

# A Breath of Fresh Air in Environmental Policy

*A breath of  
fresh Air*

*Nicholas Schneider*

The natural environment and the interaction of humans with it are subject to constant change, as are the policies that influence this interaction. In the 1970s, environmental policies tended towards “command-and-control” approaches which, while sometimes successful, were not cost-effective. Over the following years, however, the range of policy tools available to decision makers has expanded to include a greater number of market- and free market-based approaches.

Unlike command-and-control policies, market mechanisms have the potential to achieve environmental goals at lower costs, due in part to the ability of individuals to make the most cost-effective decisions in light of economic incentives. While market methods are rarely used in Canada, the authors of this book demonstrate how and why we need to adopt market-based methods to achieve our environmental goals.

Given Canadians’ well-known concern for the environment, it may be difficult to find anyone in Canada who is against improving the quality of the environment. However, a reliance on unnecessarily costly and intrusive policies over the past several decades has likely turned some people against environmentalism. But there are a growing number of market-based policy

options that would improve environmental quality at a lower cost and with less government intervention than in the past. These policies are a breath of fresh air because they are cost-effective, market-oriented, less intrusive, and more appealing to broader sections of the Canadian public.

The purpose of this book is to outline several market-based environmental policy options, and to explain why the enactment of such policies would improve environmental quality and natural resource policy in Canada.

In this book, the authors provide examples of the direct application of market-based policies. These policies include the strong protection of property rights, the use of environmental pricing, the application of cost-benefit analyses, and the devolution of the power of decision making to local agents who are most closely connected to the issues and more easily held accountable. The book concludes by describing how Canada can learn from the policy experiences of other countries.

This chapter summarizes the shift towards market-oriented environmental policies that has occurred over the past 30 years, and presents a simple framework for understanding such policies and how they can be expanded in Canada. This chapter concludes by presenting recommendations for improving environmental policy in Canada.

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> **Has there been a change in environmental and natural resource policy?**

In the late 1980s, opinion polls showed that almost 80 percent of Americans considered themselves to be “environmentalists” (Polling Report Inc., 1999).<sup>1</sup> Environmentally friendly products began to fill store shelves, and the three new “Rs”—reduce, reuse, and recycle—were adopted by schools. Organizations such as Greenpeace and the World Wildlife Fund became household names, and the United Nations’ *Our Common Future* report established the working definition of “sustainable development.” At the first Earth Summit in Rio de Janeiro in 1992, environmental issues began to shape international politics, as delegates from nearly 180 nations adopted agreements on development, biodiversity, forestry, and climate change.

In the 1990s, environmental topics slipped in relation to other issues. Worries about health care, the deficit, the economy and, since 2001, terrorism, national security, and the events in Iraq and Afghanistan, became more prevalent. In 2004, two environmental strategists went so far as to publish an essay on the state of the environmental movement titled, “The Death of Environmentalism” (Shellenberger and Nordhaus, 2004). In hindsight, it seems as though the warning was unwarranted. Opinions have once again shifted, and environmental issues are now among the top priorities of Canadians.<sup>2</sup>

Companies are trying to “green” their image, books on eco-lifestyles and low-impact living are crowding bookshelves, Kyoto is a household name, and the video, *An Inconvenient Truth*, is being shown in classrooms.

Though today’s environmental issues are nothing new, a few changes that have taken place over the last 15 years are worth highlighting. First, in addition to existing concerns such as air and water quality, the issue of climate change has brought a new level of complexity and scope to environmental issues. Second, though the public generally perceives only worsening trends (Angus Reid, 2007), much progress has been made towards improving environmental quality. For example, the Fraser Institute’s most recent *Index of Environmental Indicators* charted positive progress across a wide range of environmental measures (Brown et al., 2004). Third, while it may not be obvious to all casual observers, the policies used to address environmental and natural resource challenges have changed over the past 15 years. The use of market mechanisms within environmental policy has increased substantially to the point where it now seems to be the default policy choice for some issues.

As Wallace E. Oates notes, this is a departure from the earlier days of environmental policy, when landmark legislation such as the *Clean Air Act* and the *Clean Water Act* from the early 1970s essentially ignored economics and market approaches. According to Oates,

Environmentalists were decidedly hostile. The market system was the reason we had pollution in the first place, they said. The idea of putting a price on the environment was morally repugnant ... Environmentalists thus flatly rejected an economic approach. (2006: 302)

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1 The Americans who were surveyed were asked, “Do you consider yourself to be an environmentalist, or not?”

2 Cheadle (2007, Jan. 4) reports that environmental policy is the top priority. Rook (2007, May 15) reports that it is the second highest priority, behind health.

Robert Hahn, among others, has made a similar observation:

In the seventies, emissions fees were more likely to be viewed as “licenses to pollute.” Today, most policy discussions ... identify the need for using incentive-based instruments to achieve goals in a cost-effective manner. The sea change in attitude toward the use of incentive-based instruments represents one of the major accomplishments of environmental economics over the last three decades. (1999: 16)

In retrospect, it is somewhat remarkable that economics and market ideas had so little influence on major environmental policies in the 1970s, especially since these basic ideas had been established for decades and, in some cases, centuries. A.C. Pigou (1920) was one of the first to suggest that market mechanisms could be used to correct for environmental externalities. The use of cost-benefit analysis to evaluate regulations dates back to Otto Eckstein (1958). Moreover, methods of solving environmental disputes under the common law, without resorting to government regulation, were standard practice well before the modern environmental era (Brubaker, 1995).

Nevertheless, market and free-market approaches were not widely used in the 1970s and 1980s. Even recently, the Organisation for Economic Co-operation and Development (OECD) has strongly criticized Canada for not making sufficient use of what it calls “market-based instruments.” However, this delay has not stopped researchers from demonstrating the principles and ideas of environmental economics. In 1990, the Fraser Institute published *Economics and the*

*Environment: A Reconciliation*, which described how a market-based approach could help environmentalists achieve their goals:

The essence of the reconciliation is that it is possible to use economic means in order to obtain environmental ends ... [B]y using such economic building blocks as free market prices, private property rights, and, most important, a legal system that carefully defines, delineates, and protects such rights, the goals of the environmentalists can be achieved. [A]lso, that using these building blocks is a better and more effective way of attaining an ecologically sound environment than is directly and explicitly attempting to promote this end. A strict adherence to private property rights, in other words, will do more to secure air and water purity and sound resource management than will centralized control over the economy, even if done with this purpose in mind. (Block, 1990: vii)



### Conceptualizing market-based environmental policy

There are three broad policy categories which separate market-based approaches from non-market-based approaches.<sup>3</sup>

<sup>3</sup> While these categories are useful for illustrating the differences, few policy tools fit cleanly into one category or another without any overlap. Some analysts may categorize policies differently. In addition, the categories do not include voluntary and non-compulsory programs that Canada has sometimes been criticized for relying too heavily upon (for example, see OECD, 2004). However, non-compulsory

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**Command and control:** The government, through regulation, sets the policy outcome (for example, a pollution standard to be met, or a resource harvest level to be attained) and dictates how compliance is to be achieved. A regulation that imposes a new emissions standard and prescribes what technologies must be used to meet the standard is an example of this regulatory approach. Because regulators cannot know the most cost-effective means of reducing emissions for each of the many different firms, command-and-control approaches often incur higher costs and prove less efficient than market-based policies (Harrington and Morgenstern, 2004).

**Market:** The government creates an economic incentive and lets the market determine which means will be used to achieve a particular policy goal. The creation of a tradable quota system for fisheries is an example of a market-based policy (see, for example, Jones with Bixby, 2003). An emissions tax is another example of a regulation that creates an economic incentive to reduce emissions, but allows individual emitters to decide how much they will reduce and by what means. Policies that fall within this category are sometimes referred to as “market-like,” “quasi-market,” “incentive-based,” or “economic incentive” methods. The basis for many of these policies can be traced back to Pigou (1920). The OECD (1999) studied the use of these methods and found a growing number of examples in Canada and other countries.

**Free market:** Disputes over environmental resources are settled privately through voluntary trade (market exchanges), or by the courts. Having clearly defined and well-protected property rights (e.g., the right to clean air in your backyard, or the integrity of a private forest), individuals have a vested interest and an incentive to protect and conserve; there is no need for the government to interfere. The government’s role is to ensure that property rights are protected and, when conflicts arise, to adjudicate disputes over those rights (see Coase, 1960; Rothbard, 1982). T.L. Anderson and D.R. Leal (2001) and E. Brubaker (1995) have documented the uses of free-market environmental protection. Examples of these uses include the private purchase and protection of environmentally significant lands, as is often done by land trusts; the private ownership and breeding of wildlife and endangered species; and the ability of landowners to invoke their riparian rights to stop others from discharging pollution into waterways adjacent to their land.

In a recent address, Wiktor Adamowicz, President of the Canadian Agricultural Economics Society, reflected on the state of environmental policy in Canada, concluding,

In general, Canada has relied on command-and-control policies while other industrialized countries, notably the United States with examples like the market for SO<sub>2</sub> emissions, have moved toward market-based approaches. (2007)

Adamowicz noted some recent policy developments that may help establish greater support for

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means such as advertising, information campaigns, and eco-labeling may be useful in educating people about government approaches that fall into any of the three categories outlined in this chapter.

market methods to address environmental challenges in Canada. The water licence transfer system under Alberta's *Water Act* has resulted in some trading, and trading programs have also been developed for certain air emissions in Alberta's electricity sector (Clean Air Strategic Alliance, 2003).

### > Putting ideas into practice

We wrote this book to highlight the importance of implementing market-based environmental policy in Canada. Several chapters focus on policy options, such as the use of property rights, market pricing of environmental goods and services, and permit trading for natural resources. Other chapters explore whether policy makers should rely on a *laissez faire* approach, or intervene more aggressively by implementing economic incentives. Policy evaluation tools also are addressed. And finally, an international perspective shows that there is much to be learned about environmental policy from other countries.

In chapter two, Ross McKittrick describes the substantial improvements in Canada's air quality since the 1970s, as well as the overstated claims of ill health associated with poor air quality. He also notes that despite much effort, ozone concentrations have been largely unresponsive to policy, which demonstrates that we should not expect easy solutions. Dr. McKittrick suggests the use of pricing mechanisms as a policy option.

In the following chapter, Elizabeth Brubaker examines how government financing, regulation, and operation of water and wastewater facilities create problems for Canada's aging infrastructure. Brubaker explains

how allowing private operation and financing of public water utilities would allow the government to better concentrate on its role as a regulator rather than as a water utility operator.

In chapter four, Indur Goklany compares two approaches to addressing climate change: mitigation and adaptation. While the two are not mutually exclusive, his analysis provides good reasons for pursuing adaptation programs in any set of climate policies.

In chapter five, Elizabeth Brubaker makes a strong case for returning environmental and natural resource policy to its common law roots. Not long ago, landowners could effectively rely on the courts to defend their right to use their land and adjacent waterways, free from invasion and the pollution of others. This tradition, Brubaker writes, is several centuries old, and was used effectively in Canada well into the twentieth century.

In chapter six, Quentin Grafton argues that the best managed fisheries in Canada are characterized by incentive-based approaches which may include the adoption of individual transferable quotas, by which the government sets a level of harvest and then distributes quotas (or permits) to fishers.

Following Grafton, Glenn Fox examines the growing market for ecological goods and services in chapter seven. Fox notes that despite evidence of growing supply and demand, market trading of such goods is not occurring often.

Turning to city-related environmental issues, in chapter eight, Randal O'Toole investigates whether policies that forcibly increase urban density actually reduce the commuting associated with urban sprawl. O'Toole recommends that city planners stop trying to change

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people's transportation choices directly, and instead concentrate on making sure people pay the full costs of their choices.

In chapter nine, Lisa Skumatz examines a market-based solution to managing garbage. She argues that because homeowners generally pay for garbage services as part of their property taxes, the charge they face for each additional bag of garbage is essentially zero. This creates little incentive for homeowners to reduce the amount of waste they create. Skumatz argues that more communities should consider adopting a “pay as you throw” program that charges a fee for each bag collected.

In chapter 10, Alison Berry and Holly Lippke Fretwell outline how more than 90 percent of Canadian forest land is publicly owned, in contrast to countries such as Sweden where less than 20 percent is publicly owned. This extent of government control magnifies the need for effective forestry policy. Berry and Fretwell explore ways for the government to incorporate market mechanisms to improve forest stewardship such as relying on tenure agreements that provide longer-term secure rights for private forest managers.

In the following chapter, Robin Neill describes the unfortunate state of the aquaculture industry, which is hindered by an outdated, tangled regulatory system and a lack of clearly defined property rights. Because of this situation, the aquaculture industry's ability to meet growing demand for its product and to maintain higher environmental standards has been diminished.

## > The relevant comparison: market failure vs. government failure

How much should the government intervene in environmental issues? Should it take a *laissez faire* approach and rely on the courts to enforce and protect private property rights when parties are unable to resolve their conflicts? Or should it be willing to intervene in order to create economic incentives?

One policy cannot meet all challenges. E.C. Pasour (1982) argues that policy makers should consider the reality of markets and politics before acting, which would require them to confront the risks and trade-offs between market failure and regulatory failure.

Public policy is often presented as a solution to market failure, but there are several ways in which the government can also fail. C. Wolf (1979) outlines several ways in which governments can fail. For example, the goal of government agencies is often to increase budgets and power unrelated to or unnecessary for their purpose. Failure may also result from a lack of competition, which can lead to redundant and rising costs, as well as an inequitable distribution of power and influence, and a focus on short-term political gains, which can lead to long-term unintended consequences.

How relevant are these types of government failure? In chapter 12, Dean Lueck reflects on the evolution of the *Endangered Species Act* (ESA) in the United States, and provides a troublesome example of the unintended consequences of policy. His research shows that landowners often engage in preemptive habitat destruction to prevent endangered or threatened species from settling on their property. By punishing landowners, the ESA may actually increase habitat destruction in some cases.

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## > **An international perspective: learning from others**

Canada is not alone in its effort to address environmental concerns, and there is much to be learned from other countries. In chapter 13, John Baden and his colleagues document the evolution of American environmental policy since the first Earth Day in 1970. The authors describe how the development of effective environmental policy lagged behind the spread of environmental awareness, as evidenced by the country's reliance on command-and-control approaches during the 1970s.

In the final contribution to this volume (chapter 14), David Pannell offers insights based on Australia's land, water, and biodiversity conservation policies, which have included a greater reliance on economics than programs in Canada. His chapter is useful reading for anyone who is considering environmental policy design and implementation.

## > **Conclusion**

According to Geoffrey Heal (2007), "far too many environmental policies have relied on telling people exactly what to do and what not to do. They have been classic command-and-control policies." As this book documents, the use of command and control regulation has resulted in unnecessarily high costs, and has limited individual decision making in favour of government interference. These costs limit what can be achieved, and the degree of government control creates animosity among property owners.

Free-market and market-based environmental policies would yield considerable benefits for Canadians. The cost-effectiveness of market-based policies means that more environmental improvement can be achieved at a lower cost. The authors of this book, who are experts in Canada, the United States, and Australia, demonstrate that proven market tools can be applied to just about any environmental and natural resource issue in Canada.

After weighing the risks of market failure as opposed to government failure, it should be clear that Canada should rely more on market approaches as its primary response to environmental challenges. Doing so would go a long way toward lessening the conflict that often exists between protecting environment quality and protecting economic liberty, both of which are highly desirable and beneficial to Canadians.

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Nicholas Schneider is a former policy analyst with the Fraser Institute's Centre for Risk, Regulation, and Environment. Prior to joining the Institute, Nicholas worked with the International Joint Commissions on emerging air quality issues in the US-Canadian trans-border region, and with the Ontario Ministry of Agriculture, Food and Rural Affairs on nutrient and pesticide management policy. Nicholas holds a MSc in Environmental and Natural Resource Economics and a BSc in Environmental Science from the University of Guelph. He has written on global climate policy and economics, as well as the compliance costs of the Kyoto Protocol for the Institute. Nicholas now works to find greenhouse gas reduction opportunities for the shipping industry.

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