

# *Constitutional Change to Address Climate Change and Nonrenewable Energy Use*

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Climate change, or climate breakdown, is arguably the greatest challenge we now face. The need to address it seriously has been widely accepted by all national political parties in Canada, if only lately and grudgingly. Yet Canada is far behind European countries in turning to low-carbon energy sources — we remain the world's highest per capita energy user and carbon emitter. We signed the Kyoto Protocol,<sup>1</sup> but far from meeting our obligations under it, we have increased our greenhouse gas emissions. Our record is worse than even the Americans, who did not sign Kyoto.

The problem of climate change has a twin demon that must be considered at the same time: fossil fuels, the nonrenewable energy source that has fueled the industrial revolution and has largely caused the global heating at issue. Not only do fossil fuels cause greenhouse gas emissions and otherwise pollute the environment, but we have been using them up, especially the most efficient and least polluting oil and gas (coal will be around for longer, but is still a nonrenewable resource). Oil and gas are valuable resources, indispensable for such uses as airplane flight, as far as we know. (Renewable fuels might well power airplanes, but it would be unwise to have confidence in such a technological advance.) The debate about “peak oil” misses the crucial point. Peak oil occurred millions of years ago. On both climate, and many other issues of environmental deterioration, the science has been done — the recommendations are comprehensive and there are successful models from other similarly prosperous, indus-

trialized countries, but yet we fail to act.

Political constraints, it will be argued here, are part of the reason for Canadians' inaction on these urgent matters. Change is needed, from the broad level of the Constitution to the more mundane level of corporation and election acts, and policies directed at taxation, transportation, the armed forces, immigration, municipal governance, and government procurement. Space travel and Arctic exploration should probably be added to the list. Change is needed in all government jurisdictions, and coordination among them is crucial; but the focus in this article is Canada's federal Constitution,<sup>2</sup> which is an obstacle to the revision of key statutes and to the development of practical programs of remedy.

It would be grossly premature to suggest any particular set of new constitutional sections or clauses, or any particular amendments. The purpose here rather is to explain why full-scale revision of the Constitution is needed — when ours is so young — and to provide direction and criteria to be met. A process of radical rethinking and exploration of alternatives is needed before specific drafting of constitutional proposals can be undertaken. We need no less than a “green Enlightenment” akin to that of the eighteenth-century Enlightenment, which stimulated and shaped the democratic constitutions of the following centuries.

We are faced today with a major moral challenge — a few generations, comprised largely of rich Westerners, have nearly extin-

guished an extremely valuable resource at the expense of vast numbers of people and other species. This deprivation is a consequence of our extravagant, industrial way of life. Future generations will inherit a deforested landscape, dead oceans, polluted cities, and will have to live with higher temperatures, tornados, floods, fires, and storms. The Canadian Constitution lacks any facility for dealing with a crisis of this magnitude. In particular, the Constitution does not have any mechanisms for dealing with the use of key scarce nonrenewable resources such as fossil fuels. The only relevant constitutional consideration has been the determination of the level of government with authority to regulate. Conservation of one-time resources is not mentioned, nor are the needs of future generations, regardless of what province they may live in. Canada's constitutional documents have not been written with future citizens, let alone geological time, in mind.

## A Constitution is Grounded in Time and the Problems of its Age

In order to understand why our Constitution is so far from being adequate for the challenges of our day, we have to look at the conditions of its time of formulation in Britain, effectively the 1860s. After all, the *British North America Act* (renamed the *Constitution Act, 1867*) remains the core of the present federal Constitution. The more recent *Constitution Act, 1982*, and in particular the *Canadian Charter of Rights and Freedoms* is, in fact, the work of a remarkably short period of time, effectively 1980-81.<sup>3</sup> These additions to the constitutional framework reflect not only the constitutional predilections of the then prime minister, Pierre Elliott Trudeau, but also the eighteenth-century Enlightenment, the principles of which guided him and most constitutional thinking of the Western world in the nineteenth and twentieth centuries.

The great problems of the eighteenth century in Europe were poverty, disease, ignorance, intolerance, and vast inequalities of class, race, and gender. Economic downturn meant actual starvation for the poorest members of society, so greater productivity was an aim of social

justice during this time. The rising use of fossil fuels to increase production meant a better standard of living for vast numbers of people, although terrible misery for many in the course of their development. Scientific knowledge and technological application to reduce poverty and disease, alas, have had the unintended consequence of increasing global temperatures and pollution.

The enunciation of the principles of the sovereignty of the people (as opposed to the divine right of kings), liberty and equality (when ordinary people were largely bereft of rights), and universalism (against the great divisions of class, race, and gender) led, in time, to great advances for the vast majority of the population. Enlightenment thinking provided the moral and intellectual energy that nourished the great reform movements of the nineteenth (and twentieth) centuries: the abolition of slavery, the right to vote for all citizens, equality rights for women, tolerance for different religious and political views, rights for workers, and eventually rights for persons of a different sexual orientation, the disabled, and others. The collective right to self-determination of peoples, recognized by the United Nations, similarly derives from this earlier thinking.<sup>4</sup> By the time of the *Constitution Act, 1867*, pollution from industrialization was evident, especially in the manufacturing towns of England.<sup>5</sup> But oil had only just been discovered (in the United States) and gas had not yet come into use. Coal seemed to be plentiful, and the ecological problems it produced were still unknown. That no attention was given to intergenerational justice in the 1867 Constitution reflects the obvious fact that no resource was seen to be limited; no one considered that their use (and depletion) might deprive others of their rights. The Enlightenment notion of an individual's right to be limited only at the point where one's actions impinge on the rights of others seemed to apply only to those in the here-and-now. That understanding, of course, was well articulated by John Stuart and Harriet Taylor Mill in *On Liberty* in 1859, the period just prior to the framing of the *Constitution Act, 1867*:

That the sole end for which mankind are warranted, individually or collectively, in interfering with the liberty of action of any of their

number is self-protection. That the only purpose for which power can be rightfully exercised over any member of a civilized community, against his will, is to prevent harm to others.<sup>6</sup>

This principle would come to inform such debates as that over private morality, notably in the legalization of homosexual acts between consenting adults. That future generations might be harmed by the sale and use of our energy resources was simply not widely considered at that time. We know better now; fossil-fuel use, along with other harmful industrial practices, should be approached from the point of view of the harm it inflicts.

Who counts in the consideration of harm remains, of course, a divisive question. Enlightenment thinking radically extended the circle of consideration. Jeremy Bentham's writing on utility theory suggested several levels at which consideration of harm should be engaged: from particular individuals to "the whole nation" (thus including both sexes and all classes), "humankind in general" (including all races), and even possibly "the whole sensitive creation" (other species).<sup>7</sup> With climate breakdown and the depletion of nonrenewable resources, we need to add another category to Bentham's Enlightenment framework: future generations.

Thomas Malthus, in his *Essay on the Principles of Population* written in 1798, did provide early caution of the importance of the notion of limits. Indeed, the "limits to growth" movement of the 1970s is often called neo-Malthusian in recognition of this, although the original theory was limited to addressing the tendency of population growth to outstrip food production. The availability of new farmland in the New World, and the later use of fossil fuels, pesticides, and fertilizers, however, resulted in vastly increased food production, apparently disproving Malthus's theory. We should be less confident now, recognizing the finitude of fossil fuels used in food production, and the severe pollution effects of fertilizers and pesticides, etc. In turn, increases in our capacity to increase food production — the green revolution — increases our water consumption needs; some think access to fresh water is a concern as serious as climate

change itself.

By the time of the *Constitution Act, 1867*, industrialization had gone far enough to cause greenhouse gas emissions beyond the Earth's capacity to absorb them. But this was not widely known. In 1895, the Swedish scientist Svante Arrhenius hypothesized an increase in ground temperatures from the "carbonic acid effect" of burning coal in his now famous paper: "On the Influence of Carbonic Acid in the Air Upon the Temperature of the Ground."<sup>8</sup> The potential for a greenhouse effect had been argued even earlier, in 1824, by the French chemist Jean-Baptiste Joseph Fourier, but it was Arrhenius who took the next step of predicting how much temperatures would rise. These predictions have turned out to be remarkably accurate. Arrhenius later won the Nobel Prize, but not for this work.

Scientific consensus on the occurrence of potentially serious global heating emerged only in the late 1980s, not long after the coming into effect of the *Charter of Rights* in 1982. The Intergovernmental Panel on Climate Change (IPCC), which released its first report in 1988, would become the major source of information about global heating. In Canada, the House of Commons Standing Committee on Environment began issuing (unanimous) reports arguing for urgent action to reduce greenhouse gas emissions. In 1990, there was *No Time to Lose: The Challenge of Global Warming*, in 1991, *Out of Balance: The Risks of Irreversible Climate Change*. Paul Martin was an alternate member of that committee, yet as finance minister he provided subsidies for the tar sands project, the major source of Canada's increased emissions, and as prime minister he allowed greenhouse gas emissions to soar after the signing of the Kyoto Protocol.

The Canadian reports provided concrete measures, formulated by experienced political actors including former cabinet ministers, for implementing action on climate change. The first report had seventeen recommendations, ending with the requirement that all federal departments and agencies, as part of their budget submissions, 1) report on direct and indirect impacts of their operations on global warming, and 2) set annual targets for reductions in green-

house gas emissions.<sup>9</sup> The second report recommended that environment ministers develop policies, programs, and regulations to span the full range of activities of the federal government, analogous to those of the finance minister, and to report annually to Parliament on the environmental impact of all federal activities.<sup>10</sup> This was not done. The recommendation that the auditor general establish an environmental audit function was acted upon,<sup>11</sup> but not at the level sought, which was to ensure a truly comprehensive response to global warming.

By 1997, this parliamentary committee, renamed the Standing Committee on the Environment and Sustainable Development, again unanimously recommended that the prime minister, along with a small team of senior officials, assume responsibility for implementing Canada's Kyoto climate change commitment. Furthermore, the committee recommended, naively as we now see, that if greenhouse gas reductions exceeded the mandated target or schedule, then the target should be raised or the timetable shortened, or both.

The science of the problem is now known, a whole host of practical solutions have been advanced over the past few decades, and considerable attention has been given to the administrative structures needed to facilitate action on climate change. To understand why these efforts have not resulted in action we detour to the principles at the base of our constitutional thinking.

## Sovereignty of the People: its Rise and Decline

One of the great legacies of the Enlightenment is the principle that people have the right to determine their collective affairs. In Canada, democracy is founded on this principle in the form of a constitutional monarchy. But since the *Constitution Act, 1867*, the rights of the people have been diminished in ways pertinent to action on climate change and other forms of environmental deterioration. While the original federal Constitution did not give corporations rights equivalent to individuals, corporations have acquired them by judicial interpretation.

Arguably, this phenomenon has contributed to the diminution of human rights and the health of the environment.

The *Charter of Rights* is grounded in Enlightenment principles that were oriented entirely towards individuals, but, as entities analogous to individuals, corporations have been deemed to possess freedom of speech, including the freedom to advertise lethal products like cigarettes and energy sources like the tar sands. Individual human beings concerned about health, life and death, now see their sovereign right to government action impeded by these corporation rights. Measures to ensure "liberty of expression" were intended to keep the likes of Voltaire and Diderot out of prison for their writings on social reform. That these rights should be used to guarantee the ability of corporations to advertise hazardous products seems a grotesque distortion of such a lofty Enlightenment principle.

The cases themselves are shoddy: in the United States an 1886 Supreme Court decision, *Santa Clara County v. Southern Pacific Railroad*,<sup>12</sup> declared that corporations were legal "persons," and thus protected under the U.S. Constitution's Fourteenth Amendment, the very amendment that was used to free slaves. The 1989 ruling of the Supreme Court of Canada (SCC) on a Québec law prohibiting the advertising of toys to children under thirteen, while less outrageous, is also perverse.<sup>13</sup> The SCC drew on the "large and liberal" interpretation its earlier decisions had given to *Charter* rights, to decide that "there was no sound basis on which commercial expression can be excluded" from the *Charter* protection of free expression.<sup>14</sup> Decisions like this one narrow and reduce the right of actual people, through their legislators, to make public policy on matters of life and death, such as cigarette advertising.

Canadian measures taken to curb greenhouse gas emissions can also be countered by foreign governments prompted by their own corporations, thanks to commitments made in the 1992 North American Free Trade Agreement, and in 1994 by the World Trade Organization.<sup>15</sup> Both corporation rights and trade agreements trump the gains made through



democratic reform of domestic government institutions.

## The Impediment of Divided Jurisdiction

On top of the problem of diminished sovereignty, those seeking action on the climate crisis in Canada come up against the thorny problems of our federal structure of government, as illuminated by the division of legislative jurisdiction in the *Constitution Act, 1867*.<sup>16</sup> Climate change is a global matter, and the federal government has jurisdiction over international matters generally. But matters of private property, including nonrenewal natural resources, are under provincial control. Oceans and fisheries are federal matters, while agriculture is a joint federal-provincial matter. The list goes on. In any case, while the federal level retains the power to regulate to advance the “peace, order and good government” (POGG) of the country, this wording was not devised with polar melting, rising oceans, and deforestation in mind. Indeed, Alistair Lucas has argued that there is no “federal pre-emption of legislative authority in relation to national environmental protection,” though there is a possibility that measures for greenhouse gas control “could meet the peace, order and good government criteria.”<sup>17</sup> Nevertheless, the scale of impact of any such federal scheme on core provincial powers over property, natural resources, and local industry weighs against federal jurisdiction. While views among constitutional experts are divided on the validity of a national emissions trading scheme led by the federal government,

none have concluded that the federal government has constitutional jurisdiction broad enough to permit an optimal scheme to be tailored. Consequently, there is at least a likelihood that the federal government lacks constitutional authority to legislate national standards and the necessary framework for a national emissions trading system.<sup>18</sup>

But the “optimal” scheme might be precisely what we need. Federal-provincial agreement on climate change action would have to be reached for a concerted scheme to deal with the climate

crisis, and Canada’s federal Constitution does nothing to facilitate this.

There is no reason to blame federalism. Germany, of course, is a federal state, but it has done much more than Canada has to reduce greenhouse gas emissions. Europeans, generally, express greater and more immediate concern regarding energy use, availability, and security, and their thinking about climate change is less clouded by the erroneous belief that some countries are fortunate “producers” of oil. Norwegians, who still extract North Sea oil and gas, realize the limited nature of their good fortune. They require higher royalties and as a result have a much richer heritage fund than Alberta. (Related to this point is the argument in favour of replacing the word “production” with “extraction,” and “heritage fund” with “heritage depletion fund” when nonrenewable resources are at issue.)

## The Scope of Response Needed

The magnitude of the response required to address climate change necessitates that we be clear about the extent of the change we need in available political tools. That the ozone crisis was met successfully (at least apparently) should give no cause for comfort. Scientific opinion makers alerted politicians to the problem, and action was taken in time. Brian Mulroney’s Progressive Conservative government even played a vital role in the achievement of the Montreal Protocol for the reduction of ozone-depleting substances.<sup>19</sup> But these substances were few in number and, it turned out, cheaper alternatives were available. Consumers could make their displeasure known by simply not buying certain devices and containers, with minimal inconvenience. Consumers were not told to stop driving their SUVs or taking cheap flights.

In its 2007 report, the Intergovernmental Panel on Climate Change stated that the amount of reduction in greenhouse gas emissions required to deal with the climate crisis is 85 percent.<sup>20</sup> George Monbiot argues that a 90 percent reduction is the average required for industrial countries. Canada, in Monbiot’s estimation, must reduce greenhouse gas emissions

by 94 percent.<sup>21</sup> These figures are based on the objective of keeping the average global temperature increase to 2 degrees, the amount beyond which there is good reason to believe that vast, swift, and unpredictable climate disasters could occur. Nevertheless, Canada has failed to meet its 1997 Kyoto goal of a 6 percent reduction.

Unless these figures can be refuted, and lower, easier-to-reach targets set, we have a long way to go. The goal of a 50-60 percent reduction in greenhouse gas emissions, set by some European countries, American states, and Canadian provinces and cities, is still inadequate if our best experts are correct (and not too optimistic in their predictions). The necessary reductions of greenhouse gas emissions cannot be achieved by technological advances within our current political and economic system.

Monbiot offers a feasible strategy the British public could use to achieve 90 percent carbon reductions in such key sectors of the economy as transportation, manufacturing, government, retail sales, and housing — no equivalent attempt has been made for Canada, where most of Monbiot's proposals would require legislative changes that squarely face the impediment of our federal Constitution. Still, we have to consider both constitutional revision and legislative rewriting, as well as changes to our regulatory framework, our government procurement practices, and so on.

In arguing for massive system-level change to meet the climate crisis, let it be made clear that no current socioeconomic model is exempt. If capitalism is a culprit, so too are communism, socialism, and Chinese-style communism-capitalism. Industrialism, in fact, is the culprit in whatever type of state it exists. This is the case whether the state is capitalist, social democratic, or has a centrally organized economy. Mixed European social democracies seem to have done, so far, the best job of acting on the climate crisis, but they too have a long way to go to meet IPCC targets.

Can a largely capitalist, democratic country with a significant welfare state (such as Canada) make the adaptations necessary to meet the climate crisis before it's too late? Can other, larger,

more important countries adapt their political forms? We have reason for hope, as we have seen massive changes in capitalist economies with the incorporation of welfare state measures for income security, and social programs like medicare, counter-cyclical economic measures, and so forth.

Modern capitalism, even as promoted by its far right-wing advocates in Canada, differs greatly from its laissez-faire nineteenth-century ancestor. It has been argued that the threat of Bolshevism was the great stimulator of social reform in nineteenth-century capitalist economies, with the Russian Revolution convincing capitalists that a measure of reform would be better than risking property confiscation and exile. As Marxist historian Eric Hobsbawm has argued, the Russian Revolution “proved to be the Saviour of liberal capitalism, both by enabling the West to win the Second World War against Hitler's Germany, and by providing the incentive for capitalism to reform itself.”<sup>22</sup> Many Russian property owners did go into exile and became living examples of the threat of Bolshevism to the wealthy in the West. The equivalent threat, with regard to global warming, is not so immediate or obvious.

## Principles of a Green Enlightenment

Instead of “life, liberty, and the pursuit of happiness,” or even “peace, order and good government,” we need “caution, accountability and respect for unintended consequences” to be our governing watchwords. Rather than “more is better,” we need “make your mistakes small.” Activities both in the public and private sector must be monitored for their effects on worsening climate change and other forms of environmental deterioration. We need a healthy respect for the potential of the principle of unintended consequences to act as a counter to our intentional actions.

*Do no harm.* Enlightenment optimism and confidence in progress must be tempered with the great principle of the Hippocratic school of medicine (5th century BCE), which is above all to do no harm. Florence Nightingale famously argued that this should be applied to hospitals

and not just doctors. We might now want to apply the same principle to holders of political power (prime minister and cabinet, mayors, and municipal councillors), economic power (corporate executives, directors, and trade union officials), and leaders in other areas (health care, media, sports, culture, etc.).

*Avoid old binaries.* Left-right politics have little relevance to the climate crisis and the environment generally, however important they may remain for traditional conflicts between haves and have-nots and other dimensions of social justice. Some of the worst projects around the globe, as far as environmental deterioration and climate change are concerned, have been initiated in the name of development and human betterment. The massive water diversion projects of the old Soviet Union are a case-in-point. The public-private divide is also irrelevant to grappling with the climate crisis. Indeed, some of our greatest environmental disasters — overfishing leading to vast losses of fish stocks in Newfoundland and Labrador, or tar sands development in Alberta — were not only permitted by governments but subsidized by vast quantities of tax dollars. In the same vein, the federal-provincial divide should be revisited with a view to facilitating action on the climate crisis. The significant dichotomy today is not which level of government, but rather what type of resource is at issue — renewable or nonrenewable? Different mentalities, moralities, and modes of governance are needed for each of the two types, and debate over the choice of resource should not proceed without engaging the moral rights of future generations.

## Successful Models

The change scientific authorities deem necessary to deal with the climate crisis is enormous, but it is important to remember that human societies have managed to make massive change before, sometimes doing so in a short period of time. The abolition of slavery and apartheid, the achievement of equality rights for women, and the introduction of measures of democracy in many countries, international cooperation among members of the United Nations and its organizations, are all examples of

enormous social change. Change happens rapidly at times, as it did when the Berlin Wall fell and the Soviet bloc collapsed, leading to some measure of disarmament and *détente* among military superpowers.

On the environment itself there is the example of the ozone crisis. In response, Canada played an important role in getting an international treaty — the Montreal Protocol — off the ground. On climate change, Canadian scientists and the Canadian government have provided key input at several (early) stages. We do not have to start at zero, even if we have a long way to go.

First Nations peoples in Canada and elsewhere have traditions and principles that could be enormously helpful as models for action in dealing with the climate crisis. The long time span with which Aboriginal peoples frame deliberations — seven generations hence — is far better than a focus on the next election. First Nations' concepts of communal land ownership, in perpetuity, are more conducive to conservation than the industrial land-as-commodity notion prevalent in western capitalist societies. First Nations' respect for other species might be similarly more conducive to good practice than western instrumentalism. Their concept of the Earth-as-entity — Mother Earth — might again be better than the industrial approach, which views the Earth as an inert repository of "natural resources."

Judicial activism in Canada has extended the rights of First Nations *peoples* and stimulated important legislative changes and financial settlements. The next challenge our constitutional thinkers face is the incorporation of First Nations *principles* into the Constitution itself.

A host of other structural changes is needed to facilitate action on climate change and resource conservation. Electoral system reform, resulting in more proportional representation in Canada's legislative bodies, would result in the election of more environmentalists, notably from the Green Party. It would also likely result in frequent minority governments, which have been good for the achievement of social justice measures such as the old age pension, and con-

trols on election spending and reportage. Constitutional change to bring in proportional representation should be a priority item in dealing with the climate crisis.

International conventions also have to be revisited in the light of the climate crisis. From its inception in 1864, the Geneva Convention<sup>23</sup> has aimed to reduce harm to ordinary people by limiting the “right” of states to make war. War and the preparation for it are major contributors to greenhouse gas emissions, and to the release of other toxic substances into the atmosphere, oceans, and soil. Yet “national defence” has traditionally been exempted from environmental assessment; even the idea of its inclusion seems ridiculous, since war is intended to be harmful. Yet Canada’s military, for decades now, has been engaged in activities justified as peace making — neither territorial aggrandizement nor vanquishing the Queen’s enemies has been the stated aim of military action. Our own Constitution keeps the decision to go to war within the executive; Parliament need not be consulted. (Any democratic control over such a decision is, unhappily, no guarantee that thinking about war will be different, as was seen when the United States Congress ceded its power to the president in the case of the Iraq war.)

Environmental bills of rights have been adopted in some jurisdictions, but there will be no argument here for such a tactic. Much more fundamental change is required. The very notion that people have a right to a healthy environment, when we make the lifestyle choices we do, is ludicrous. Rather we need to conceptualize some way of securing rights for future generations. This reconceptualization requires the curtailment of rights for individuals and corporations in the here and now. Town hall meetings across the country, with citizen participation, and with input from specialists in values and ethics, would be a helpful step towards rethinking fundamental principles.

Such a process produced excellent results in the refinement of the *Charter of Rights* between 1980-82. Women, notably, made great gains in advancing a shift in rights conceptions relating to women, surprising the federal government in the course (and indeed themselves), for there

were few women constitutional lawyers to draw upon and there was virtually no academic literature to assist in justifying *Charter*-rights protection for women.

Revision of the Constitution and other statutes to deal with climate change will be divisive. Pessimists will point out that the French Enlightenment was followed by revolution, The Terror, and the Napoleonic wars. Slavery was ended in the United States only after a devastating civil war. If we do not act vigorously and promptly, however, we must expect unprecedented environmental breakdown. Scarce resources themselves are causes of war. Realists must rise to the occasion, and the sooner we start the better for all.

Al Gore found an example in Abraham Lincoln’s ability to see opportunity in all the difficulties of the American Civil War: “As our case is new, we must think anew and act anew. We must disenthrall ourselves and then we shall save our country.”<sup>24</sup> Gore argues that Americans of our day have also to “disenthrall” themselves from the “sound-and-light show” that has diverted attention “from the important issues and challenges of our day.”<sup>25</sup> Our issues and challenges surely include climate change. Gore quotes the proverb: “Where there is no vision, the people perish” (Proverbs 29:18), optimistically adding that there is another side: “Where there is vision the people prosper and flourish, and the natural world recovers and our communities recover.”<sup>26</sup> Gore insists, and rightly I believe, that the knowledge of what to do is available. What we need is political will, which Gore described as “a renewable resource in a democracy.”

My concluding point is that the political will to deal with the climate crisis has to be directed to revising our constitutional framework, as well as dealing with the substance of the climate crisis as such. We must change the Constitution, and numerous statutes and policies, to make action on climate change possible. Let’s agree that a crisis also brings with it opportunity, and let’s get on with that greatly needed creative thinking.



## Notes

- \* Lynn McDonald, university professor emerita, University of Guelph, former MP and environment critic; for her work on climate change see: online, <www.justearth.net>. As president of the National Action Committee of Canada she gave that organization's brief to the Senate-Commons committee on the *Charter of Rights and Freedoms*, and has written and worked on obtaining equality rights for women, notably for First Nations women.
- 1 *Kyoto Protocol to the United Nations Framework Convention on Climate Change*, 10 December 1997. UNFCCC COP 3d Sess., UN Doc FCCC/CP/1997/7/Add.1, 37 ILM 22 (1998) [Kyoto Protocol].
- 2 *Constitution Act, 1867* (U.K.), 30 & 31 Vict., c. 3, reprinted R.S.C. 1985, App. II, No.5.
- 3 *Canadian Charter of Rights and Freedoms*, Part I of the *Constitution Act, 1982*, being Schedule B to the *Canada Act 1982* (U.K.), 1982, c. 11.
- 4 *Charter of the United Nations*, 26 June 1945, Can. T.S. 1945 No. 7.
- 5 United Kingdom, *Alkali Act, 1863*. *Fourth Annual Report by the Inspector of his Proceedings During the Year 1867* (London: Eyre & Spottiswoode, 1868) at 4; and see Robert Angus Smith, *Air and Rain: the Beginning of a Chemical Climatology* (London, Longmans, Green, and Co., 1872).
- 6 John Stuart Mill, *The Collected Works of John Stuart Mill, Volume XVIII - Essays on Politics and Society Part I*, John M. Robson, ed. (Toronto: University of Toronto Press, 1977) at 223.
- 7 Jeremy Bentham, "Introduction to the Principles of Morals and Legislation" in John Bowring, ed., *The Works of Jeremy Bentham*, reprint of 1838 ed., (New York: Russell & Russell, 1962) 1:25.
- 8 Svante Arrhenius, "On the Influence of Carbonic Acid in the Air Upon the Temperature of the Ground" (1896) 41 *London, Edinburgh and Dublin Philosophical Magazine and J. of Science*. 237.
- 9 House of Commons, Standing Committee on Environment, *No Time to Lose: The Challenge of Global Warming* (October 1990) at 15, 19.
- 10 House of Commons, Standing Committee on Environment, *Out of Balance: The Risks of Irreversible Climate Change* (March 1991) at 83-4.
- 11 House of Commons, Report of the Standing Committee on Environment and Sustainable Development, "The Commissioner of the Environment and Sustainable Development" (May 1994). In 1995 a Commissioner of the Environment and Sustainable Development was created within the Office of the Auditor General of Canada.
- 12 *Santa Clara County v. Southern P.R. Co.*, 118 U.S. 394 (U.S. 1886).
- 13 *Irwin Toy Ltd. v. Quebec* (Attorney General), 1989 SCC 87, [1989] 1 S.C.R. 927 (CanLII).
- 14 *Ibid.* at 977.
- 15 Alastair R. Lucas, "Legal Constraints and Opportunities: Climate Change and the Law" in Harold Coward & Andrew J. Weaver, eds., *Hard Choices: Climate Change in Canada* (Waterloo: Wilfred Laurier University Press, 2004) 179.
- 16 The division of powers was altered with the addition of Section 92A to the *Constitution Act, 1867*. This section addresses provincial jurisdiction over "Non-Renewable Natural Resources, Forestry Resources, and Electrical Energy," and came into force as part of the *Constitution Act, 1982*.
- 17 *Supra* note 15 at 186.
- 18 *Ibid.* See also Stewart Elgie, "Kyoto, The Constitution, and Carbon Trading: Waking a Sleeping BNA Bear (Or Two)" (2007) *Review of Constitutional Studies* 67.
- 19 United Nations Environment Programme, *The Montreal Protocol on Substances that Deplete the Ozone Layer* (Nairobi: UNEP, 2000) [Montreal Protocol].
- 20 Intergovernmental Panel on Climate Change, Summary for Policymakers in B. Metz, O.R. Davidson, P.R. Bosch, R. Dave, & L.A. Meyer, eds., *Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* (Cambridge, U.K. & New York: Cambridge University Press, 2007) at 15.
- 21 George Monbiot, *Heat: How to Stop the Planet from Burning* (Toronto: Doubleday, 2006) at 15-16.
- 22 Eric Hobsbawm, *The Age of Extremes* (New York: Pantheon, 1994) at 84.
- 23 Convention for the Amelioration of the Condition of the Wounded in Armies in the Field, 1864 [Geneva Convention].
- 24 Al Gore, *The Assault on Reason* (New York: Penguin, 2007) at 212.
- 25 *Ibid.* at 213.
- 26 *Ibid.*