

1 Canada's Environmental Record

Canada's environmental record is among the best in the world.

Environment Canada, 1996

Canada is viewed as a world leader in sustainability.

*Ralph Goodale, Canada's Minister of Natural Resources,
1997-2000*

Canada's reputation far exceeds our track record, and it has begun to fray, badly.

David Suzuki

Far too often, the government is not keeping the promises it makes both to Canadians and the world.

*Brian Emmett, Canada's Commissioner on the Environment
and Sustainable Development, 1996-2000*

Is Canada an environmental leader or an environmental laggard? Are Canadians carefully safeguarding our natural legacy so that it is passed on, altered but not degraded, to future generations? Or are we, despite our best intentions, fraying the fabric of this natural legacy, passing on a land that is less natural, less clean, less healthy, less diverse, and less awe-inspiring? In the global picture, is Canada contributing to solving such environmental challenges as climate change, depletion of the ozone layer, and the loss of biological diversity, or are we exacerbating these problems?

Canada is one of the wealthiest nations on Earth in terms of our natural heritage. Canada is blessed with countless rivers and lakes, sprawling forests, thousands of kilometres of coastline along three great oceans, extensive wilderness areas, and abundant wildlife. From a natural resource perspective, Canada is again gifted – endowed with plentiful fresh water, energy, minerals,

timber, fisheries, and farmland. Canadians enjoy spectacular beauty in all regions of the country, from maritime seascapes to big sky prairies, from mountain grandeur to the painter's palette of the Canadian Shield and the subtle splendour of the Arctic.

Canada's Environmental Ethic

In a vast, geographically and culturally diverse country like Canada, there are very few points on which the overwhelming majority of people agree. Somewhat surprisingly, a passion for the environment is one of those rare subjects of societal convergence. As a people, Canadians define themselves in terms of their natural heritage. Canada's national and provincial flags, coats of arms, and currency reflect Canadian landscapes and wildlife. A recent study found that the only two symbols embraced by all segments of the Canadian population are the natural environment and medicare. Similarly, Ian Angus, in his book *A Border Within*, searched Canada for common bonds and identified two unifying Canadian values: multiculturalism and a love of nature.¹

The deep-rooted connection between individual Canadians and the natural world is demonstrated by the following statistics:

- 98 percent of Canadians view nature in all its variety as essential to human survival.
- 90 percent of Canadians consider time spent in natural areas as children very important.
- 85 percent of Canadians participate regularly in nature-related activities such as hiking, bird-watching, and fishing.
- 82 percent of Canadians say nature has very important spiritual qualities for them personally.²

This love of nature translates into a strong environmental ethic. According to public opinion polls, Canadians are among the most staunchly pro-environment people on the planet. Eight out of ten Canadians believe that environmental protection should be given priority over economic growth. This is the highest proportion of support for environmental protection in the thirty countries surveyed by the research firm Environics International.³ Two studies found that nine out of ten Canadians feel either "a great deal of concern" or "a fair amount of concern" about the state of the environment, and that nine out of ten Canadians rate it as one of their top concerns.⁴ Neil Nevitte, in his book *The Decline of Deference*, tracks values across a span of decades and concludes that environmental protection is becoming part of Canada's fundamental moral belief system.⁵ Given that Canadians appear to be among the most environmentally conscientious people in the world, the question is obvious: Are Canadians walking the walk of environmental responsibility or just talking the talk?

Conflicting Perspectives on Canada's Environmental Record

Canada's performance on protecting the environment is the subject of lively debate. On one side, environmental groups are relentlessly critical and negative. Their mantra is that both Canadian and global environments are deteriorating rapidly, and that ecological collapse is imminent if dramatic changes are not made. Environmental groups have published reports attacking Canada for failing to protect biological diversity, mismanaging forests, failing to address climate change, failing to protect children's health, failing to protect drinking water, allowing destructive mining practices, flawed environmental assessment processes, and outdated pesticide laws.⁶ Canada's foremost environmental spokesperson, renowned broadcaster and scientist David Suzuki, warned in 1990 that if society didn't turn things around in the next decade, "civilization as we know it will cease to exist."⁷ Most Canadians lean toward this pessimism, with 82 percent professing in 1999 that they were "currently upset about threats to nature in Canada."⁸ Scientists and environmental experts forecast further declines in environmental quality in the next ten to fifteen years, both in Canada and globally.⁹

On the other side of the debate, government and industry insist that environmental conditions are improving. Canadian governments, both federal and provincial, promote Canada as a world leader on environmental issues including forest management, clean mining practices, safe drinking water, pesticide regulation, environmental assessment, and achieving sustainable development.¹⁰ The Fraser Institute calculated that environmental quality in Canada improved by 17 percent between 1980 and 2002 (excluding so-called secondary factors such as climate change, ozone depletion, and the loss of biodiversity).¹¹ According to the Fraser Institute, "Canadians can be proud of all we have accomplished to reduce pollution and protect our environment."¹²

Is Canada headed toward ecological disaster? Or, having peered over the precipice, is Canada now pulling back from the brink and moving toward a sustainable future? While facts can be marshalled to support both sides of this argument, neither of these extremes presents an accurate picture of Canada's environmental record. Environmentalists sometimes exaggerate the extent of problems and are reluctant to recognize progress, while government and industry tend to downplay environmental problems and exaggerate their successes. As is often the case in public policy debates, the truth is somewhere in the middle.

Canada's Environmental Performance

What are the straight goods, the facts, about Canada's environmental performance? A recent analysis conducted by the University of Victoria's Eco-Research Chair in Environmental Law and Policy examines twenty-five key environmental indicators in ten broad categories: air, water, energy, waste, climate change, ozone depletion, agriculture, transportation, biological diversity, and

miscellaneous issues.¹³ The analysis is based entirely on information gathered, verified, and published biannually by the Organization for Economic Cooperation and Development (OECD). The OECD includes the G7 nations (Canada, the United States, Japan, Germany, France, Great Britain, and Italy), Mexico, Korea, Australia, New Zealand, and nineteen other European nations.¹⁴ Canada's environmental record is compared with the twenty-eight other industrialized nations in the OECD at the time of the study to put our record in context and to determine whether Canada is a leader or a laggard. Canada's performance is also tracked over two decades to accurately determine whether it is improving or worsening.

In the University of Victoria study, Canada's overall ranking is second last, better only than the United States (see Table 1). Canada is not among the five best countries on any of the twenty-five indicators and is among the five worst countries on seventeen of them. Canada is among the three worst countries in the OECD on nine indicators: emissions of greenhouse gases, sulphur dioxide, carbon monoxide, and volatile organic compounds; consumption of water and energy; energy efficiency; volume of timber logged; and generation of nuclear waste. Canada's economy is among the dirtiest and least efficient in the industrialized world, in that we generate much more pollution and use much more energy to produce a given amount of economic output than other OECD countries. For example, Canada uses 33 percent more energy per unit of gross domestic product (GDP) than the United States. Canada's performance on most of the environmental indicators continues to worsen, with increasing water and energy consumption, increases in nuclear and hazardous waste, higher greenhouse gas emissions, higher numbers of endangered species, declining fish populations, higher commercial fertilizer use, more livestock, more timber logged, more motor vehicles, more kilometres travelled by road, and less official development assistance (funds used to promote sustainable development in poor countries).

On a brighter note, two reasons for optimism emerge from the study. First, on ten indicators, Canada's record is improving. Substantial progress has been

Table 1

Canada's environmental ranking, compared to other OECD nations

Environmental indicator	Canada's OECD ranking	
	Per capita	Total
Air pollution		
Sulphur oxides (kilograms)	27th out of 28	27th out of 28
Nitrogen oxides (kilograms)	25th out of 28	25th out of 28
Volatile organic compounds (kilograms)	25th out of 26	25th out of 26
Carbon monoxide (kilograms)	26th out of 27	25th out of 27



◀ Table 1

Environmental indicator	Canada's OECD ranking	
	Per capita	Total
Climate change		
Greenhouse gas emissions (tonnes of CO ₂)	27th out of 29	25th out of 29
Ozone depletion		
Consumption of ozone-depleting substances (kilograms)	13th out of 16	13th out of 16
Water		
Water consumption (cubic metres)	28th out of 29	26th out of 29
Municipal sewage treatment (% of population served)	N/A	9th out of 28
Energy use		
Energy consumption (tonnes of oil equivalent)	27th out of 29	26th out of 29
Energy efficiency (tonnes of oil equivalent/US\$1000 GDP)	N/A	28th out of 29
Waste		
Municipal waste (kilograms)	18th out of 29	18th out of 29
Recycling (% of glass and paper recycled)	N/A	23rd out of 27
Hazardous waste (kilograms)	24th out of 27	23rd out of 27
Nuclear waste (kilograms)	28th out of 28	27th out of 28
Agriculture		
Pesticide use (tonnes of active ingredients)	22nd out of 28	18th out of 28
Fertilizer use (tonnes)	25th out of 28	25th out of 28
Livestock (number of cattle, sheep, goats, and pigs)	16th out of 28	17th out of 28
Biodiversity		
Species at risk (number of species designated)	N/A	7th out of 29
Protected areas (% of land designated)	N/A	13th out of 29
Fisheries (amount caught, kilograms)	20th out of 28	20th out of 28
Forests (volume of forest logged, in cubic metres)	27th out of 29	28th out of 29
Transportation		
Road vehicles (number)	25th out of 29	22nd out of 29
Distance travelled (kilometres)	26th out of 29	24th out of 29
Miscellaneous		
Population (% growth/total population)	26th out of 29	18th out of 29
Official development assistance (% of GDP)	N/A	11th out of 20

Note: Higher ranking (e.g., 1st) for better performance, lower ranking (e.g., 28th) for worse performance.

Source: Boyd (2001a).

made in reducing various kinds of air pollution, improving sewage treatment, reducing municipal waste, increasing recycling, reducing the use of ozone-depleting substances, and creating more protected areas. Modest progress has been made in increasing energy efficiency. There are other issues, not covered by the OECD data, where Canada has also made commendable progress, such as reducing lead emissions and curtailing some forms of water pollution (e.g., releases of dioxins and furans from pulp and paper mills, and chemical discharges from petroleum refineries). Second, the superior progress of other industrialized nations proves that Canada's shortcomings are not due to an absence of viable, practical solutions. Answers to our environmental challenges exist and are being successfully implemented elsewhere, most notably Europe. Sweden, for example, is a northern nation with many similarities to Canada. But on twenty-three out of the twenty-five environmental indicators examined in the OECD comparison, Sweden outperforms Canada.¹⁵

Other Independent Assessments of Canada's Environmental Record

The University of Victoria's study demonstrates that Canada is more accurately described as an environmental straggler than as a star. This assessment of Canada's environmental performance is confirmed by the conclusions of several other respected organizations. In 2000 the World Economic Forum singled out Canada for criticism of our dismal record on energy efficiency (worst among eighteen high-income countries). Canada also trailed many of our industrial competitors on the effectiveness of environmental regulations covering air pollution, water pollution, toxic waste, chemical waste, and genetically modified organisms.¹⁶

The OECD is also highly critical of Canada's environmental record. An OECD report published in 2000 attacked Canada for its "over-use of water," "intensive exploitation of nonrenewable resources," subsidies to polluters, inefficient use of energy, lack of action to address climate change, unsustainable use of natural resources, and unwarranted reliance on voluntary agreements in lieu of enforcing environmental laws.¹⁷ The OECD later noted that on environmental issues Canada has "a tendency to talk rather than act."¹⁸ A 1995 assessment of Canada's environmental performance by the OECD had been equally critical, pointing out many areas where Canada was performing poorly.¹⁹

In 2002 *Redefining Progress* investigated the ecological footprints of 146 nations. The ecological footprint is an innovative tool that measures the area of land required to produce the resources and absorb the waste needed to sustain an individual at a particular standard of living. Canada placed third in the world, with only the United States and United Arab Emirates having larger footprints, that is, greater per capita impacts on the environment. The study estimated that each Canadian had an ecological footprint of 8.8 hectares. In other words, it takes 8.8 hectares of ecologically productive land to generate the resources and assimilate the wastes of the average Canadian. On a global

basis, at today's population of 6.1 billion people, there are approximately 1.7 hectares of productive land available per person, or less than one-fifth of the amount used by Canadians.²⁰

More than sixty audits by Canada's commissioner of the environment and sustainable development and the auditor general identify weaknesses in the federal government's efforts to protect the environment. In 1998 the commissioner criticized the government's lack of action on climate change and protecting biological diversity. In 1999 the commissioner emphasized the gap between the government's commitments and its actions, particularly in the area of pesticides and toxic chemicals. In 2000 the commissioner focused on "persistent problems with the federal government's management of key issues like climate change, toxic substances and biodiversity" and a failure to adequately safeguard Canadians from the health risks posed by smog. In 2001 the commissioner warned that "the continuing rise in Canada's greenhouse gas emissions places the country on a path that is far from sustainable" and expressed alarm about Canada's failure to protect and restore the Great Lakes. In 2002 the commissioner concluded, "Our audit findings this year make me more concerned than ever about the environmental, social and economic legacy we are leaving our children – we are burdening them with a growing sustainable development deficit."²¹ Canada's auditor general has published audits critical of Canadian fisheries management, unacknowledged liabilities from contaminated sites, inadequate control of the transportation of hazardous waste, and the federal government's failure to complete and protect the national parks system.²²

A comprehensive study published in 2001 by the International Development Research Centre, in cooperation with the United Nations, the World Conservation Union, and the Food and Agriculture Organization, ranks Canada very highly on overall quality of life but poorly on environmental sustainability. Canada tied Switzerland for seventh place out of 180 nations on overall quality of life. However, based on an examination of fifty-one environmental indicators, Canada ranked ninety-fourth out of 180 nations.²³

More positive news can be found in the World Economic Forum's Environmental Sustainability Index, a complex rating system "aimed at measuring long-term environmental prospects." The index assesses a nation's *potential* to achieve a sustainable future, not a nation's current performance. Canada ranks fourth out of 142 nations, a testament to our wealth of natural resources, large area, small population, effective health care system, well-educated public, and strong democratic freedoms.²⁴

The foregoing evidence makes the basic facts about Canada's environmental record relatively clear. The good news is that on a number of important environmental issues, Canada's performance is improving, and that Canada has tremendous potential for further progress toward sustainability. The bad news is that Canada is faring poorly in comparison to the rest of the industrialized

world in terms of protecting our environment, and that Canada's record, on the majority of environmental indicators, is getting worse.

Great Expectations, Poor Performance

The values expressed by Canadians dramatically diverge from our performance, as a nation, on environmental issues. This is true not only in terms of the contradiction between our strong environmental ethic, described earlier, and our overall performance, but also on a range of specific issues and concerns. A public opinion poll conducted in 2000 found that 99 percent of Canadians believe reducing air pollution is important.²⁵ Yet according to the OECD, Canada ranks among the worst industrialized nations in causing air pollution.²⁶ The same poll found that 97 percent of Canadians believe it is important to reduce the amount of pesticides in our food, water, and soil. Yet Canada stands alone among OECD countries in failing to collect reliable data on the use of pesticides.²⁷ Ninety-four percent of Canadians polled think Canada should meet its international obligations on climate change. Yet Canada has broken all of its promises to reduce greenhouse gas emissions and is among the three worst OECD nations on this issue.²⁸

The list of contradictions goes on and on. Ensuring clean air and water is viewed as more important than personal tax cuts by over 80 percent of Canadians and more important than corporate tax cuts by over 90 percent of Canadians.²⁹ Yet in December 2000 Canadians reelected a federal government and an official opposition whose top priorities include personal and corporate tax cuts but not environmental protection. Ninety-seven percent of Canadians want the federal government to pass a strong law to protect endangered species and their habitats.³⁰ Yet after promising to do so in 1992, the federal government dragged its heels for a decade before passing a law that many critics, including those within the government, deride as weak (see Chapter 5.2). Canadians believe that Canada's number-one priority in foreign affairs – ahead of peace, exports, and foreign aid – should be protecting the environment.³¹ Most Canadians (62 percent) are concerned that international trade agreements lead to lower environmental standards.³² Yet the federal government continues to pursue further trade liberalization, such as the Free Trade Agreement of the Americas and the General Agreement on Trade in Services, without due regard for the environmental consequences.³³

The Legal System's Role in Environmental Protection

Why is there such a striking gap between the environmental values of Canadians and our environmental performance? Why are greenhouse gas emissions still soaring, numbers of endangered species still rising, consumption of energy and water still growing, and production of hazardous and nuclear waste increasing? On the other hand, how has Canada made strides in reducing the use of

ozone-depleting substances and decreasing releases of certain toxic chemicals like dioxins and furans?

The legal system is central to the answers to these difficult questions. In a constitutional democracy, the legal system is the mechanism through which the values of the people are expressed and our beliefs acted upon. The legal system defines and balances the rights and responsibilities of citizens, businesses, and government, mediating the struggle between defenders of the status quo and advocates of change. Canada's legal system, for the purposes of this book, will be defined broadly to include the institutions and processes that make laws, apply or enforce laws, and interpret laws. These activities are carried out by the legislative (Parliament), executive (cabinet and the bureaucracy), and judicial (courts and other tribunals) branches of government.³⁴

Law refers to a body of rules that govern the activities of individuals, governments, and corporations, rules that are enforced by a sovereign authority. From an environmental perspective, laws establish rules governing our rights to use natural resources and our responsibilities in protecting nature. Canada has many laws, regulations, policies, and institutions intended to protect the environment, at the federal, provincial, and local levels. Most were created in the last three decades, as the need to protect the environment from human despoliation became increasingly clear. Unwritten laws, in the form of social norms and customs, have a complementary role to play in achieving environmental progress. For example, the change in attitudes toward smoking in recent decades, combined with increasingly strict regulations, has significantly diminished smoking in public places.

The authority to enact laws to address environmental problems is defined by Canada's *Constitution Act, 1867*, which divides power between the federal and provincial governments. Although responsibility for the environment is not specifically assigned to either level of government, each has areas of jurisdiction with environmental consequences. The federal government has clear powers over fisheries, international trade, nuclear power, and criminal law, plus broad responsibility for matters of national and international concern. The provinces have jurisdiction over natural resources, property, municipal governments, local and private matters, and most Crown land within their boundaries. Municipal governments are created by provincial governments, and their jurisdiction is limited to areas explicitly identified in provincial legislation. Aboriginal governments have authority by virtue of constitutionally protected rights and powers defined in treaties. Any law that is inconsistent with Canada's Constitution, such as a law passed by a level of government lacking constitutional authority in that subject area, can be struck down by the courts. The uncertainty about constitutional responsibility for environmental protection is one of the most controversial aspects of Canadian environmental law and policy.³⁵

Chapters 2 through 5 examine the laws, regulations, and policies intended to conserve and protect water, air, land, and biological diversity in Canada. These chapters also assess the international context of Canada's environmental laws and policies, including the influence of international environmental and trade agreements. The entire range of laws and policies employed by different levels of government – federal, provincial, local, and Aboriginal – to address environmental problems is evaluated.