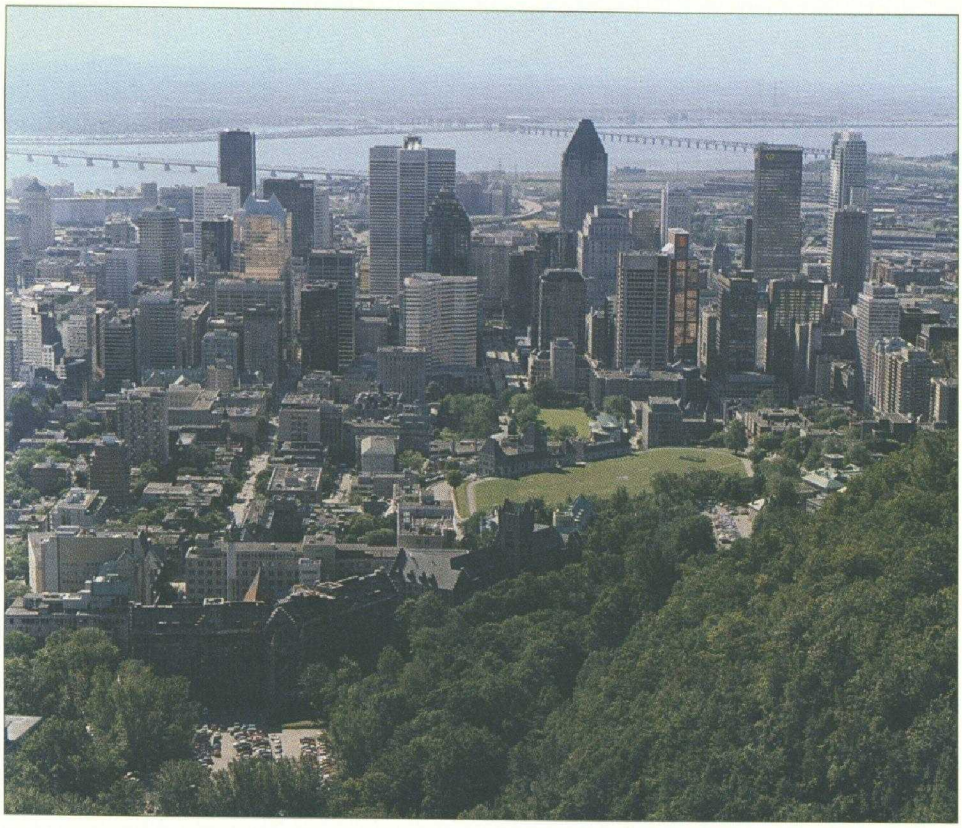
Source: *ICSC/CIRC/PAC/247*, July 1995

The UN Per Diem Allowance proves how friendly Montreal is to visitors' budgets.



Source: *ICSC/CIRC/DSA/243*, August 1995

Montreal is a safe, clean city. Education, health, housing and commercial services are of international quality. They are available in French, English and



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other major languages. Montreal also offers recreation, culture, entertainment and sports.

A CONVENIENT LOCATION

Montreal is served by more than 60 airlines. It has frequent and direct connections to most major centres in North America and Europe.

It is convenient in other ways. Almost every country in the world has permanent representation within two hours of Montreal. The city has about 80 consulates and 60 permanent representatives to ICAO. It is only two hours by road or rail from the more than 130 diplomatic missions in Ottawa, Canada's capital. It is about an hour by plane from New York or Washington.

CANADA - A COMMITMENT TO BIODIVERSITY

The operational benefits of locating in Montreal are matched by Canada's strong support for biodiversity.

Canada has 24 per cent of the world's wetlands, 20 per cent of its fresh water and 10 per cent of its productive forests. A quarter of all wilderness left on this planet is here. To guard this heritage, we are meeting our biodiversity commitments.

Canada was the first industrialized country to sign and ratify the Convention on Biological Diversity. It has followed through with a Canadian Biodiversity Strategy. Governments are protecting more of Canada's natural regions. They are strengthening related policies. The same is happening in sectors such as forestry, farming and industry.

Canada recognizes the ancient tradition of Aboriginal people living in harmony with the environment. Many Aboriginal communities now have substantial influence or control over wildlife management and are full partners in Canada's Biodiversity Strategy.

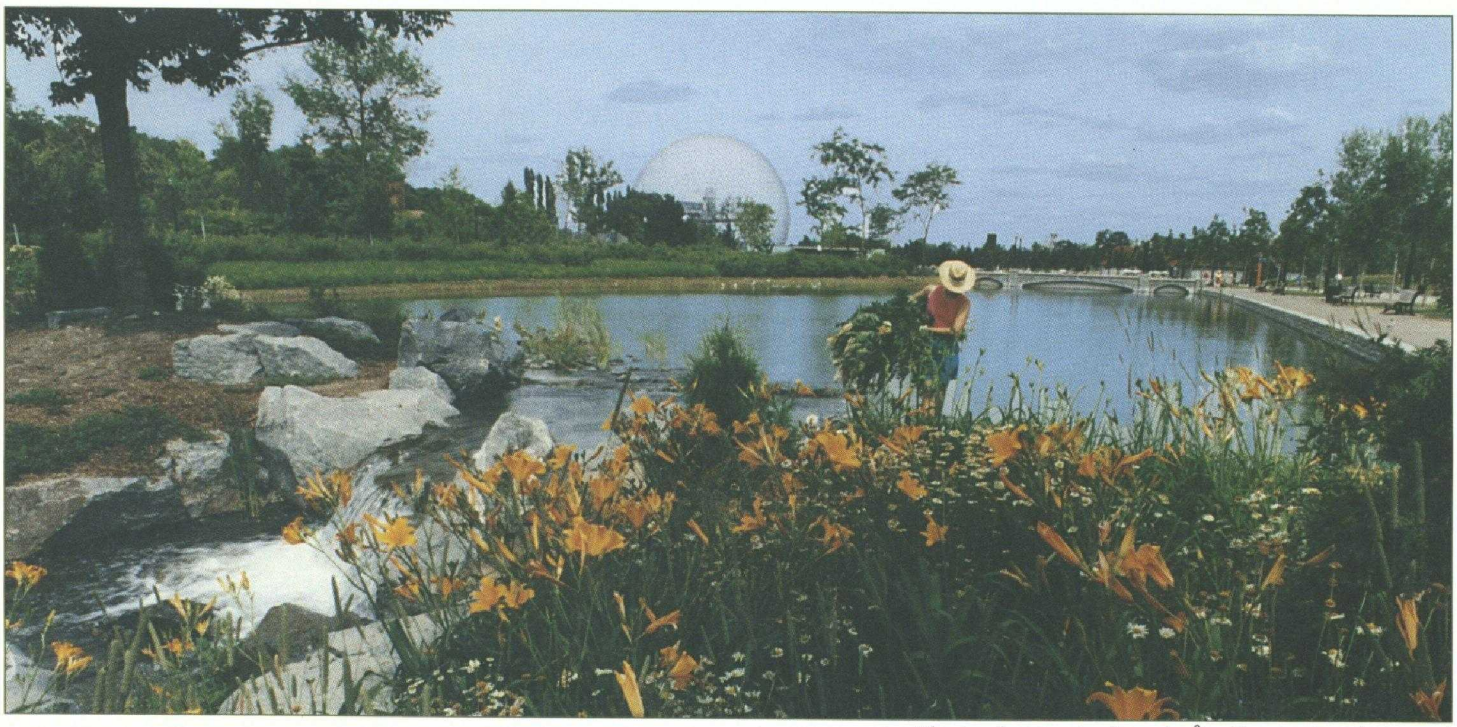
Montreal is the second largest French-speaking city in the world. The Quebec government has formally adopted the Convention's principles and objectives and followed with its own biodiversity strategy. It has improved many environmental policies and practices to protect its biological diversity better. For example, protected wildlife sites in Quebec occupy an area larger than Switzerland.

INTERNATIONAL CO-OPERATION

Canada's record of co-operation on wildlife conservation goes back to the early 1900s. Now, Canada contributes to international efforts to implement the Convention on Biological Diversity.

Canada shares its biodiversity expertise extensively with developing countries. **Since 1991, C$210 million in official development assistance has been related to the objectives of the Convention.**

Canadian projects support governments, communities and organizations that are taking action on biodiversity priorities. Canadian governments are sharing expertise in economic assessment, environmental impact, protected areas, pollution prevention and local stewardship with developing countries.



Filtration Basin in the *Parc des Îles*. Photos: City of Montreal