

## List of Acronyms and Abbreviations

AQI	Air Quality Index (US)
$C_{10}H_{12}N_2O$	cotinine
CCs	collaborating centres
CCME	Canadian Council of Ministers of the Environment
CEC	Commission for Environmental Cooperation of North America
CEPA	Canadian Environmental Protection Act
CEQ	Council on Environmental Quality (US)
CESCC	Canadian Endangered Species Conservation Council
CFCs	chlorofluorocarbons
CISE	Canadian Information System for the Environment
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
CRP	Conservation Reserve Program (US)
CSA	Canadian Standards Association
CSD	United Nations Commission for Sustainable Development
DDE	dichlorodiphenyldichloroethylene
DDT	dichlorodiphenyltrichloroethane
DESA	United Nations Department for Economic and Social Affairs
dkl	decalitre
DPSEEA	driving force, pressure, state, exposure, effect, action
DPSIR	driving force, pressure, state, impact, response
DSR	driving force-state-response
EID	environmental indicators database
EJ	Exajoules
EPA	Environmental Protection Agency (US)
ESDI	Environment and Sustainable Development Indicators
ESI	Environmental Sustainability Index
FSC	Forest Stewardship Council
ft	feet
g	gram
GAO	United States Government Accountability Office
GBIF	Global Biodiversity Information Facility
GDP	gross domestic product
GEO	Global Environment Outlook
GEOSS	Global Earth Observation System of Systems
GHG	Greenhouse gases
Gl	gallon
GLWQA	Great Lakes Water Quality Agreement
GNP	gross national product
GPA	United Nations Global Programme of Action for the Protection of the Marine Environment from Land-based Activities
GPAC	Global Programme of Action Coalition for the Gulf of Maine
ha	hectare
HCFCs	hydrochloroflorocarbons
Hg	mercury

IEA	International Energy Agency
IUCN	World Conservation Union (International Union for the Conservation of Nature and Natural Resources)
K	Potassium
km	kilometre
l	litre
lbs	pounds
m <sup>3</sup>	cubic metre
MDGs	Millennium Development Goals
MEME	multiple exposures–multiple effects
mg	milligram
MSW	municipal solid waste
N <sub>2</sub>	nitrogen
NAAEC	North American Agreement on Environmental Cooperation
NAAQO	National Ambient Air Quality Objectives (Canada)
NAAQS	National Ambient Air Quality Standards (US)
NAFTA	North American Free Trade Agreement
NATS	North American Transportation Statistics Interchange
NEON	National Ecological Observatory Network (US)
NGO	Non-governmental organization
NIRO	National Indicators and Reporting Office (Canada)
NO <sub>x</sub>	nitrogen oxides
NO <sub>2</sub>	nitrogen dioxide
NO <sub>3</sub>	nitrate
NOAA	National Oceanic and Atmospheric Administration (US)
NPL	Superfund National Priorities List (US)
NPRI	National Pollutant Release Inventory (Canada)
NRDC	Natural Resources Defense Council
NRTEE	National Round Table on the Environment and the Economy (Canada)
O <sub>3</sub>	ozone
ODA	official development assistance
ODP	ozone-depleting potential
ODS	ozone depleting substances
OECD	Organization for Economic Co-operation and Development
P	phosphorous
Pb	lead
PBTs	persistent bioaccumulative toxics
PCB	polychlorinated biphenyl
PCSD	President's Council on Sustainable Development (US)
PM	particulate matter
PM <sub>10</sub>	particulate matter with an aerodynamic diameter less than 101micrometer
PM <sub>2.5</sub>	particulate matter with an aerodynamic diameter less than 2.51micrometer (fine particulate)
POPs	persistent organic pollutants
ppb	parts per billion
PPP	purchasing power parities
PRTR	Pollutant Release and Transfer Register

PSR	pressure-state-response
RCRA	Resource Conservation and Recovery Act (US)
Rn	radon
RPA	Resource Planning Act (US)
SD	sustainable development
SDI Group	Interagency Working Group on Sustainable Development Indicators (US)
SFI	Sustainable Forestry Initiative
SIDA	Swedish International Development Agency
SO <sub>x</sub>	sulphur oxides
SO <sub>2</sub>	sulphur dioxide
SO <sub>42</sub>	sulphate
SOE	State-of-the-environment
SOLEC	State of the Lakes Ecosystem Conference
SUV	sports utility vehicle
TEEI	transportation, energy, and environment indicators
TRI	Toxics Release Inventory (US)
µg	microgram
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
USLE	universal soil loss equation
VMT	vehicle miles travelled
VOC	volatile organic compounds
WCED	World Commission on Environment and Development
WHO	World Health Organization
WRI	World Resources Institute
WSSD	World Summit on Sustainable Development

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Appendix 1: Table 2—Comparative table of Canadian and US environmental indicators

NRTEE (Canada)		Environment Canada	United States EPA	The Heinz Center (USA)	Common Indicators
<i>Environment and Sustainable Development Indicators for Canada</i>	<i>Environmental Signals: Canada's National Environmental Indicators Series</i>	<i>Draft Report on the Environment 2003</i>	<i>The State of the Nation's Ecosystems</i>	<i>Generic indicators common to both countries</i>	
<b>Drivers</b>	<b>Drivers</b>	<b>Drivers</b>	<b>Drivers</b>	<b>Drivers</b>	
	% change in population, GDP per capita and energy use per capita since 1990 (to 2000)	% change in population, GDP, energy consumption, VMT, and aggregate emissions of criteria air pollutants since 1970 (to 2001)	% change in population, GDP per capita and energy use	% change in population, GDP per capita and energy use	
<b>Energy and Transportation</b>	<b>Energy and Transportation</b>	<b>Energy and Transportation</b>	<b>Energy and Transportation</b>	<b>Energy and Transportation</b>	
<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>	
	primary energy consumption (exajoules [EJ]), 1958–2000				
	fossil fuel consumption (total, crude oil, natural gas, coal) (EJ), 1958–2000				
	secondary energy use (EJ), with actual use and energy saved through improved efficiency, 1990–2000				
	passenger travel (car, plane, bus, train), (thousand million passenger-km), 1976–2000				
	automobiles, vans, and light trucks fossil fuel use, (thousand millions litres of gasoline), 1950–1998				trend in gasoline use by motor vehicles
	urban automobile and transit use (thousand millions passenger-km), 1976–2000				
<i>State</i>	<i>State</i>	<i>State</i>	<i>State</i>	<i>State</i>	
<i>Impact</i>	<i>Impact</i>	<i>Impact</i>	<i>Impact</i>	<i>Impact</i>	
<i>Response</i>	<i>Response</i>	<i>Response</i>	<i>Response</i>	<i>Response</i>	
	new vehicles fuel efficiency (l/10 <sup>2</sup> km), 1977–2001				

NRTEE (Canada)	Environment Canada	United States EPA	The Heinz Center (USA)	Common Indicators
<i>Environment and Sustainable Development Indicators for Canada</i>	<i>Environmental Signals: Canada's National Environmental Indicators Series</i>	<i>Draft Report on the Environment 2003</i>	<i>The State of the Nation's Ecosystems</i>	<i>Generic indicators common to both countries</i>
<b>Pollution Issues</b>	<b>Pollution Issues</b>	<b>Pollution Issues</b>	<b>Pollution Issues</b>	<b>Pollution Issues</b>
<b>Climate Change</b>	<b>Climate Change</b>	<b>Climate Change</b>	<b>Climate Change</b>	<b>Climate Change</b>
<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>
total GHG emissions (gigatonnes CO <sub>2</sub> equivalents), 1980–2000	total GHG emissions (gigatonnes CO <sub>2</sub> equivalent), 1980–2000, with Kyoto benchmark			
<i>State</i>	<i>State</i>	<i>State</i>	<i>State</i>	<i>State</i>
<i>Impact</i>	mean Canadian temperature variation, 1961–1990 (5-yr avgs)			
<i>Response</i>	# weather-related disasters, 1900–1999			
<b>O<sub>3</sub> Layer</b>	<b>O<sub>3</sub> Layer</b>	<b>O<sub>3</sub> Layer</b>	<b>O<sub>3</sub> Layer</b>	<b>O<sub>3</sub> Layer</b>
<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>
	new supplies: O <sub>3</sub> -depleting substances (CFCs and all ODSs) (kilotonnes, CFC-11 equivalent), 1979–2000	US production of selected ODSs (10 <sup>3</sup> metric tonnes of CFC-11 equivalent), 1958–1993		trends in ODS production
<i>State</i>	<i>State:</i>	<i>State</i>	<i>State</i>	<i>State</i>
<i>Impact</i>	<i>Impact</i>	<i>Impact</i>	<i>Impact</i>	<i>Impact</i>
<i>Response</i>	mean annual O <sub>3</sub> level over Canada (Dobson units*), 1957–2001	O <sub>3</sub> levels over North America (Dobson units), 1979 and 1994		trend in O <sub>3</sub> levels over North America
<b>Air Quality</b>	<b>Air Quality</b>	<b>Air Quality</b>	<b>Air Quality</b>	<b>Air Quality</b>
<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>
	SO <sub>2</sub> emissions for total Canada and eastern Canada (10 <sup>6</sup> tonnes), 1980–2000, with targets	sectoral SO <sub>2</sub> emissions (10 <sup>3</sup> short tonnes), 1982–2001		trend in criteria pollutants emissions

\*defined as thickness of 1 mm of ozone at 0°C at sea level pressure

NRTEE (Canada)		Environment Canada		United States EPA		The Heinz Center (USA)		Common Indicators	
<i>Environment and Sustainable Development Indicators for Canada</i>	<i>Environmental Signals: Canada's National Environmental Indicators Series</i>	<i>Draft Report on the Environment 2003</i>	<i>The State of the Nation's Ecosystems</i>	<i>Generic indicators common to both countries</i>					
	NO <sub>x</sub> emissions (10 <sup>6</sup> tonnes), 1980–2000	sectoral NO <sub>x</sub> emissions (10 <sup>6</sup> short tonnes), 1982–2001							
	non-methane VOC emissions from all sources (kilotonnes), 1980–2000	sectoral VOC emissions (10 <sup>3</sup> short tonnes), 1982–2001							
		sectoral, direct PM <sub>10</sub> emissions (10 <sup>3</sup> short tonnes), 1985–2001							
		sectoral direct PM <sub>2.5</sub> emissions (10 <sup>3</sup> short tonnes), 1992–2001							
		sectoral Pb emissions (10 <sup>3</sup> short tonnes), 1982–2001							
		criteria pollutants aggregate emissions change (%) compared to growth measures, 1970–2000							
		10 <sup>8</sup> toxic air pollutants: national air toxics emissions (10 <sup>6</sup> tonnes/day) 1990–1993, 1996							
<i>State</i>	<i>State</i>	<i>State</i>	<i>State</i>						<i>State</i>
	total suspended levels PM, NO <sub>2</sub> , SO <sub>2</sub> , and CO (% maximum acceptable levels) 1980–2000	annual average PM <sub>2.5</sub> concentrations, 6 categories (µg/m <sup>3</sup> ), 2001 (map)							average annual PM <sub>2.5</sub> concentrations
	average annual ambient PM <sub>2.5</sub> levels (5 cities, µg/m <sup>3</sup> ), 1998, 1999, 2000	% air pollution monitoring stations (urban and suburban areas) with O <sub>3</sub> exceeding 8-hour mean concentrations (4 ranges) 1990–2002							
	national ambient levels: ground level O <sub>3</sub> (ppb), 1990–2000	8-hour O <sub>3</sub> regional concentrations (ppm), 1982–2001 (map)							trend in O <sub>3</sub> concentrations, by region
	ground-level O <sub>3</sub> mean concentrations (ppb) for eastern and western provinces, 1982–2000, with Canada-wide standard as benchmark	air monitoring stations exceeding 8-hour O <sub>3</sub> threshold for <4 days, 2002 and >4 days, 2002 (2 maps)							



NRTEE (Canada)	Environment Canada	United States EPA	The Heinz Center (USA)	Common Indicators
<i>Environment and Sustainable Development Indicators for Canada</i>	<i>Environmental Signals: Canada's National Environmental Indicators Series</i>	<i>Draft Report on the Environment 2003</i>	<i>The State of the Nation's Ecosystems</i>	<i>Generic indicators common to both countries</i>
<i>Impact</i>	<i>Impact</i>	percent reduction in concentration of 6 criteria air pollutants, 1982–2001 compared to 1992–2001	<i>Impact</i>	<i>Impact</i>
mean daily 8-hr max O <sub>3</sub> exposure by population (ppb), 1986–2000		# and % days w/ Air Quality Index (AQI) greater than 100, 1988–2001		population exposed to 8-hr O <sub>3</sub> above acceptable levels
<i>Response</i>	<i>Response</i>	Pb (g/dkl) in blood of children 5 and under, 1976–1980, 1988–1991, 1992–1994, 1999–2000	<i>Response</i>	<i>Response</i>
<b>Acid Deposition</b>	<b>Acid Deposition</b>	<b>Acid Deposition</b>	<b>Acid Deposition</b>	<b>Acid Deposition</b>
<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>
Canada and eastern Canada total SO <sub>2</sub> emissions (10 <sup>6</sup> tonnes), 1980–2000, with targets	Canada and eastern Canada total SO <sub>2</sub> emissions (10 <sup>6</sup> tonnes), 1980–2000, with targets	sectoral SO <sub>2</sub> emissions (10 <sup>3</sup> short tonnes), 1982–2001		
NO <sub>x</sub> emissions (10 <sup>6</sup> tonnes), 1980–2000	NO <sub>x</sub> emissions (10 <sup>6</sup> tonnes), 1980–2000	sectoral NO <sub>x</sub> emissions (10 <sup>3</sup> short tonnes), 1982–2001		
		SO <sub>2</sub> power plant emissions (10 <sup>6</sup> tonnes), 1980–2001		
		NO <sub>x</sub> power plant emissions (10 <sup>6</sup> tonnes), 1990–2001		
<i>State</i>	<i>State</i>	<i>State</i>	<i>State</i>	<i>State</i>
<i>Impact</i>	<i>Impact</i>	<i>Impact</i>	<i>Impact</i>	<i>Impact</i>
	lake SO <sub>4</sub> <sup>2-</sup> level trends (% lakes studied in 3 regions), 1981–1997			
	lake acidity trends 1981–1997 (% of lakes studied)			

NRTEE (Canada)		Environment Canada		United States EPA		The Heinz Center (USA)		Common Indicators	
<i>Environment and Sustainable Development Indicators for Canada</i>	<i>Environmental Signals: Canada's National Environmental Indicators Series</i>	<i>Draft Report on the Environment 2003</i>	<i>The State of the Nation's Ecosystems</i>	<i>Generic indicators common to both countries</i>					
	wet SO <sub>4</sub> deposition 4-year mean (kg/ha, 7 categories), 1980–1983 compared to 1996–2000 (map of eastern North America)	wet SO <sub>4</sub> deposition (kg/ha), 1989–1991 compared to 1999–2001 (map of US)		change in wet SO <sub>4</sub> deposition distribution					
	wet NO <sub>3</sub> deposition (kg/ha, 7 categories) 4-year mean, 1980–1983 compared to 1996–2000 (map of eastern North America)	wet NO <sub>3</sub> deposition (kg/ha), 1989–1991 compared to 1999–2001 (map of US)		change in wet NO <sub>3</sub> deposition distribution					
<i>Response</i>	<i>Response</i>	<i>Response</i>	<i>Response</i>	<i>Response</i>					
<b>Indoor Air Quality</b>	<b>Indoor Air Quality</b>	<b>Indoor Air Quality</b>	<b>Indoor Air Quality</b>	<b>Indoor Air Quality</b>					
<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>					
<i>State</i>	<i>State</i>	<i>State</i>	<i>State</i>	<i>State</i>					
<i>Impact</i>	<i>Impact</i>	<i>Impact</i>	<i>Impact</i>	<i>Impact</i>					
		% homes w/ young children exposed to environmental tobacco smoke, 1986–1998							
		C <sub>10</sub> H <sub>12</sub> N <sub>2</sub> O (µg/ml) in blood of children age 5 and under, 1990–1991 and 1999–2000							
		# homes and % national housing units above EPA Rn action levels, 1991							
<i>Response</i>	<i>Response</i>	<i>Response</i>	<i>Response</i>	<i>Response</i>					
<b>Toxic Substances</b>	<b>Toxic Substances</b>	<b>Toxic Substances</b>	<b>Toxic Substances</b>	<b>Toxic Substances</b>					
<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>					
	% emissions change (15 toxic substances w/ matched data (NPRU), 1995–2000	total Toxics Release Inventory (TRI) releases across industry (short tonnes), 1998, 1999, 2000; yearly totals; and change by industry 1998–2000							
	Hg emissions (10 <sup>3</sup> kilograms), 1990–2000								

NRTEE (Canada)	Environment Canada	United States EPA	The Heinz Center (USA)	Common Indicators
<i>Environment and Sustainable Development Indicators for Canada</i>	<i>Environmental Signals: Canada's National Environmental Indicators Series</i>	<i>Draft Report on the Environment 2003</i>	<i>The State of the Nation's Ecosystems</i>	<i>Generic indicators common to both countries</i>
<i>State</i>	<i>State</i>	total Toxics Release Inventory (TRI) releases by industry (%), 2000 <i>State</i>	<i>State</i>	<i>State</i>
<i>Impact</i>	<i>Impact</i>	trends in toxic chemicals (energy recovery, quantity released, quantity treated, recycled), 1998–2000 (short tonnes) <i>Impact</i>	<i>Impact</i>	<i>Impact</i>
<i>Response</i>	<i>Response</i>	PCBs and DDT Great Lakes atmospheric deposition (kg/yr), 1992–1998 Great Lakes fish tissue PCBs (ppm), 1972–2000 <i>Response</i>	<i>Response</i>	<i>Response</i>
<i>Waste Pressure</i>	<i>Waste Pressure</i>	17 waste minimization priority chemicals (W/MPC) releases (10 <sup>6</sup> lbs), 1991–1998 <b>Waste</b> <i>Pressure</i>	<b>Waste</b> <i>Pressure</i>	<b>Waste</b> <i>Pressure</i>
		municipal solid waste (MSW) generation rates (total tonnes and per capita lbs/day), 1960, 1970, 1980, 1990, 1995, 2000 total amount radioactive waste generated, by type and unit, 2000 <i>State</i>	<i>State</i>	<i>State</i>
		composition of total municipal solid waste generated (%), 2000 <i>State</i>	<i>State</i>	<i>State</i>

NRTEE (Canada)	Environment Canada	United States EPA	The Heinz Center (USA)	Common Indicators
<p><i>Environment and Sustainable Development Indicators for Canada</i></p> <p><i>Impact</i></p>	<p><i>Environmental Signals: Canada's National Environmental Indicators Series</i></p> <p><i>Impact</i></p>	<p><i>Draft Report on the Environment 2003</i></p> <p><i>Impact</i></p>	<p><i>The State of the Nation's Ecosystems</i></p> <p><i>Impact</i></p>	<p><i>Generic indicators common to both countries</i></p> <p><i>Impact</i></p>
		<p># and location of MSW landfills in 4 regions, 2000</p>		
		<p># and location of RCRA hazardous waste management facilities, by EPA region, 1999</p>		
		<p># and location of Superfund National Priorities List (NPL) sites by status and milestone, 1990–2002</p>		
<p><i>Response</i></p>	<p><i>Response</i></p>	<p><i>Response</i></p>	<p><i>Response</i></p>	<p><i>Response</i></p>
	<p>total non-hazardous solid waste disposal and recycling/reuse by sector (megatonnes), 1996, 1998, 2000</p>	<p>municipal solid waste (MSW) management (composting, recycling, combustion, landfill), (megatonnes), 1960–2000</p>		<p>trends in MSW management</p>
	<p>per capita non-hazardous solid waste disposal and recycling/reuse (kg/person), 1994, 1996, 1998, 2000</p>	<p>source reduction of MSW (megatonnes), 1992–2000</p> <p>quantity of RCRA hazardous waste generated (% by region) and managed (% by method)</p>		
		<p># and location of RCRA corrective action sites</p>		
<p><b>Natural Resources and Services</b></p>	<p><b>Natural Resources and Services</b></p>	<p><b>Natural Resources and Services</b></p>	<p><b>Natural Resources and Services</b></p>	<p><b>Natural Resources and Services</b></p>
<p><b>Land Use</b></p>	<p><b>Land Use</b></p>	<p><b>Land Use</b></p>	<p><b>Land Use</b></p>	<p><b>Land Use</b></p>
<p><i>Pressure</i></p>	<p><i>Pressure</i></p>	<p><i>Pressure</i></p>	<p><i>Pressure</i></p>	<p><i>Pressure</i></p>
<p><i>State</i></p>	<p><i>State</i></p>	<p><i>State</i></p>	<p><i>State</i></p>	<p><i>State</i></p>
	<p>long-term (pre-settlement)</p>	<p>long-term (pre-settlement) and recent trends in ecosystem extent (% of all lands in 4 types), 1950s–1990s</p>	<p>and recent trends in ecosystem extent (% of all lands in 4 types), 1950s–1990s</p>	
			<p>long-term (pre-settlement) extent (% of total land area) and 1992 extent (acres) of 6 ecosystem types, with changes from 1950s</p>	

NRTEE (Canada)	Environment Canada	United States EPA	The Heinz Center (USA)	Common Indicators
<i>Environment and Sustainable Development Indicators for Canada</i>	<i>Environmental Signals: Canada's National Environmental Indicators Series</i>	<i>Draft Report on the Environment 2003</i>	<i>The State of the Nation's Ecosystems</i>	<i>Generic indicators common to both countries</i>
			change in ecosystem area compared to 1955 (Macres)	
			land cover (6 categories) and ocean depth (6 categories) (map)	
		bird species (types of birds), as characteristics of landscape composition, and pattern, as an indicator of landscape condition, 1995–1996	natural ecosystem services	
		terrestrial plant growth index, by ecosystem, 1989–2000		
			fragmentation of landscape pattern (national level)	
<i>Impact</i>	<i>Impact</i>	<i>Impact</i>	<i>Impact</i>	<i>Impact</i>
			% of land area and stream and coastline length, according to the level of disturbance, management, or physical alteration	
<i>Response</i>	<i>Response</i>	<i>Response</i>	<i>Response</i>	<i>Response</i>
<b>Freshwater Resources</b>	<b>Freshwater Resources</b>	<b>Freshwater Resources</b>	<b>Freshwater Resources</b>	<b>Freshwater Resources</b>
<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>
		freshwater withdrawals: sectoral sources (10 <sup>9</sup> gallons/day), 1960–1995	total freshwater withdrawals for irrigation, thermoelectric, industrial, municipal and rural use (10 <sup>9</sup> gallons [Bg]/day), 1960–1995	trends in municipal water extraction
	daily municipal water use/capita (l/person) 1983–1999			
	total daily municipal water use (Gl/day), 1983–1999			

NRTEE (Canada)	Environment Canada	United States EPA	The Heinz Center (USA)	Common Indicators
<i>Environment and Sustainable Development Indicators for Canada</i>	<i>Environmental Signals: Canada's National Environmental Indicators Series</i>	<i>Draft Report on the Environment 2003</i>	<i>The State of the Nation's Ecosystems</i>	<i>Generic indicators common to both countries</i>
		water abstractions/irrigated land area (m <sup>3</sup> /ha/year), 1997		
		cultivated land: % irrigated areas share, 1997, and % change since 1980		
		sources of acidity (watershed sources, organic or acid deposition) in acid-sensitive lakes and streams, 1984–1986		
		Hg, dioxin, PCBs, PBTs toxic release to water, 2000		
<i>State</i>	<i>State</i>	<i>State</i>	<i>State</i>	<i>State</i>
		extent of ponds, lakes, and reservoirs, excluding the Great Lakes (Macres), 1950s–1990s	extent of ponds, lakes, and reservoirs, excluding the Great Lakes (Macres), 1950s–1990s	
		est. streams and rivers mileage, 1997–2002	length of small, medium, and large streams and rivers	
		extent of submerged aquatic vegetation in estuarine systems (acres)	riparian land cover of streams and rivers (% riparian miles, each of 3 land use categories), 1990's	
			% of lake and reservoir area with low-, medium-, and high-clarity water	
			stream habitat quality	
<i>Impact</i>	<i>Impact</i>	<i>Impact</i>	<i>Impact</i>	<i>Impact</i>
freshwater quality index				
			% stream, pond, lake, and riparian zone miles and wetland acres that have been altered	
			groundwater levels	

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<i>Environment and Sustainable Development Indicators for Canada</i>	<i>Environmental Signals: Canada's National Environmental Indicators Series</i>	<i>Draft Report on the Environment 2003</i>	<i>The State of the Nation's Ecosystems</i>	<i>Generic indicators common to both countries</i>
		NO <sub>3</sub> - levels (mg/l) in streams of forests, grasslands and shrublands, farmlands, urban and suburban ecosystems, 1992–1998		
		NO <sub>3</sub> - load carried by 4 major rivers (kilotonnes/yr), 1950s–2000	NO <sub>3</sub> - load carried by 4 major rivers (kilotonnes/year), 1950s–2000	
		total N yield (lbs/acre/year) from major watersheds (6 categories), 1996–1999 (map)	total N yield (lbs/acre/year) from major watersheds (6 categories), 1996–1999 (map)	
		annual mercury wet deposition (µg/m <sup>2</sup> ), 2001 (map)		
		number of contaminants in streams and ground water (% of sites, 3 categories), 1992–1998	number of contaminants in streams, ground water, and streambed sediment (% of sites, 3 categories), 1992–1998	
		summary of detections of 1 or more pesticides in streams and ground water (frequency of detection as % of samples), 1992–1998		
		watersheds in sediment quality inventory (1980–1999) containing areas of particular concern (APCs) (map)		
		% tested sites (large rivers) w/ total P concentrations (4 ranges ppb) 1991–1996		
			% all lakes with indicated total P concentration (4 ranges ppb)	
			% urban/suburban stream sites w/ detected number of contaminants (3 categories), 1992–1998	

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<i>Environment and Sustainable Development Indicators for Canada</i>	<i>Environmental Signals: Canada's National Environmental Indicators Series</i>	<i>Draft Report on the Environment 2003</i>	<i>The State of the Nation's Ecosystems</i>	<i>Generic indicators common to both countries</i>
			% stream sites exceeding # human health and aquatic life standards or guidelines (3 categories), 1992–1998	
			% groundwater sites exceeding # human health standards or guidelines (3 categories), 1992–1998	
			streambed sediment: % stream sites exceeding # aquatic life standards or guidelines (3 categories), 1992–1998	
			% urban/suburban stream sites w/ chemical contaminant concentrations above aquatic and human health standards and guidelines, 1992–1998	
		animal mortality events (#/5yrs, regional), 1985–1989, 1990–1994, 1995–1999	animal mortality events (#/5yrs, regional), 1985–1989, 1990–1994, 1995–1999, and by region (6)	
		tropic state index for northeast lakes, 1991–1994		
	% municipal population on sewers with 2ndary and/or 3tiary treatment, 1983–1999			
	total estimated P loadings to waters from municipal wastewater treatment plants (tonnes/year)			
		# reported waterborne disease outbreaks (#/yr) associated with drinking water (type of water system), 1971–2000	outbreaks (#/yr) attributed to waterborne disease-causing organisms (drinking water or recreational contact), 1970s to 2000	



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<i>Environment and Sustainable Development Indicators for Canada</i>	<i>Environmental Signals: Canada's National Environmental Indicators Series</i>	<i>Draft Report on the Environment 2003</i>	<i>The State of the Nation's Ecosystems</i>	<i>Generic indicators common to both countries</i>
			% gauged streams/rivers w/ major, moderate, and minimal low flow and high flow changes, 1970s, 1980s, and 1990s, against 1930–1949 reference period	
			% gauged streams/rivers w/ low and high flows increase, decrease, or timing, 1970s, 1980s, 1990s, against 1930–1949 reference period	
<i>Response</i>	<i>Response</i>	<i>Response</i>	<i>Response</i>	<i>Response</i>
		population (total and %) served by community water systems w/ no reported national health-based standards violations, 1993–2002		
<b>Wetlands</b>	<b>Wetlands</b>	<b>Wetlands</b>	<b>Wetlands</b>	<b>Wetlands</b>
<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>
<i>State</i>	<i>State</i>	<i>State</i>	<i>State</i>	<i>State</i>
% wetland area (5 categories), 1986 (distribution map)	% wetlands area, 1986 (distribution map)	est. wetland extent (acres), 1977–1982 and 1997–2002	freshwater wetlands (% land area), 1950–2000	trend in % land area in wetlands
			extent of freshwater wetlands (Ma), 1950s–1990s, and historic total (1780)	
			Atlantic and Gulf Coasts coastal vegetated wetlands (Ma), 1950–2000	
		altered freshwater ecosystems trends in selected freshwater wetlands (acres), 1954–1997		
		regional non-federal wetland losses and gains and reasons for conversion (%), 1992–1997 (map)		

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<i>Environment and Sustainable Development Indicators for Canada</i>	<i>Environmental Signals: Canada's National Environmental Indicators Series</i>	<i>Draft Report on the Environment 2003</i>	<i>The State of the Nation's Ecosystems</i>	<i>Generic indicators common to both countries</i>
<i>Impact</i>	<i>Impact</i>	average annual wetland loss (acres), 1954–1974, 1974–1983, 1986–1997 <i>Impact</i>	<i>Impact</i>	<i>Impact</i>
<i>Response</i>	<i>Response</i>	<i>Response</i>	<i>Response</i>	<i>Response</i>
<b>Coastal Resources</b>	<b>Coastal Resources</b>	<b>Coastal Resources</b>	<b>Coastal Resources</b>	<b>Coastal Resources</b>
<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>
<i>State</i>	<i>State</i>	<i>State</i>	<i>State</i>	<i>State</i>
		est. estuarine surface area (acres) and coastline (miles), 1996–1998		
		coastal living habitats extent (10 <sup>6</sup> acres), 1950s–1990s	coastal living habitats extent (10 <sup>6</sup> acres), 1950s–1990s	
		% of total regional shoreline, in types of coastal shoreline, by region, 2000	% of total regional shoreline in types of coastal shoreline by region, 2000	
		% coastal areas where benthic communities are in good, fair, or poor condition, in Mid-Atlantic, South Atlantic and Gulf of Mexico, 2000	% ocean bottom area where benthic communities are undegraded, moderate, or degraded, by region, 1990–1997 and 1999–2000	
		water clarity: % estuarine area with good, fair, or poor light penetration, 1990–1997		
		estuarine area with poor, fair, or good dissolved oxygen conditions, 2000	% estuarine and coastal areas by level of dissolved oxygen	
		% Mid-Atlantic estuarine areas with low, intermediate, or high total organic carbon content in sediments, 1997–1998		
		chlorophyll concentrations (ppb) in 9 ocean regions, 1998–2000	chlorophyll concentrations (ppb) in 9 ocean regions, 1995–2000	

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<i>Environment and Sustainable Development Indicators for Canada</i>	<i>Environmental Signals: Canada's National Environmental Indicators Series</i>	<i>Draft Report on the Environment 2003</i>	<i>The State of the Nation's Ecosystems</i>	<i>Generic indicators common to both countries</i>
		% estuaries w/ high, moderate, or low eutrophic condition levels, 1998	% estuaries with high, moderate, and low chlorophyll concentrations	
<i>Impact</i>	<i>Impact</i>	<i>Impact</i>	<i>Impact</i>	<i>Impact</i>
		sediment enrichment (% area) by metals, pesticides, and PCBs due to human sources in estuaries of 5 regions, 1990–1997	sediment contamination of ocean	
			coastal sediment contamination (% area exceeding indicated # guidelines) in estuaries of 5 regions, 1990–1997 and 1999–2000 (3 categories)	
			coastal sediment in estuaries (% area) exceeding # of guidelines (3 categories) for aquatic life, 1990–1997 and 1999–2000	
			sea surface temperature change (Western and Eastern regions, against 14-yr average), 1985–2000	
		reported sources of pollution (%) that resulted in beach closings or advisories, 2001		
		number of beach days that beaches are closed or under advisory, 2001	% “beach-mile-days” affected by various levels of <i>Enterococcus</i>	
		# unusual marine mortalities, 1992–2001	# unusual marine mortalities, 1992–2001	
			# harmful algal blooms of low, medium or high intensity	
<i>Response</i>	<i>Response</i>	<i>Response</i>	<i>Response</i>	<i>Response</i>
			coastal erosion management	

NRTEE (Canada)	Environment Canada	United States EPA	The Heinz Center (USA)	Common Indicators
<i>Environment and Sustainable Development Indicators for Canada</i>	<i>Environmental Signals: Canada's National Environmental Indicators Series</i>	<i>Draft Report on the Environment 2003</i>	<i>The State of the Nation's Ecosystems</i>	<i>Generic indicators common to both countries</i>
<b>Fish Resources</b>	<b>Fish Resources</b>	<b>Fish Resources</b>	<b>Fish Resources</b>	<b>Fish Resources</b>
<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>
<i>State</i>	<i>State</i>	<i>State</i>	<i>State</i>	<i>State</i>
<i>Impact</i>	<i>Impact</i>	<i>Impact</i>	<i>Impact</i>	<i>Impact</i>
		occurrence (% of fish samples) of contaminants (3 categories) in fish tissue, 1992–1998	% fish stocks w/ known status (increasing or decreasing volume), by region, 1981–1999	occurrence (% of fish samples) of contaminants (3 categories) in fish tissue, 1992–1998
		watersheds w/ fish tissue concentrations exceeding health-based national water quality Hg criteria, 2001 (map)	% commercially important fish stocks w/ known status (increasing or decreasing volume), by region, 1981–1999	concentration of PCBs, mercury, and DDT in edible tissue of seafood from coastal waters
		watersheds with fish tissue concentrations exceeding health-based national water quality PCBs criteria, 2001 (map)	commercial fish and shellfish landings by region (megatonnes) 1950–2000	
		fish abnormalities (% fish examined), 2001		
<i>Response</i>	<i>Response</i>	<i>Response</i>	<i>Response</i>	<i>Response</i>
		% river (miles) and lake (acres) under fish consumption advisory, 1993–2001		

NRTEE (Canada)		Environment Canada		United States EPA		The Heinz Center (USA)		Common Indicators	
<i>Environment and Sustainable Development Indicators for Canada</i>	<i>Environmental Signals: Canada's National Environmental Indicators Series</i>	<i>Draft Report on the Environment 2003</i>	<i>The State of the Nation's Ecosystems</i>						<i>Generic indicators common to both countries</i>
<b>Forests</b> <i>Pressure</i>	<b>Forests</b> <i>Pressure</i>	<b>Forests</b> <i>Pressure</i>	<b>Forests</b> <i>Pressure</i>	<b>Forests</b> <i>Pressure</i>	<b>Forests</b> <i>Pressure</i>	<b>Forests</b> <i>Pressure</i>	<b>Forests</b> <i>Pressure</i>	<b>Forests</b> <i>Pressure</i>	
	total area harvested (kha), 1950–1998	total area harvested (kha), 1950–1998	total area harvested (kha), 1950–1998	timber harvest (by primaryproduct category and by region, Bft <sup>3</sup> ), 1950–2002	timber harvest (by primaryproduct category and by region, Bft <sup>3</sup> ), 1950–2002	timber harvest (by primaryproduct category and by region, Bft <sup>3</sup> ), 1950–2002	timber harvest (by primaryproduct category and by region, Bft <sup>3</sup> ), 1950–2002	timber harvest (by primaryproduct category and by region, Bft <sup>3</sup> ), 1950–2002	trend in timber harvest
				owner group (public/private) timber removals (thousand millions square feet [Bft <sup>2</sup> ]), various years from 1952 to 2001	owner group (public/private) timber removals (thousand millions square feet [Bft <sup>2</sup> ]), various years from 1952 to 2001	owner group (public/private) timber removals (thousand millions square feet [Bft <sup>2</sup> ]), various years from 1952 to 2001	owner group (public/private) timber removals (thousand millions square feet [Bft <sup>2</sup> ]), various years from 1952 to 2001	owner group (public/private) timber removals (thousand millions square feet [Bft <sup>2</sup> ]), various years from 1952 to 2001	
<i>State</i>	<i>State</i>	<i>State</i>	<i>State</i>	<i>State</i>	<i>State</i>	<i>State</i>	<i>State</i>	<i>State</i>	<i>State</i>
forest crown closure (each 10 <sup>2</sup> ha), from satellite images, 1998 (map)				forest lands acreage est., 1977–1982 and 1997–2002	forest lands acreage est., 1977–1982 and 1997–2002	forest lands acreage est., 1977–1982 and 1997–2002	forest lands acreage est., 1977–1982 and 1997–2002	forest lands acreage est., 1977–1982 and 1997–2002	trend in forest cover
total area of each of 12 ecosystems with crown closure over 10%, 1998				trends in forest types (increasing or decreasing in area), by region (Western, Eastern), 1963–1997	trends in forest types (increasing or decreasing in area), by region (Western, Eastern), 1963–1997	trends in forest types (increasing or decreasing in area), by region (Western, Eastern), 1963–1997	trends in forest types (increasing or decreasing in area), by region (Western, Eastern), 1963–1997	trends in forest types (increasing or decreasing in area), by region (Western, Eastern), 1963–1997	
				acres of forest land ownership (private and public) by region (4 regions), 2001	acres of forest land ownership (private and public) by region (4 regions), 2001	acres of forest land ownership (private and public) by region (4 regions), 2001	acres of forest land ownership (private and public) by region (4 regions), 2001	acres of forest land ownership (private and public) by region (4 regions), 2001	
				populations (# of tree and bird species or groups of species) of representative forest species, by diameter class (<-50%; -50% to 0%; 0 to +50%; >+50%), 1970–2002	populations (# of tree and bird species or groups of species) of representative forest species, by diameter class (<-50%; -50% to 0%; 0 to +50%; >+50%), 1970–2002	populations (# of tree and bird species or groups of species) of representative forest species, by diameter class (<-50%; -50% to 0%; 0 to +50%; >+50%), 1970–2002	populations (# of tree and bird species or groups of species) of representative forest species, by diameter class (<-50%; -50% to 0%; 0 to +50%; >+50%), 1970–2002	populations (# of tree and bird species or groups of species) of representative forest species, by diameter class (<-50%; -50% to 0%; 0 to +50%; >+50%), 1970–2002	trend in forest bird populations

NRI/TEE (Canada)	Environment Canada	United States EPA	The Heinz Center (USA)	Common Indicators
<i>Environment and Sustainable Development Indicators for Canada</i>	<i>Environmental Signals: Canada's National Environmental Indicators Series</i>	<i>Draft Report on the Environment 2003</i>	<i>The State of the Nation's Ecosystems</i>	<i>Generic indicators common to both countries</i>
		% trees in each of 4 RPA regions with diminished biological component: (% yes and % no), 1990–1999 (map)		
		contribution of forest ecosystems to total global carbon budget: average Mt/yr net carbon pool change, 1953–1996	forests C storage (gigametric tonnes), 1950–2000, East and West	
<i>Impact</i>	<i>Impact</i>	<i>Impact</i>	<i>Impact</i>	<i>Impact</i>
		forest cover and neighborhood size (% mostly forested), in the East and West (immediate, local, and larger neighborhood), 1992	forest cover and neighborhood size (% mostly forested) in the East and West (immediate, local, and larger neighborhood), 1992	
	spruce budworm defoliation: consecutive yrs (two categories), 1980–1996 (map)	acres forest disturbed by insects, forest fires, and disease (Ma), 1979–2000	acres forest disturbed by insects, forest fires, and disease (Ma), 1979–2000	
	forest fires (10 <sup>3</sup> ) and area burned (Mha), 1970–2000		% forest lands burned by wildfire (compared to pre-settlement)	trend in area burned in forest wildfires
		% change in annual harvest, annual growth, and growing stock since 1990		
			total area of forest community types with significantly reduced areas (since pre-settlement)	
			number of community types with significantly reduced area that are increasing or decreasing in size (4 categories)	
		ozone injury to trees (% of plots in 4 regions), 1994–2000		

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		frequency distribution of % of plot area exhibiting evidence of surface compaction on FHIM program plots, 1999–2000	% forest streams with mean NO <sub>3</sub> <sup>-</sup> concentrations (1 of 4 ranges), 1992–1998	
<i>Response</i>	<i>Response</i> trend in % strictly protected area, for 4 ecozones, 1992–2001	<i>Response</i>	<i>Response</i> % forest area in East and West in 1 of 4 management categories, 1953–1997	<i>Response</i> trend in area of protected forest
			forest planted timberland (% area), 1953–1997	
			% natural/semi-natural forest land area, 1953–1997	
			forest natural/semi-natural timberland (% area), 1953–1997	
<b>Agricultural land</b>	<b>Agricultural land</b>	<b>Agricultural land</b>	<b>Agricultural land</b>	<b>Agricultural land</b>
<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>
			% farmland actively used for crop production, pasture, or haylands, 1992	
			% use non-cropland areas of farmland landscape, 1992	
		agricultural pesticides use (Mlbs active ingredients/yr), 1992 and 1997		
		fertilizer use (millions of nutrient tonnes), 1960–1998		
<i>State</i>	<i>State</i>	<i>State</i>	<i>State</i>	<i>State</i>
		farmlands (croplands and pasturelands) acreage est., 1977–1982 and 1997–2002	croplands (% farmland area), by region, 1992	

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		extent of croplands (acres), 1997 (map)	total acres in croplands (Ma), 1950–2000	
			trends in % soil organic matter (dry weight), by % cropland, and by region	
			% croplands in different ranges on Nematode Maturity Index (NMI)	
			status of animal species in farmland areas	
			native vegetation remaining in cropland areas	
<i>Impact</i>	<i>Impact</i>	<i>Impact</i>	<i>Impact</i>	<i>Impact</i>
		change in cropland, CPR land, and pastureland acreage, 1982, 1987, 1992, 1997		
		% change (6 categories) in cropland area, 1992–1997 (map)		
			degree of fragmentation of farmland landscapes by development	
			% of natural patch areas in compact, elongated, and intermediate patches	
		# watersheds with low, moderate, and high potential for sediment runoff from croplands and pasturelands, 1990–1995 (map)		
		# watersheds with low, moderate, and high potential for pesticide runoff from farm fields, 1990–1995 (map)		
		estimates of risk of nitrogen export by watershed, 1992		
		estimates of risk of phosphorus export by watershed, 1992		



NRTEE (Canada)	Environment Canada	United States EPA	The Heinz Center (USA)	Common Indicators
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		wind and water erosion distribution on croplands and CRP lands (tonnes/yr), 1997 (map)		
		croplands most prone to wind erosion, (dot = 2*10 <sup>4</sup> acres), 1997 (map)	croplands most prone to wind and water erosion, (dot = 2*10 <sup>4</sup> acres), 1997 (map)	
	% share agricultural land (5 regions) subject to unsustainable water erosion, 1981, 1991, 1996		% farmland, according to potential for wind and water erosion (3 categories), 1982–1997	% farmland susceptible to water erosion
			% cropland with different levels of salt content (dS/m) habitat quality of farmland streams	
	% change in residual N levels on agricultural land, in regions (3 categories), 1981–1996		% farmland streams and groundwater sites w/ mean NO <sub>3</sub> <sup>-</sup> concentrations (1 of 4 ranges), 1992–1998	
			average # pesticides in farmland streams and shallow groundwater wells, 1992–1998	
			% streams and shallow groundwater wells with pesticide concentrations exceeding standards and guidelines for human health and aquatic health, 1992–1998	
			% farmland streams w/ mean annual P concentrations (1 of 4 ranges), 1992–1998	
		pesticide residues in food (% of samples), 2000		
<i>Response</i>	<i>Response</i>	<i>Response</i>	<i>Response</i>	<i>Response</i>
	% change in # bare soil days on agricultural land, in 5 regions, between 1981 and 1996			

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<b>Grasslands and Shrublands</b> <i>Pressure</i>	<b>Grasslands and Shrublands</b> <i>Pressure</i>	<b>Grasslands and Shrublands</b> <i>Pressure</i>	<b>Grasslands and Shrublands</b> <i>Pressure</i>	<b>Grasslands and Shrublands</b> <i>Pressure</i>
			cattle (10 <sup>6</sup> ) grazing on grasslands, shrublands and pastures (rather than feedlots), during July, 1994 to 2002	
			acres of grassland/shrubland by land use (Macres), 1994–2002	
<i>State</i>	<i>State</i>	<i>State</i>	<i>State</i>	<i>State</i>
		grasslands and shrublands acreage, est. 1977–1982 and 1997–2002	grassland/shrublands from 1992 satellite image	
		extent (acres) of grasslands and shrublands, 1992 (lower 48 states) and 1991 (Alaska)	extent (acres) of grasslands and shrublands, 1992 (lower 48 states) and 1991 (Alaska)	
			total C stored in grasslands and shrublands (soils and plants) (10 <sup>9</sup> metric tonnes)	
<i>Impact</i>	<i>Impact</i>	<i>Impact</i>	<i>Impact</i>	<i>Impact</i>
			% grassland/shrubland streams and rivers with at least 1 no-flow day/yr, and % where zero-flow duration periods are longer or shorter than 50-year mean, 1950s–1990s	
			area and size of grassland and shrubland patches (% of total in patches – 5 size categories)	
			grassland and shrubland groundwater NO <sub>3</sub> – (% sites tested, 4 categories)	

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			% grassland and shrubland areas where depth to groundwater falls within several ranges	
			fraction of grassland and shrubland areas that burn more or less often as before European settlement	
			riparian condition	
<i>Response</i>	<i>Response</i>	<i>Response</i>	<i>Response</i>	<i>Response</i>
<b>Biodiversity</b>	<b>Biodiversity</b>	<b>Biodiversity</b>	<b>Biodiversity</b>	<b>Biodiversity</b>
<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>
		% all watersheds w/ different #s of non-native fish species w/ established breeding populations, 2000	% all watersheds w/ different #s of non-native fish species w/ established breeding populations, 2000	
			different #s established breeding populations of non-native fish species, by watershed, 2000 (map)	
			population trends comparison between selected non-invasive native and invasive grassland/shrubland bird species, 1966–2000	
			% forest, and % grassland/shrubland area covered by non-native plants	
<i>State</i>	<i>State</i>	<i>State</i>	<i>State</i>	<i>State</i>
		population trends (% species increasing) of invasive and native, non-invasive birds, 1966–2000	population trends (% species increasing) of invasive and native, non-invasive birds, 1966–2000	
			% of all sites (fish and benthic animals) with different levels of disturbance	

NRTEE (Canada)	Environment Canada	United States EPA	The Heinz Center (USA)	Common Indicators
<i>Environment and Sustainable Development Indicators for Canada</i>	<i>Environmental Signals: Canada's National Environmental Indicators Series</i>	<i>Draft Report on the Environment 2003</i>	<i>The State of the Nation's Ecosystems</i>	<i>Generic indicators common to both countries</i>
		fish diversity: # fish species (low or high diversity), 1997–1998 (map)	plant growth index, (regional), based on 11-yr average, by ecosystem and regional, 1988–2000, and 2000 map	
<i>Impact</i>	<i>Impact</i> endangered and threatened species and subspecies, and populations (#s) in each of 3 ecozones, 2001 (map) status change in reassessed species at risk (4 COSEWIC categories), 1985–2002	<i>Impact</i> at-risk land and freshwater plant and animal native species, by risk categories (% all species), 2000 % imperiled species (ecosystem), 2000 at-risk native forest species (% of all forest species), by risk category, 2000 at-risk native grassland and shrubland species (% of all grassland and shrubland species), by risk category, 2000	<i>Impact</i> at-risk land and freshwater plant and animal native species, by risk categories % land plants and freshwater species at risk, (regional) 2000 at-risk native forest species (% of all forest species), by risk category, and at-risk species by region, 2000 at-risk native grassland and shrubland species (% of all grassland and shrubland species), by risk category, 2000 % wetland plant communities (4 degrees risk elimination, regional), 2000 % native marine species at extinction risk (5 categories, regional), 2000 degree to which "original" plants and animals are either absent entirely or are at risk of being lost from metropolitan areas	<i>Impact</i> #s threatened species or % of all species 2000
<i>Response</i>	<i>Response</i> strictly protected areas (IUCN I–III) and total protected areas (all classes), as % Canada's total area, 1900–2000, showing international target	<i>Response</i>	<i>Response</i>	<i>Response</i>

NRTEE (Canada)	Environment Canada	United States EPA	The Heinz Center (USA)	Common Indicators
<i>Environment and Sustainable Development Indicators for Canada</i>	<i>Environmental Signals: Canada's National Environmental Indicators Series</i>	<i>Draft Report on the Environment 2003</i>	<i>The State of the Nation's Ecosystems</i>	<i>Generic indicators common to both countries</i>
	% strictly protected ecoregions (4 categories), 2001 (map) # strictly protected sites in each size range (7 categories, km <sup>2</sup> )			
<b>Urban Areas</b>	<b>Urban Areas</b>	<b>Urban Areas</b>	<b>Urban Areas</b>	<b>Urban Areas</b>
<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>
<i>State</i>	<i>State</i>	<i>State</i>	<i>State</i>	<i>State</i>
		extent of non-federal developed land (metropolitan area boundaries), 1997 (map)	acres of urban and suburban areas, by region (Ma), 1992	
			urban/suburban area as % of total region's land, 1992	
			% of urban/suburban land composed of wetlands, croplands, grass/shrublands, and forests, by region, 1992	
		patches of forest, grassland, shrubland, and wetland in urban and suburban areas, by region (% of all natural lands), 1992		
			total patches of forest, grassland, shrubland, and wetland, in urban and suburban areas, and by region (% of all natural lands), 1992	
<i>Impact</i>	<i>Impact</i>	<i>Impact</i>	<i>Impact</i>	<i>Impact</i>
		change in acres of developed land (urban and suburban areas and rural transportation land), by watershed, 1982–1997 (map)	suburban/rural land use change	

NRTEE (Canada)	Environment Canada	United States EPA	The Heinz Center (USA)	Common Indicators
<i>Environment and Sustainable Development Indicators for Canada</i>	<i>Environmental Signals: Canada's National Environmental Indicators Series</i>	<i>Draft Report on the Environment 2003</i>	<i>The State of the Nation's Ecosystems</i>	<i>Generic indicators common to both countries</i>
			% urban/suburban land that is undeveloped (5 categories, regional), 1992	
			% all natural areas w/in urban and suburban lands w/ varying size patches (5 categories, regional), 1992	
			% streams draining urban watersheds with average NO <sup>3</sup> - concentrations in 1 of 4 ranges, 1992–1998	
			% streams draining urban watersheds with average annual P concentrations in 1 of 4 ranges, 1992–1998	
			average difference between urban and rural air temperature (% metropolitan area in 1 of 3 categories)	
			# and type of “disruptive” species found in metropolitan areas, and by region	
<i>Response</i>	<i>Response</i>	<i>Response</i>	<i>Response</i>	<i>Response</i>
<b>Natural Disasters</b>	<b>Natural Disasters</b>	<b>Natural Disasters</b>	<b>Natural Disasters</b>	<b>Natural Disasters</b>
<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>	<i>Pressure</i>
<i>State</i>	<i>State</i>	<i>State</i>	<i>State</i>	<i>State</i>
<i>Impact</i>	<i>Impact</i>	<i>Impact</i>	<i>Impact</i>	<i>Impact</i>
<i>Response</i>	<i>Response</i>	<i>Response</i>	<i>Response</i>	<i>Response</i>
<b>National Responses</b> (expenditures)	<b>National Responses</b> (expenditures)	<b>National Responses</b> (expenditures)	<b>National Responses</b> (expenditures)	<b>National Responses</b> (expenditures)

## Appendix 2: Data Sources for Selected Issues

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North America's environment—air currents, watersheds, and wildlife and their habitat—is not dissected by political borders. But Canada and the United States often measure environmental conditions and report on them using different indicators. This report examines the environmental indicators used by both nations, suggests a way to develop a set of North American indicators, and using a number of common indicators, provides a snapshot of the level of progress being made in protecting the environmental assets and services that underpin North America's economy.

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