



Environment
Canada

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www.ec.gc.ca



NATURE AT WORK: WHY BIODIVERSITY IS IMPORTANT TO YOU!



FAST FACT

Over 70 000 species of plants and animals have been identified in Canada, and countless numbers remain to be discovered.



DID YOU KNOW...

More than 100 000 trees have been planted in Canada under the Plant for the Planet: Billion Tree Campaign and over 60 Green Wave events took place in 2010 where trees were planted. For more information on the United Nations Environment Programme, visit www.unep.org and www.greenwave.cbd.int for the Green Wave initiative.



Understanding biodiversity

Spiderwebs in your backyard, birds at the local park, algae in lakes and oceans, worms in the soil, and the forests, plains and tundra found across the country—this variety is biological diversity, also known as “biodiversity.”

With its intricate web of life forms and habitats, our planet depends on biodiversity, defined as the variety of living species and ecosystems on Earth and the ecological processes of which they are part.

DID YOU KNOW...

The United Nations declared 2011–2020 the International Decade of Biodiversity.

Why is biodiversity so important? The answer is simple. We all want to continue living in a country where we can watch birds, go fishing, walk in nature, swim in lakes and rivers, and do all the activities that take us outdoors while enjoying fresh air and clean water. The diversity of life is essential for us to enjoy these simple pleasures.

Examples of nature at work can be found everywhere: the process by which plants filter carbon dioxide and produce oxygen for us to breathe; the naturally occurring filtering of drinking water; the species responsible for enriching the soil in which we grow food; the pollination of plants that enables new seeds to grow; the role of oceans in the regulation of our climate. Biological diversity is vital to maintaining life on Earth and to ensuring a clean, safe and sustainable environment.

Habitat loss, the spread of non-native species, climate change, pollution and overconsumption all contribute to a decline in the variety of living species and threaten nature as we know it. It is a good thing that Canadians and other people around the world are recognizing this issue and are taking action.

Canada 

Proud to be Canadian

There is no denying: Canada is huge. We are the second-largest country on Earth. Canada covers over 15 million square kilometres of land and water, containing approximately **24%** of the planet's wetlands, **20%** of its freshwater and **8%** of its forests. We see biodiversity in every corner of our country and witness its impact on our economy, culture and society.

Canadians inhabit some of the most diverse natural settings in the world—from coastal communities to arctic tundra, prairie grasslands to mountains, and even deserts. With such a variety of natural treasures, it is no surprise that the Government of Canada takes its role so seriously in conserving biodiversity.

DID YOU KNOW...

Canada's boreal region covers **34%** of the country's land mass and contains **21%** of the world's total boreal forest.

The boreal forest, which is wooded mainly with coniferous trees, is a dynamic system of living organisms—plants, animals, insects and micro-organisms, interacting with the soil, water and air.

Canada has a rich tradition of environmental awareness and conservation. In fact, Canadian governments began establishing protected areas not long after Confederation.

DID YOU KNOW...

1872: First municipal park
(Mount Royal, Quebec)

1885: First national park
(Banff, Alberta)

1887: First wildlife sanctuary
(Last Mountain Lake, Saskatchewan)

1893: First provincial park
(Algonquin, Ontario)

Discovering biodiversity



Protecting biodiversity starts with knowledge and exploration. The Government of Canada, including Environment Canada, has taken a lead role in providing Canadians with opportunities to learn about and experience biodiversity.

What can you do? Get outside! Discover biodiversity while you walk, ski, snowshoe, ride horseback or cycle.

The Trans Canada Trail, the world's longest network of trails, makes it easy to experience biodiversity. Four out of five Canadians live within 30 minutes of the Trail. Learn more about it at www.tctrail.ca.

Hinterland Who's Who has been providing Canadians with information about Canada's wildlife and wildernesses since the 1960s. Through its website you can learn about nature and the many species of animals in Canada. Visit www.hwww.ca for more information and a complete list of activities and programs for helping to conserve biodiversity.

The Biosphère, Environment Canada's museum in Montréal, is devoted to environmental education and action. Since 1995, the Biosphère has increased awareness of environmental issues, including biodiversity, through its interactive and educational exhibits. The Biosphère has created a series of BioKits that encourage participants to use their five senses in exploring nature in urban and rural areas. Individuals, families and schools across Canada can download a BioKit by visiting www.ec.gc.ca/biotrousses-biokits.



Conserving the biodiversity of our country

In addition to supporting education, the federal government is also taking direct action to conserve our living species and ecosystems through a combination of research, monitoring, policies, regulation, enforcement, conservation and partnership activities.

- Since 1885, Canada has taken action to protect almost 1 million km² of land—nearly 10% of Canada's land mass—and 56 000 km² of our oceans and Great Lakes.
- We have the best national park system in the world and have grown it by almost 50% since 2005.
- We have expanded Nahanni National Park Reserve sixfold, and are establishing Gwaii Haanas National Marine Conservation Area Reserve and Haida Heritage Site, in collaboration with the Haida Nation, as well as establishing a national park on Sable Island.
- We protected and took actions that will expand the national park and marine conservation area systems by nearly 90 000 km².
- As of early 2011, 470 species are listed under the *Species at Risk Act*, which came into force to prevent Canadian species from becoming extirpated or extinct, to provide for the recovery of those that are endangered or threatened, and to encourage the management of other species to prevent them from becoming at risk.
- Environment Canada offers many programs to enable Canadians, from businesses to local communities, to protect natural areas, species and their habitat. Hundreds of partnerships have been established with Aboriginal organizations, provinces, other federal departments, the natural resource sector, landowners, trusts and conservation organizations, and educational institutions, to conserve and protect Canada's natural spaces and wildlife.
- We are working with a broad spectrum of partners on ecosystem initiatives to achieve environmental results and sustainable development. For instance, we are pooling resources and talents from several federal organizations to protect and restore water quality and the health of the aquatic ecosystem in the Great Lakes.

FAST FACT

Canada is a seasonal host to 530 species of migratory birds.



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- With 54 national wildlife areas and 92 migratory bird sanctuaries, Canada demonstrates its ongoing commitment to protecting the habitats of wildlife species. These results are possible with the contribution of conservation partners across the country.
- Canada has the world's longest coastline. Fisheries and Oceans Canada, Parks Canada and Environment Canada work in partnership to establish and manage our marine protected areas. This work protects coastal and marine habitat and species that are ecologically significant and vulnerable.
- The Scott Islands and surrounding waters in British Columbia are home to over 2 million breeding seabirds from March to September, including the endangered Black-footed Albatross. Before long, the Scott Islands will be ready for designation as a marine national wildlife area under the *Canada Wildlife Act*.

DID YOU KNOW...

The largest park in Canada is Wood Buffalo National Park, which spans 44 807 km² of land in Alberta and the Northwest Territories. It is home to North America's largest bison herd and is the only nesting site of the endangered whooping crane.

The Great Lakes provide drinking water to millions of Canadians and are a major source of economic activity.



Conserving biodiversity beyond our borders

The Government of Canada plays a major part in the promotion and protection of biodiversity internationally. Canada was instrumental in drafting the United Nations Convention on Biological Diversity: we were the first industrialized country to ratify the convention, and we host the convention's international secretariat in Montréal, which supports the goals and vision of the Convention and its 193 members.

In response to the Convention, the Government of Canada, in partnership with provincial and territorial governments, jointly developed the Canadian Biodiversity Strategy, which guides our work in conserving, managing and sustaining Canada's biodiversity. For more information on the Canadian Biodiversity Strategy, visit www.biodivcanada.ca.

The Convention on Biological Diversity is only one of several international agreements to which Canada subscribes. Others include:

- the Convention on International Trade in Endangered Species of Wild Fauna and Flora
- the Convention on Wetlands of International Importance (RAMSAR)
- the Agreement on the Conservation of Polar Bears
- the Convention for the Protection of Migratory Birds in Canada and the United States
- the Agreement between the United States and Canada on the Conservation of the Porcupine Caribou Herd

The Arctic covers over one sixth of the Earth's landmass. Four million people live there, including over 30 different Aboriginal peoples.

Canada is home to approximately **15 500** of the estimated **25 000 to 30 000** polar bears in the world. We protect them through a collaborative approach that is shared with provinces, territories and regional wildlife management boards, and we have taken many actions so far, like:

- the signing of a Memorandum of Understanding with the governments of Nunavut and Greenland
- drafting a National Conservation Strategy for polar bears
- establishing protected areas for habitat important to them



Also, through ongoing enforcement under the Convention on International Trade in Endangered Species (CITES), Canada works with other nations and partners such as Interpol to control illegal international wildlife trade in endangered species from every part of the globe. This helps ensure that offenders cannot escape justice simply by crossing a border.

The Government of Canada works in cooperation with many other countries to study biodiversity and develop strategies for global conservation. Canada, along with the United States and Mexico, is a member of the Commission for Environmental Cooperation. As part of the Commission, Canada works to facilitate partnerships and public awareness in the protection and conservation of the North American environment.

Canada is also a member of the Arctic Council and its Conservation of Arctic Flora and Fauna working group, which seeks to conserve Arctic biodiversity and share information with governments and residents of the Arctic. This helps to promote practices that ensure the sustainability of the Arctic's living resources.



DID YOU KNOW...

Environment Canada's biodiversity experts include:

- **botanists**, who study plants
- **biologists**, who study organisms and their relationship to the environment, such as birds, polar bear or caribou for example
- **research experts and environmental scientists**, who study different subjects such as conservation of species and habitats at risk, marine birds, aquatic biodiversity, ecosystems, water quality, and many more subjects related to the environment
- **ecotoxicologists**, who evaluate the effects of toxic substances on the health of wildlife and ecosystems
- **social scientists**, who study the economic, social and cultural values of biodiversity

Making a difference

As a society, we all share responsibility for the protection of biodiversity. The choices we make every day have an effect on the planet. Do you purchase products with limited packaging? Do you recycle? Do you avoid using fertilizers, insecticides, herbicides and pesticides on your lawn? Do you choose native plants and heritage seeds for your yard? The answers to these questions will tell you how much you are doing for biodiversity.

Once you begin learning about biological diversity, you will start to notice the animals, plants and habitats that are part of everyday life. Then you can take action to help protect biodiversity.

Here are a few simple things that you and your family can do:

- Compost—make it a habit!
- Use cloth bags when shopping and avoid plastic—just plan ahead.
- Carpool or use public transit—consider alternatives!
- Assist in wildlife surveys such as bird counts—it can be educational.
- Participate in national monitoring volunteer programs such as WormWatch, IceWatch, PlantWatch and FrogWatch—it can be a fun activity to do with kids.
- Install bird feeders—you will love your new visitors in the backyard.
- Get your school involved in the Green Wave Project and plant trees in your community—talk to the people who can make a difference.
- Buy certified fisheries and forestry products—verify the products you buy.
- Donate land through Environment Canada's Ecological Gifts Program (Ecogift)—it really helps the environment!
- Apply to Environment Canada's EcoAction Community Funding Program, the Invasive Alien Species Partnership Program or the Habitat Stewardship Program for Species at Risk to support conservation or restoration projects in your community—you can have a bigger impact than you think!

Consult Environment Canada's website at www.ec.gc.ca to find out more information about these activities or others that you could do to make a difference!



FAST FACTS

- ✱ On average, Canadians throw away half a kilogram of plastic packaging per day.
- ✱ One in every three bites of our food depends on pollination by bees and other insects.



Biodiversity – more Canadian contributions

With the help of the volunteer WormWatch program, 25 new earthworm species have been found and identified in Canada.



Through the Toronto Zoo's Adopt-A-Pond Wetland Conservation Programme, communities throughout Canada can adopt local wetlands and help to protect aquatic biodiversity.



Edmonton, Calgary and Montréal are participating with other cities from around the world in the Local Action for Biodiversity Program. For more information, visit www.iclei.org.

Through the Ecogifts Program, 857 ecological gifts valued at almost \$551 million have been donated across Canada as of January 2011, protecting over 137 700 hectares of wildlife habitat. Canadians are also very engaged with the Community Action Programs for the Environment, like the Habitat Stewardship Program and the EcoAction Community Funding Program. To learn more about these programs, visit www.ec.gc.ca/pde-egg and www.ec.gc.ca/pace-cape.

All of the world's population of Ross' Geese nest in Canada, and of these, over 95% breed in the Queen Maud Gulf Migratory Bird Sanctuary in Nunavut, one of Environment Canada's protected areas.



A portion of the Canadian Forces Base Suffield in Alberta is a designated national wildlife area that contains mixed grass prairie habitat, some sand dunes and other types of habitat. This area is home to 16 species at risk in Canada, including the Burrowing Owl and the Ferruginous Hawk.

Canada's 138 native tree species have provided substances for approximately 40 medical uses.

The Southwest Nova Biosphere Reserve in Nova Scotia is home to over 30 species at risk, such as the Eastern Ribbon Snake, Southern Flying Squirrel, Monarch Butterfly, Blanding's Turtle, Atlantic Whitefish, Piping Plover, Atlantic Coastal Plain flora and rare lichens.



Each year, Canada's rivers discharge 7% of the world's renewable water supply at the rate of 105 000 cubic metres per second.

Almost 9% (891 163 km²) of Canada's total area is covered by freshwater.

To learn more about biodiversity, visit www.biodivcanada.ca or Environment Canada's website at www.ec.gc.ca.

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