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***The 1991 Canada-United States Air Quality Agreement: An Examination of
Domestic and Bi-lateral Enforcement***

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A Thesis
Submitted to the Faculty of Graduate Studies and Research
in Partial Fulfillment of the
Prerequisite for the Degree of Master of Arts

Department Political Science

Carleton University
Ottawa, Ontario

April 1998

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The undersigned hereby recommend to
the Faculty of Graduate Studies and Research
acceptance of the thesis,

**THE 1991 CANADA-UNITED STATES AIR QUALITY AGREEMENT:
AN EXAMINATION OF DOMESTIC AND BI-LATERAL ENFORCEMENT**

submitted by

Allison Gardner, B.A.

in partial fulfilment of the requirements

for the degree of Master of Arts

Chair, Department of Political Science
Thesis Supervisor

Carleton University
June 5, 1998

Abstract

The purpose of this paper is to demonstrate that the reliance on domestic enforcement regimes for the implementation of bi-lateral environmental agreements, especially in the Canada-United States context, does not assure the successful implementation of the agreements and their standards, and leads to insufficient protection of the Canada-US environment. As such, the domestic air quality enforcement regimes of Canada and the US are examined and their use in the implementation of the 1991 Canada-United States Air Quality Agreement (AQA) is considered. It is determined that the self-enforcement approach to implementation employed in the AQA, while necessary within the current framework of international relations, limits success in the implementation of the AQA in Canada and the US. As such, implementation of the AQA through domestic enforcement regimes must be supplemented with other bi-lateral enforcement mechanisms.

The analysis of enforcement within the Canada-US air quality context is based in literature regarding general and specific environmental regulation, as well as theories of compliance and enforcement. In the application of these theories to the enforcement regimes of Canada and the US, it is determined that, given the different political systems which exist in the United States and Canada, the two countries use significantly different regulatory approaches to address environmental problems. Canada exhibits the characteristics of a cooperative enforcement strategy, as it is marked by a close relationship between the regulated industry and the enforcement officers, who generally negotiate to ascertain compliance. The United States strategy is more adversarial, characterized by a relationship of distrust between the enforcement agency and the regulated industries.

While each regulatory approach may be suited to each particular state, the differences, particularly in enforcement strategy, have significant effects on the successful development and implementation of bi-lateral environmental agreements. The characteristics of a country's enforcement approach can also substantially affect a country's bargaining ability in the bi-lateral forum. Hence, both the domestic and bi-lateral enforcement regimes are analyzed with respect to theories of compliance and

enforcement, and recommendations for the improvement of bi-lateral enforcement in the Canada-US air quality context are offered.

Preface

I was first introduced to the problem of transboundary air pollution between Canada and the United States while traveling in the Maritimes with my family in the mid-1980s. During that time, the two countries were at a standstill in their negotiations to develop a bi-lateral air quality agreement and the Canadian government had just begun a campaign to inform the public, both Canadian and American, about the sources and effects of acid rain. As American tourists in the national parks of Atlantic Canada, my family and I were presented with all sorts of information regarding acid rain and its effects on the sensitive ecosystems of Atlantic Canada. At the entrance to the Bay of Fundy National Park in Nova Scotia, I was even given a pin, which encouraged us as Americans to join Canada in the fight to end acid rain. This experience opened my eyes to the implications of pollution on a regional and global scale and planted a seed of interest which I cultivated throughout my high school and undergraduate years.

In my senior year at Wellesley College in Wellesley, Massachusetts, I decided that I would like to further examine the problem of transborder air pollution within the context of relations between Canada and the US, with special attention to the domestic and bi-lateral policy which was developed. As such, I applied for and was awarded a Fulbright Fellowship for one year of study in Canada, in which I was to complete my research regarding the Canada-US transboundary air pollution problem. This paper is the product of that research, although it is very different than the result I envisioned when I first began this journey. I started my research with a vague hypothesis that the 1991 Canada-United States Air Quality Agreement (AQA), which was the eventual product of negotiations between Canada and the US regarding acid rain, provides a good framework for the consideration and solution of bi-lateral air quality problems; however, I soon discovered that, despite the rhetoric praising the AQA, it is a fairly weak agreement, which does not adequately address the problem of Canada-US acid rain.

Since the signing of the AQA in 1991, acid rain has fairly fallen off the domestic and bi-lateral agendas of Canada and the US. No longer are there public information campaigns regarding the effects of acid rain and calling for improvements in emissions standards; however, the problem persists. As such, the AQA has created a false sense of

security and complacency about acid rain reduction – for the most part, the biennial Progress Reports, which maintain that the implementation of the Agreement and the reduction of acid rain are successful, go unquestioned. It is assumed that the AQA is solving the acid rain problem, when in fact its framework is so weak that its own implementation is not assured. Hence, it is hoped that this analysis of enforcement of air quality regulations in the context of Canada and the US sparks renewed interest in the continuing acid rain problem and draws attention to the fact that more improvements in standards and enforcement are necessary to assure further reductions of acid rain. I also hope that the recommendations included in the following pages regarding improvements to bi-lateral implementation and enforcement are seriously considered in the establishment of new air quality standards and inspire further debate regarding the AQA and the Canada-US transboundary air pollution problems.

Allison F. Gardner

Ottawa, April 1998

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I would first like to thank my advisor, Professor Bruce Doern, whose comments and direction have helped me to narrow the focus of this paper and have aided in its development and direction. Thanks are also in order for Professor Michael Whittington whose comments and direction helped me to shape this thesis into a more readable document.

As well, I must acknowledge all of the government officials in Canada and the US who took time out of their busy schedules to speak with me regarding air quality standards and enforcement in the two countries. Their comments regarding air quality issues within Canada and the US, and acid rain relations between the two countries, provided an insight into the true workings of domestic and bi-lateral enforcement which could not have been gained from the existing literature or analysis of the relevant policy.

I would also like to express my gratitude to my mentor, friend, and fellow Wellesley alumna, Judge Vanessa Ruiz, who provided me with a place to stay while I conducted interviews in Washington, DC. As well, the informal discussions which we had regarding this paper encouraged me to further consider the implications of environmental crimes.

To my friends, I owe a debt of gratitude which I may never be able to repay – especially to Brenda, who took the time to read almost every chapter of this thesis, and combing the text for typos and other errors. As well, I thank Sara, for her encouragement and comic relief, and Keri, for being there to listen.

To my parents, William and Flora Gardner, I also express my immense appreciation for providing me with a strong foundation of love and support, which has helped me, and continues to help me, achieve my goals.

Finally, the production of this paper would not have been possible without the generosity of the Fulbright Foundation, which awarded me a fellowship to conduct the research for this paper in Canada. The Foundation has not only provided financial support, but officials at the Canadian office have also helped establish contacts in both the Canadian and American governments.

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Introduction

Reliance on domestic environmental enforcement regimes for the implementation and enforcement of bi-lateral environmental agreements does not assure successful implementation of the agreements or the sufficient protection of the environment. The political systems within which the domestic enforcement regimes are developed limit the effectiveness of domestic enforcement in the domestic and bi-lateral spheres. As well, differences in the domestic enforcement regimes of parties to the bi-lateral agreement have the potential to lead to inequality in enforcement of bi-lateral standards, which may cause conflict between the parties, and potentially result in the demise of the bi-lateral agreement. The issues of domestic and bi-lateral enforcement of environmental regulations will be examined in the context of the relationship between Canada and the United States regarding air quality and the long-range transport of air pollutants – more commonly known as acid rain. Air quality relations between Canada and the US provide an excellent context in which to study the enforcement of environmental regulations, domestically and bi-laterally. Both countries have implemented specific air quality standards through particular enforcement regimes and the two entered into the 1991 Canada-United States Air Quality Agreement (AQA) on March 13, 1991. As such, one can study the domestic standards and enforcement in both countries and their relationship to and effects on the bi-lateral agreement. It is also possible to examine the impacts which the domestic standards and enforcement regimes have had on the successful implementation of the bi-lateral agreement.

The analysis of the Canada-US air quality relationship will demonstrate significant differences between each country's domestic air quality/environmental enforcement regimes. These differences, as will be demonstrated in Chapter 3, can seriously impact the implementation of the agreement and lead to problems which threaten the existence of the AQA, as well as the protection of the environment. The reader will also discover the weaknesses of the AQA regarding its enforcement mechanisms and the potential for its successful implementation in the US and Canada. These weaknesses will be attributed not to the lack of commitment of the framers of the

Agreement or the states involved, but rather to the framework in which the agreement was developed – the international relations framework. As the reader shall discover, national sovereignty concerns are a primary limiting factor on the actions that Canada and the US have taken to address the acid rain problem in North America. The defects of the Agreement and the limitations imposed by sovereignty demand that alternatives in the enforcement of bi-lateral agreements be considered, particularly in the context of Canada-US relations. Finally, it will be determined that the current bi-lateral environmental enforcement regime incorporated in the AQA should be supplemented by other forms of enforcement which involve third party environmental groups and citizens, as well as market forces, in the domestic and bi-lateral enforcement of air quality and other environmental standards.

In the past, and to some extent still, environmental degradation was considered to be solely the concern of the nation within whose borders the effects were experienced; however, pollution does not recognize national boundaries – industrial activity in one country may not only adversely affect its own environment, but also contribute to the degradation of the environment within a neighboring country. To address these problems of transborder pollution, states enter into bi-lateral, multi-lateral, and international environmental agreements. While bi-lateral and multi-lateral agreements focus on regional issues like acid rain, international environmental agreements tend to involve global problems, such as ozone or global warming. International agreements can also address regional problems, like acid rain, on a global scale; however, for the purposes of the discussion here, let us consider international agreements as global in scope and bi-lateral agreements as regional in their focus. International and bi-lateral environmental agreements can involve general commitments to environmental protection, or they may establish plans to stop environmental degradation of a specific type, supported by specific protocols; however, as states exist in an international arena that has been described as anarchic,¹ the commitments to environmental protection cannot be imposed upon individual states – the agreements are, as their title suggests, common

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¹ “Assent to and Enforcement of International Environmental Agreements.” *Harvard Law Review*. Vol. 104, no. 7, 1 May 1991, p. 1553 (hereafter *Harvard Law Review*).

understandings on a specific topic among states. These agreements are *not* binding on the states in any way – it is by their assent only that they become subject to the requirements of the accord. Hence, implementation of these agreements and the enforcement of the standards contained therein are to be carried out by the states which are parties to the particular agreement – an approach known as self-enforcement. The understanding of the different domestic enforcement regimes which are utilized to implement these bi-lateral, multi-lateral, and international agreements is important, because it can lead to the better understanding of problems involved in implementation of specific agreements, and the development of ways in which implementation and enforcement may be improved. Thus, the analysis of implementation and enforcement within the context of Canada-US air quality presented in this paper, is intended to furnish some insight into the problems involved in the implementation of the AQA and to provide some suggestions for the general improvement of implementation and bi-lateral enforcement.

Sources and Methodology

This paper is truly multi-disciplinary in its consideration of the issues of domestic and bi-lateral environmental enforcement, as it incorporates the consideration of literature from the areas of public administration, political science, international relations, and law. In addition, the study also includes analyses of primary sources, among which are the texts of bi-lateral agreements, domestic air quality legislation and regulations, as well as bi-lateral regional agreements, federal-provincial and federal-state agreements, and inter-agency enforcement regulations. Included among the secondary sources consulted are interviews² with officials in various American and Canadian government environmental enforcement agencies – the US Environmental Protection Agency (EPA), Environment Canada, and the Ontario Ministry of Environment. These interviews were conducted with the understanding that the interviewees would not be directly quoted or have their views attributed within the text of this paper.

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² Approximately nine interviews were conducted.

In the area of public administration, literature regarding theories of regulation and enforcement was consulted. The sources may be divided into two general categories – one set of sources specifically addresses issues involved with environmental regulation, while the other set involves general theories of regulation and enforcement. Both Canadian and American authors were consulted in an attempt to limit bias in the discussion of enforcement theory. Many of these same authors were also considered regarding the application of enforcement theory to the specific American and Canadian environmental and air quality regulatory and enforcement regimes.

Literature regarding the political institutions and structures of the US and Canada was also consulted in the development of this paper, to provide a background for the understanding of enforcement problems within the political context of both countries. The discussions of the institution of federalism in the two countries and its evolution is drawn from Canadian and American political science discourse. As well, many critiques of domestic legislation and regulation in the two countries is used as a basis for the analysis of air quality legislation and regulations found in Chapter 2.

The discussions of the historical diplomatic development of the AQA, as well as the framework in which it was developed, are based on readings from the discipline of international relations. These sources may be divided into those which specifically address the issues and problems involved with the AQA, and those which provide general background on inter-state relations and bi-lateral and international environmental agreements. The discussions regarding national sovereignty in the international arena and its limitations on environmental treaty-making are also based in this body of literature.

Finally, because litigation is key to some of the discussions within the paper, the legal systems of the US and Canada are briefly considered as well. Primary to the consideration of the legal ramifications involved in the development and enforcement of the AQA, are sources which provide legal analyses within both the American and Canadian contexts. These sources may be found in law reviews and legal journals and, as such, derive from the disciplines of law and legal studies in both Canada and the US.

Acid Rain

As acid rain is the environmental issue at the heart of this enforcement analysis, it is important to understand its sources, effects, as well as why and how it become a bilateral issue between Canada and the US. Acid rain is actually the popular term for what scientists generally refer to as acid deposition. "Deposition" is considered more accurate, because the acid may be deposited in either hydrous or anhydrous forms.³ The acid in the acid rain, or deposition, is formed when sulphur dioxide (SO₂) and nitrogen oxides (NO_x) oxidize in the atmosphere to create sulphuric and nitric acid.⁴ This oxidation can occur within a matter of hours after the release of the emissions.⁵ The acids then generally fall back to the earth, either in dry, particulate forms, or in precipitation. They find their way into rain, snow, sleet, hail, fog, mist, dew, and frost.⁶ Basically, any moisture which comes from the atmosphere will contain sulphuric and nitric acids.

There are both natural and human sources of SO₂ and NO_x. The natural sources include volcanoes, the decomposition of organic matter, coastal wetlands, forest fires, etc.;⁷ however, these sources contribute minimal amounts to the atmosphere compared to the emissions which originate with human industrial sources. Garland suggests that 7 percent of the SO₂ in the atmosphere can be attributed to natural sources, while Roeloffs suggests that the contribution may range between 5 percent and 25 percent.⁸ Industrial sources, on the other hand, account for the greatest share of acid-causing emissions – up

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³ Stuart N. Keith "The EPA's Discretion to Regulate Acid Rain." *Cleveland State Law Review*. Vol. 36, 1988, p. 136, citing Office of Research and Development, US Environmental Protection Agency, *Report No. EPA-600/9-79-036, Acid Rain*. at 26 (hereafter *USEPA Acid Rain Report*); Carol Garland. "Acid Rain over the United States and Canada." *Environmental Affairs*. Vol. 16, 1988, p. 4.

⁴ Roy Gould. *Going Sour: Science and Politics of Acid Rain*. Boston, MA: Birkhauser Boston, 1985, pp. 5-6.

⁵ *Id.*

⁶ Jeffrey L. Roeloffs. "United States-Canada Air Quality Agreement: A Framework for Addressing Transboundary Air Pollution Problems." *Cornell International Law Journal*. Vol. 26, 1993, p. 422, citing James L. Regens & Robert W. Rycroft. *The Acid Rain Controversy*. at 35 (1988); Garland *Id.* p. 3, citing Office of Acid Deposition, Environmental Monitoring and Quality Assurance, EPA. "The Acidic Deposition Phenomenon and its Effects: Critical Assessment Document 3, 9-10 (Aug. 1985) (hereafter OAD Report).

⁷ Garland *Id.* p. 4, citing Congressional Research Service. "Acid Rain: A Survey of Data and Current Analyses 27 (Comm. Print 1984) (hereafter *Survey*) at 9; Keith *Id.* p. 136.

⁸ Garland *Id.* p. 4, citing *Survey* at 9; Roeloffs *Id.* p. 422, citing Gregory Westone & Armin Rosencranz. "Acid Rain in Europe and North America." 14 (1983) at 14 (hereafter Westone & Rosencranz).

to 93 percent.⁹ Generally, the emissions originate from the combustion of fossil fuels and, as such, power generation facilities and nonferrous metal smelters are the primary industrial sources of SO₂, while the same power generation plants, along with gasoline-powered vehicles are responsible for most of the NO_x emissions.¹⁰

Until the 1960s and 1970s, pollution concerns regarding SO₂ and NO_x were local to the areas in which major emission sources were located. In fact, SO₂ and NO_x were responsible for the “killer fogs” in England during the 1950s, in which hundreds of people, mainly elderly, children, and those with respiratory ailments, died due to high concentrations of the pollutants in the fogs that are common to the area. Due to this concern about local pollution, during the 1960s and 1970s, major sources in Europe and North America installed what are commonly known as “tall stacks” – some of which are actually over 1000 feet high.¹¹ While these tall stacks mitigated local pollution problems, they created a new problem – the long-range transport of air pollutants, namely SO₂ and NO_x. The stacks release the pollutants into the upper air mass, which transports them over long distances – in many cases, across national borders.¹² The pollutants are then deposited in their oxidized form far downwind of the sources which emitted them. As such, the tall stacks did not solve the problem of SO₂ and NO_x pollution, but merely transported the problem elsewhere, changing its dynamics. In the Canada-US context, the advent of tall stacks led to the advent of the transborder acid rain problem – essentially, because of the wind patterns, the SO₂ and NO_x which are emitted in the generation of power in the Midwestern US are transported to Eastern and Atlantic Canada, where they are deposited as sulphuric and nitric acid in the area’s sensitive ecosystems.¹³ See Figure 1 at the end of this Introduction for a graphic. This is not to say that all acid-causing emissions travel only from the US to Canada – in fact, some of the emissions produced in power generation and nonferrous metal smelting in Southern Ontario and Quebec affect the sensitive ecosystems in the Northeastern US, especially in

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⁹ Garland *Id* p. 4, citing *Survey Id*.

¹⁰ Roeloffs *Id* p. 422, citing *Acid Rain and Friendly Neighbors* (1988) (hereafter *Friendly Neighbors*) at 16; Garland *Id* p. 4, citing OAD Report at 117, 199; Gould *Id*. pp. 6-7.

¹¹ Keith *Id*. p. 137

¹² *Id*

¹³ Roeloffs *Id*. pp. 423-424.

the New England area; however, because of the wind patterns, *most* of the pollution travels from the US to Canada. Hence, during the 1980s, Canada sought to convince the US, which was less affected by its own SO₂ and NO_x emissions, to reduce emissions in order to reduce acid rain in Canada. The dynamics of these interactions will be discussed in Chapter 3.

The effects of acid deposition are wide-ranging. The primary areas of concern involve human and ecosystem health; however, it should be noted that acid precipitation also causes deterioration of certain types of buildings. Structures built with such materials as marble, limestone, and galvanized steel are at particular risk.¹⁴ Indeed, acidifying emissions are to blame for much of the deterioration of the ancient structures of Greece and Rome, as well as for the corrosion of the facades of buildings on both Parliament Hill and Capitol Hill.

Ecosystems are delicately balanced entities. Each organism within a particular system has its own niche and performs a function important to the sustenance of the entire system. As such, anything which affects one part of an ecosystem, affects the entire system – if a part is damaged or destroyed, the balance of the system is destroyed. Hence, acid deposition has the potential to negatively alter many ecosystems in the areas in which it is a problem.¹⁵ pH is an important element within ecosystems because certain chemical and bio-chemical reactions are only able to occur at certain levels of acidity or alkalinity. The acid introduced into an ecosystem through acid deposition may increase the acidity of the environment enough to prevent certain vital reactions from occurring. These reactions not only occur between organisms in the environment, but within organisms, including humans. Thus, if the pH drops too low, that is, the environment becomes too acidic, the vital systems within organisms will not function properly and the organisms may die.

Some organisms and ecosystems are more resilient to changes in pH while others are highly sensitive. Among the more sensitive ecosystems are some aquatic ecosystems,

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¹⁴ Garland *Id.* p. 9, citing D. Lewis and W. Davis. "Joint Report of the Special Envoys on Acid Rain." (January 1986) (hereafter Lewis & Davis) at 13.

¹⁵ For an excellent discussion of the effects of acid deposition on ecosystems, see Gould *Id.* pp. 18-22.

including lakes, rivers, streams, etc. According to Garland, these systems demonstrate the most evidence of harm due to acid deposition.¹⁶

Acid rain's adverse impact on aquatic ecosystems has been extensively documented. The evidence conclusively points to chemical and biological changes in aquatic ecosystems affected by acidic inputs, resulting in the degeneration, reduction, or extinction of species, populations of fish, reptiles, crustaceans, microbiotic life, insects, and aquatic vegetation.¹⁷

It is believed that the increased acidity interferes with the ability of aquatic organisms, particularly certain species of fish, to reproduce.

There is less known about acid deposition effects on terrestrial ecosystems, like forests; however, many scientists believe that acid deposition contributes to forest decline.¹⁸ For example, Stuart Keith suggests that the deforestation experienced in the Black Forest in Germany is the result of increased acidity in precipitation.¹⁹ Experiments have also demonstrated that acid precipitation may be harmful to leaves and roots, as well as microorganisms that live in symbiotic relationships with the plants.²⁰ "Most plants subjected to acid deposition show reduced growth, lowered crop yields, lesions, and reduced capacity for photosynthesis."²¹ Included in this category are also the effects on soil and agriculture.²²

The effects of acid deposition/precipitation on human health are even less certain; however, considering that humans are organisms, sensitive to changes in pH as other organisms are, it is not difficult to believe that increased acid deposition will have a deleterious effect on human health. The suggested effects are both direct and indirect.²³ The direct effects are generally attributed to the inhalation of dry acid particulates or of

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¹⁶ Garland *Id* p. 7, citing Lewis & Davis at 11.

¹⁷ Roeloffs *Id*. p. 424, citing various sources. See his notes 31-33.

¹⁸ *Id.*, citing *Survey* at 37.

¹⁹ Keith *Id*. p. 138, citing RH Boyle & RA Boyle *Acid Rain*. (1983) (hereafter Boyle & Boyle) at 75.

²⁰ Gould *Id*. pp. 67-68.

²¹ Keith *Id* p. 138, citing *USEPA Acid Rain Report* at 19.

²² Garland *Id*. p. 8.

²³ *Id* p. 10, citing Goyer. "Health Effects of Acid Precipitation: Overview." 63 *Environmental Health Perspective* 3 (1985).

the precursors to acid rain, SO₂ and NO_x.²⁴ Fogs are particularly dangerous – because fogs are generally ground level clouds, they tend to concentrate the oxidized SO₂ and NO_x, hence the sulphuric and nitric acids, in water droplets. Thus, a person inhaling the air during a fog, inhales a high concentration of acid particles, which have the potential to harm his pulmonary system.

Humans are also indirectly affected by acid deposition through drinking water and the ingestion of contaminated fish. High concentrations of acid in water can cause toxic metals, such as lead and copper, to leach from plumbing into the drinking water²⁵ and these metals are harmful to humans, many times even in small amounts. As was mentioned above, aquatic ecosystems are particularly sensitive to increased acidity – in fact, the fish from these ecosystems may be harmful to humans because the higher concentrations of acid in the water lead to higher concentrations of heavy metals, which accumulate in the fish. When humans ingest these fish, they may experience serious health problems from the toxicity of these metals.²⁶

Thus, one may see that the reduction of acid-causing emissions like SO₂ and NO_x is very important to both ecological and human health. It is uncertain what the effects would be if acid rain were to continue unabated. This is not to say that Canada and the US have not already taken some action domestically to curb acid rain – both have. As well, the nations have signed the AQA, recognizing the transboundary nature of the problem; however, it is questionable whether the steps already taken are enough to continue protection of sensitive ecosystems.²⁷

The reader may see that acid rain is a serious issue for northeastern North America – specifically for Canada and the US. As such, an examination of the domestic standards and enforcement of air quality emissions standards, as well as an analysis of the relationship between Canada and the US on the issue, provides a good example of the

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²⁴ *Id.*, citing “Statement of Need and Reasonableness.” (November 15, 1985) at 73; Roeloffs *Id* p. 425, citing Westone & Rosencranz at 37-38.

²⁵ Keith *Id.* pp. 138-139, citing D. Bubenick. *Acid Rain Information Book*. (1984) at 292; Garland *Id* p. 11, citing Maugh “Acid Rain’s Effects on People Assessed.” 226 *Science* 1408 (Dec. 21, 1984) at 1409-1410.

²⁶ Garland *Id* p. 10, citing *Statement of Need* at 73.

importance of enforcement. Lack of enforcement on the part of either country could have serious ramifications for ecological stability and human health, as well as for the future of the cooperative relationship between Canada and the US. A study of enforcement in the context of bi-lateral environmental agreements is important because, at the present time, agreements between states are one of the only mechanisms that may be used to address issues of bi-lateral and global pollution. Their successful enforcement and implementation is vital to the protection of the environment through the curbing of transboundary pollution.

Since the signing of the AQA in 1991, interest in the acid rain issue in the Canada-US context has diminished. Much of the discourse on acid rain, air quality and the long-range transport of air pollutants in the Canada-US context ends with the signing of the AQA. The AQA has been perceived by the governments of Canada and the US, as well as by the general populations of both countries, to be a satisfactory solution to the Canada-US acid rain problem. This is not to say that negotiations regarding air quality no longer occur, but that these interactions are much lower in profile and occur between lower levels of government in each country. As such, there exists minimal literature, aside from the biennial Progress Reports issued by the Air Quality Committee,²⁸ which examines or analyzes the implementation of the Agreement. This paper encompasses one of the first academic analyses of the AQA and its development and implementation in the 1990s. It is hoped that the determinations made within regarding the defects of the AQA and the need for supplemental bi-lateral enforcement mechanisms will spark new interest and debate about the Canada-US acid rain problem. As well, as new annexes to the Agreement are considered, it is also hoped that the suggestions regarding a new bi-lateral enforcement regime which are included in Chapter 4, will be considered so that protection of the regional air quality in Eastern Canada and the Northeastern US will be improved.

While the issues discussed in the following chapters are drawn specifically from the Canada-US air quality context, some of the concepts regarding enforcement theory,

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²⁷ See discussion in Chapter 3.

particularly the enforcement continuum, as well as domestic and bi-lateral enforcement, may be extrapolated and applied to general bi-lateral, and in some cases, multi-lateral and global agreements. Ultimately, this paper will demonstrate the inherent weaknesses in relying on a cooperative, self-enforcement model for the enforcement and implementation of a bi-lateral environmental agreement and the necessity for the introduction of supplemental enforcement mechanisms into the bi-lateral enforcement regime.

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²⁸ This body was created by the two governments in the establishment of the AQA. See *AQA* Article VIII; also see discussion in Chapter 3.

Figure 1 The Long-Range Transport of SO₂ Between Canada and the US

Source: *Canada-United States: Acid Rain* – an informational package prepared in 1989 by the Canadian Embassy in the United States

Note: This figure is slightly biased in terms of the number and location of sources, as it was prepared by Canada to convince US citizens of the need to decrease transborder pollution – there are, in fact, many more sources of SO₂ in Canada than this illustration suggests. Despite its bias, the figure does provide a relatively good conception of transborder air pollution, the prevalent wind patterns in Canada and the US, and the sensitive areas that acid rain may affect.

Chapter 1

A Brief Review of Enforcement and Implementation Theory

Prior to addressing air quality enforcement per se, it is important to place the issue within a theoretical framework. There is a variety of literature on enforcement, compliance, and implementation which may be reviewed and from which an enforcement and compliance theory may be drawn as a framework for analysis of air quality regulation. It is first important to understand what is meant by compliance and enforcement. Compliance involves a person or corporation obeying the law, or acting as the law specifies is appropriate, while enforcement refers to the activity of ascertaining the compliance of a person or corporation with a given law. Generally, enforcement is perceived as a duty assigned to particular bureaucratic agencies of the federal or state/provincial or even local governments.¹ The nature of enforcement and how it is used to gain compliance is the focus of this chapter. Enforcement in and of itself is not a simple concept. It encompasses a variety of issues, among which are the appropriate goals of enforcement, level of compliance sought, the general strategy,² the instruments of enforcement, the actors involved in enforcing, costs, political factors, etc. Each of these factors significantly influences the enforcement process and its result – that is, whether the targeted party of enforcement obeys the law/regulation at issue. Each factor also carries a particular meaning within the enforcement of environmental regulations.

Although it is similar to other economic and social regulatory legislation, environmental legislation is a category all its own – it is generally a combination of economic and social regulation. John Howard describes the function of environmental regulation as “...parallel to economic regulation, [or] at least an analogical extension of it...;”³ however, he also discusses the balance of “...‘environmental values against other

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¹ Enforcement can also include private, citizen-initiated enforcement actions. See discussion of third party involvement in enforcement later in this chapter and in Chapters 2, 3, & 4.

² cooperative v. adversarial strategy, discussed below.

³ John L. Howard. “Industrial Policy and Environmental Regulation – Canada.” *Canada-United States Law Journal*. Vol. 19 1993, pp. 322-323.

values...”⁴ Environmental legislation most often involves the regulation of activities which contribute to the economic prosperity and standard of living, as well as to the degradation of the environment, in a particular nation. As such, the regulation of these activities requires striking a balance between economic and social interests.

Regulatory agencies must operate in a political environment, for regulation is intended to preserve the sometimes fragile balance between the interests of economic activity on the one hand and the public welfare on the other.⁵

It should be noted that in this chapter, the framework for enforcement which is developed is formed with respect to the unique attributes of environmental regulatory legislation. It will later be applied specifically to the case of air quality regulation in the United States and Canada.

Goals of Enforcement

Enforcement goals are not merely the end sought in an enforcement strategy, but they are often also the driving force behind the particular enforcement approach that is used. That is to say that a regulatory agency may seek retribution as a goal, but that choice will, in essence, determine which strategy is used to achieve that goal. It is a circular process in which the desired end and the method of achieving that end are very closely related.

The goals of the enforcement of regulations are different from the goals or purposes of the legislation itself. Environmental legislation usually has as its purpose the general goal of the protection of the environment. For example, the purpose of the 1990 Amendments to the United States Clean Air Act (CAA) as stated in the legislation is: “To amend the Clean Air Act to provide for attainment and maintenance of health, protect national ambient air quality standards, and for other purposes.”⁶ The Canadian Environmental Protection Act (CEPA) states: “It is hereby declared that the protection of

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⁴ *Id.* p. 325, quoting William D. Ruckelshaus, “Preface to U.S. Environmental Laws.” 1986.

⁵ Keith Hawkins. *Environment and Enforcement: Regulation and the Social Definition of Pollution*. Oxford: Clarendon Press, 1986, p. 9.

⁶ Public Law 101-549, Title.

the environment is essential to the well-being of Canada.”⁷

The question raised by consideration of enforcement, on the other hand, is whether the goal of environmental regulation is to draw violators into compliance, deter violators from re-offending and deter potential violators from offending, or to punish the illegal acts of violators.⁸ These goals, in turn, depend upon one’s perception of whether the environmental legislation is regulatory legislation or whether the standards contained therein should be considered criminal standards, thereby making certain acts of pollution crimes.⁹ In turn, this perception is related to the value-judgments of individual citizens and of society in general. Regulatory offenses are generally considered by society to be less offensive than violations of criminal law. Generally regulatory offenses are viewed as technical violations of the law, which do not result in harm to individuals or society. Thus, if, for example, an excessive release of sulphur dioxide (SO₂) is considered to be a regulatory offense, the goal of enforcement is likely to be less retributive. Of course, with many violations of environmental regulations, there can be considerable harm to people and to the environment. The perception of this harm has allowed regulators to consider some regulatory offenses to be more serious and requiring a greater penalty, leading to the establishment of environmental crimes in certain areas.¹⁰

It should be noted that enforcement goals are not mutually exclusive; that is, a certain enforcement program may seek both deterrence and compliance, or compliance and retribution, or indeed all three, although, most, if not all, enforcement programs seek compliance from those whom they regulate. The decision whether to seek deterrence or retribution, or both, is related to one’s concept of penalties – whether punishment should be used for the sake of deterrence or simply for the sake of punishment.¹¹ As mentioned

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⁷ R.S. 1985, c. 16 (4th Supp.)

⁸ The concept of goals of enforcement is attributed to Clifford S. Russell, Winston Harrington, & William J. Vaughan. *Enforcing Pollution Controls Laws*. Washington, D.C.: Resources for the Future, 1986, p. 87.

⁹ Law Reform Commission of Canada. *Policy Implementation, Compliance and Administrative Law*. Working Paper 51. 1986, p. 40 – suggests a difference between crimes and other offenses.

¹⁰ See later discussion of environmental crimes and the harm component in determining appropriate regulatory penalties. Also see discussion of environmental crimes in Chapter 2.

¹¹ Punishment used for the sake of punishment is retribution. These two terms – punishment and retribution – are often used interchangeably throughout this section; however, punishment as an enforcement instrument – also termed sanctions or force – is distinct from punishment as the goal of enforcement, which is termed retribution.

above, it is also related to whether the general purpose of the legislation is to create a standard of acceptable behavior or to punish criminal behavior. These decisions, as well as the values which form the basis for them, in turn, are products of the political cultures, institutions, and structures of the particular countries in which they are found.¹²

Compliance

As stated above, it is assumed that all enforcement programs seek compliance with regulations. Compliance in the context of environmental regulation, particularly air quality, generally means that the polluting agent's emissions are within the legally established standards. However, "compliance...is an elaborate concept, one better seen as a process, rather than a condition,"¹³ and hence, the issue is not whether compliance should or should not be sought, but what level of compliance is acceptable and what constitutes complete compliance. In *Administrative Analysis*, Christopher Hood suggests that there are four approaches to compliance:

- (1) Aim for total compliance....
- (2) Aim for an acceptable level of compliance....
- (3) Aim to match (marginal) [sic] enforcement cost against benefits directly realized from detecting non-compliance....
- (4) Aim to match marginal enforcement cost against benefits directly realized from detecting non-compliance plus benefits of deterring evasion that would occur in the absence of enforcement effort.¹⁴

While total compliance should be an ultimate goal, realistically, 100 percent compliance with environmental legislation at any point is very difficult to achieve. This is a result of changing and expensive technologies, as well as unforeseeable events, such as accidental spills or emissions. However, complete or total compliance does not have to be defined as 100 percent compliance – a company may be in complete compliance if it has not emitted any pollutants above a particular level for the period of six months or a year. It is usually up to the regulatory agency to define compliance with respect to the

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¹² See discussion of the US and Canadian regulatory and enforcement systems in Chapter 2.

¹³ Hawkins *Id.* p. 126.

legislation and regulations. In some instances the legislation is specific about emission standards, leaving the agency to determine certain specifics related to regulation, such as the period of time within which polluters must achieve compliance. In other situations, the legislation is very vague, leaving the bulk of establishing and defining regulations and compliance determinants to the regulatory agency.

Compliance may also be defined as initial or continuing.¹⁵ According to Russell, et al, the United States Environmental Protection Agency (EPA) historically defined compliance as the installation of pollution abatement equipment.¹⁶ This initial compliance required only the equipment installation, and no proof of use of that equipment or actual decrease in emissions. Continuing compliance, on the other hand, “...is the ongoing meeting of a discharge limit over days, weeks, and years of routine operation.”¹⁷ As one may see, it is much easier to measure a polluter’s compliance level when the compliance is initial. Continuing compliance requires the use of more sophisticated monitoring devices and, therefore, the use of more resources.¹⁸ Russell, et al, suggest that the EPA’s use of initial compliance as the definition of compliance in the early days of pollution control is the reason for such high reported percentages of compliance.¹⁹ They believe that the initial compliance has been achieved and that continuing compliance is the pressing issue²⁰ – indeed, the clean air legislation and regulations in the United States now suggest that the EPA seeks continuing compliance from the sources which it monitors.²¹

Alvin Alm, former Deputy Administrator of the EPA, suggests that there is a hierarchy of goals in environmental enforcement. He maintains that in the past, the EPA’s goal was to reduce risk to the environment by treating waste; however, that goal has given way to the following hierarchy of risk reduction: 1) prevention of pollution; 2)

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¹⁴ Christopher Hood. *Administrative Analysis*. New York: St. Martin's Press, 1986, pp. 61-63.

¹⁵ Russell, et al *Id.* p. 8.

¹⁶ *Id.*

¹⁷ *Id.*

¹⁸ *Id.* p. 9.

¹⁹ *Id.* p. 8.

²⁰ *Id.* p. 9; this could be a possible explanation for the concern about increasing non-compliance – it is not that the companies are complying any less, but that the focus of the agency has turned to continuing compliance.

²¹ See Chapter 2 for discussion of the US regulatory and enforcement approach.

recycling of products that cause pollution; 3) decreasing environmental impact of pollution; 4) isolation of contaminants through proper disposal.²² Viewing this hierarchy with respect to Hood's concept of total compliance, one can see just how difficult achieving that standard could be. Total pollution prevention is every environmentalist's dream; however, the reality of the situation demands that we recognize that in an industrial society *some* pollution will occur, no matter how strict our standards.

Hood's other models are perhaps more applicable to the "real-world" of environmental regulation. Suggestion number two is very simple – to aim for an acceptable compliance level; however, in focusing on an "acceptable" level, this approach, unlike the approach introduced in suggestion one, implicitly takes into account some of the social and economic elements that may make total compliance²³ difficult or even undesirable to achieve. Suggestions three and four are even more detailed with respect to the economic considerations in environmental regulation – both provide a cost-benefit analysis to determine whether the costs of achieving compliance outweigh the benefits, or vice-versa. This analysis is important as continuing compliance, as mentioned above, often requires a level of monitoring which may be very expensive. Suggestion four is the most involved model of the four, as it also takes into consideration some social benefits, like that of deterring future and potential violators. Even this model of compliance does not encompass all possible externalities, as it does not consider other social costs and benefits such as health of the population and quality of life.

Thus, as the reader may see, compliance is not a simple concept. There are many levels and types of compliance which the regulatory agency may seek from the sources in its jurisdiction. Generally, continuing compliance is sought by environmental regulatory agencies, at least in the US and Canada, and some economic and social costs are considered in determining the level of compliance sought.²⁴ Regardless of the type and level of compliance sought, it is important to understand that it is a primary goal of most environmental regulatory programs – most regulatory agencies seek compliance as a

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²² Alvin L. Alm. "Tools' To Protect the Environment." *EPA Journal*. May/June 1992, p. 8.

²³ Total compliance is defined in this instance to be 100 percent compliance with the regulations.

goal. What separates approaches to enforcement is whether and to what extent the agency also seeks deterrence and/or retribution as goals.

Deterrence and Retribution

The goals of deterrence and retribution are closely related; however, it is important to understand the different role of punishment in each of the goals – whether punishment is used as an instrument in achieving the goals, or whether it is part of the goal itself. If the goal of enforcement is deterrence, punishment²⁵ is employed as an instrument to encourage compliance, and is not an end in itself. Punishment in the form of fines and sanctions may also be employed in an enforcement regime in which retribution is the goal; however, the ultimate goal is also the punishment of the offender – to penalize the offender for his wrongdoing.

The basic premise of deterrence is that the use of force – sanctions, fines, or some form of punishment – or the threat of the use of force, will discourage 1) the violator from performing the illegal act again and 2) potential violators from performing the illegal act.

There are two types of deterrence that are used in the enforcement of environmental regulations. The first primarily relies on the threat of the use of force, which is only utilized in extreme cases of noncompliance and violation such as the continuing and willful release of hazardous substances into the environment. For the purposes of this paper it will be termed *persuasive deterrence*. Characteristic of the second type of deterrence is reliance on sanctions and the use of force, known here as *coercive deterrence*. The question usually asked by penal theorists is whether stronger penalties – longer imprisonment, larger fines, the death penalty, etc. – will deter criminals from committing crimes. It should be noted that these concepts of deterrence are significantly simplified here, as it is beyond the scope of this paper to delve deeply into the origins and specific characteristics of deterrence. This discussion is included merely to provide the reader with a basis for understanding the motivation behind approaches to environmental regulation. Thus, the following section is in no way intended to be a comprehensive

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²⁴ See analysis of the American and Canadian air quality enforcement regimes in Chapter 2.

²⁵ Sanctions and fines are examples of the punishment instrument in the enforcement process.

review of deterrence theory.

The decision whether to seek retribution as a goal, is a function of the regulator's²⁶ perception of the regulated behavior. In his discussion about enforcement strategies, Keith Hawkins suggests that the approach is closely related to "...the sort of behavior which is subject to control. Where deviance has a categorical, unproblematic quality, a penal response is triggered."²⁷ The issue is whether one perceives the violation of environmental regulations to be a criminal act. There are "...important differences that exist between crimes and other offenses."²⁸ The perception of environmental policy has serious implications for the goals of that policy; that is, it is significant whether the legislation is seen as a method to regulate an existing, acceptable behavior, or to create a bar to a particular behavior, due to a societal consensus that a behavior is morally reprehensible. One could argue that all social policy, including criminal policy, is regulatory in that it seeks to alter or control behavior to a certain point. On the other hand, not all regulated behavior can be called criminal behavior. A crime usually involves intent to inflict some sort of harm – the *mens rea* – and the act of inflicting that harm– the *actus rea*, although some crimes involve only one of the principles. For example, conspiracy to commit murder is based solely on *mens rea*, as the act of inflicting the harm does not occur. On the other hand, manslaughter would be an example of a crime in which the *actus rea* is present, but the *mens rea* is absent. Cases of criminal negligence also involve crimes based solely on *actus rea*. In addition to these legal definitions of crime, there is a social basis for defining crime – for a behavior to be classified as a crime, society must reach a general consensus that the behavior in question is morally reprehensible. Only then may the concepts of *mens rea* and *actus rea* be applied.²⁹ If a regulated behavior, for example the unauthorized release of sulphur dioxide emissions, is not considered criminal behavior, how do we justify punishment for not meeting a certain government-created standard of behavior? Environmental crimes

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²⁶ The term regulator refers to the executive enforcement agency as well as the legislature. If, for example, the legislature characterizes a behavior as a crime, the perception of the behavior is generally clear; however, the legislature may be less clear in its classification of behavior and, as a result, the agency in charge of enforcement must determine whether or not the behavior is criminal.

²⁷ Hawkins *Id.* p. 6.

²⁸ Law Reform Commission of Canada *Id.* p. 40.

do exist, although they usually involve either *mens rea* or *actus rea*, that is, they either involve the purposeful or negligent release of toxic substances.³⁰ One possible answer to the question posed above is that the punishment rests on the harm and/or potential harm to individuals and society. One of the interesting aspects of the definition of a crime is that it involves an action which causes harm – usually to an individual, but also to society in general.

Because there is an increasing interest in the harm component of crime,³¹ it is possible that a small door for considering noncompliance with environmental regulatory standards as criminal is opening;³² however, scientific certainty regarding the actual effects of pollution is difficult to establish because of the complexity involved in tracing pollution to a particular source, especially in the case of air quality. The proof of a criminal act is very difficult to find. Also missing, as mentioned above, is the moral consensus that a certain level of emissions is criminal. Again, because the actions which cause the emissions usually contribute to the economic prosperity and standard of living of an area, society is reluctant to punish those acts. “Regulatory legislation is concerned with the protection of the public and the punishment and deterrence of acts in order to protect the interests of society generally; regulatory offenses are said to involve a lesser degree of culpability than does conviction for a crime.”³³ Thus, stronger penalties – those involved in coercive deterrence – are not likely to be successful until there is a consensus that the actions of polluters 1) should be punished or 2) will be deterred by the higher penalties. The problem with deterrence is that until the courts, as instruments of society, see the acts of violators as criminal, they will continue to be reluctant to levy high penalties. “[The courts’] inability to distinguish between pollutions of greater and lesser seriousness leads them, it is thought, to punish many polluters with derisory

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²⁹ See Hawkins *Id.* pp. 8-9, 194 and Chapter 1 generally.

³⁰ See discussion of environmental crimes in the context of the American air quality regulatory regime in Chapter 2; also see 42 USCS §7413(c).

³¹ See the recent increase of calls for victims' rights in both the US and in Canada.

³² See Chapter 2 for a discussion of environmental crimes in the Canada-US air quality context.

³³ Paul R. Cassidy & Anne Sonnen. “An Overview of the Legislative Structure of Environmental Regulation and Enforcement: Federal and Provincial Authority and Legislation.” *Environmental Inspections and Investigations*. Mississauga, Ontario: Insight Press, 1991, p. 5.

finances....[The courts] see a cross section of reality, and sanction it accordingly...”³⁴ The courts are often limited in the scope of the penalties that they may assess by the existing environmental legislation because, unless the polluting action is a crime in the statutes, the courts cannot levy criminal penalties. Thus, the issue returns to the societal consensus which is necessary to motivate the legislature to cast some polluting actions as criminal, thereby giving the court the ability to levy more significant penalties.³⁵

This is not to say that some environmental regulatory agencies do not seek to use coercive deterrence. In fact, the US EPA uses a modified form of coercive deterrence, relying on both sanctions and threat thereof to deter violators – the goals of the enforcement programs, as the reader shall discover in Chapter 2, are both deterrence *and* the extraction of the benefits of noncompliance from the polluter.³⁶ As well, Kathryn Harrison suggests that regulatory enforcement in the US is characterized by a prosecution-oriented approach.³⁷ Indeed, the US Clean Air Act does provide for some air pollution crimes that are punishable by significant penalties.³⁸

As a result of the lack of moral consensus for the creation of a crime, the persuasive form of deterrence, that is, the occasional use of force and threat of force to convince violators and potential violators to comply, is more popular among some regulatory agencies. Prosecutions, in these systems are used as tools of last resort. “The threat of prosecution lurks...in the background of private negotiations, a threat to be unveiled in the face of unco-operativeness or intransigence.”³⁹ In Canada, “...prosecution is the ultimate sanction for a regulatory offense”⁴⁰ – instead, it is the threat of possible prosecution or sanctioning that is most important.

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³⁴ Hawkins *Id.* p. 188-189.

³⁵ The US Clean Air Act Amendments of 1990 are a good example. Prior to 1990, the environmental crimes which existed were only misdemeanors, allowing the courts to impose only minimal penalties for large violations. The 1990 Amendments upgraded some of those crimes to felony status, allowing for the imposition of more serious penalties. This information is attributed to a confidential interview with an enforcement officer at the USEPA, Air Enforcement Division, 4 December 1997.

³⁶ *Id.*

³⁷ Kathryn Harrison. “Is Cooperation the Answer? Canadian Environmental Enforcement in Comparative Context.” *Journal of Policy Analysis and Management* Vol. 14, no. 2, 1995, p. 221.

³⁸ See 42 USCS §7413; CAA §113.

³⁹ Hawkins *Id.* p. 8.

⁴⁰ Richard Brown & Murray Rankin. “Persuasion, Penalties, and Prosecution: Administrative v. Criminal Sanctions.” *Securing Compliance*. ed. M.L. Friedland. Toronto: University of Toronto Press, 1990, p. 337.

If [enforcement] officers fail to exploit the moral compunction arising from the norm of conformity to the law, negotiation becomes a matter of the manipulation, delicate or otherwise, of threats....prosecution is rare...Prosecution is, as one field man put it “your final ace card,” and derives its value from being kept under wraps.⁴¹

Persuasive and coercive deterrence are generally used in different approaches to enforcement, although, it is possible for an enforcement regime which focuses on coercive deterrence to also engage in persuasive deterrence. In such a situation, the fact that the regulatory agency uses force in some instances provides it with a good basis to threaten the use of force in other situations. Contrarily, if a system primarily uses persuasive deterrence, it is, by definition, less likely to engage in coercive deterrence. It is possible that the country using such an enforcement regime does not have the resources to carry through its threats of force or that coercive deterrence and its focus on force, is contrary to the values in which the enforcement approach is based. Deterrence may be a goal, as well as an element that drives the enforcement of the environmental regulations, but the method of deterring is less concerned with an actual show of force. These two different types of deterrence provide another perspective from which to view the enforcement strategies.

As mentioned earlier, punishment/retribution is also a possible goal of the enforcement of environmental regulations. In the area of environmental regulation, it is very difficult to determine whether a penalty is meant to deter or punish an offender. Note that punishment is closely related to coercive deterrence and is usually found in a more prosecution-oriented, command-penalty enforcement approach. For example, a polluter may be fined to extract the economic benefits he accrued from noncompliance;⁴² however, an additional penalty may be added to that, increasing the total fine beyond the amount of the benefits which the polluter gained from noncompliance. That additional penalty could be viewed as a retributive payment. The fine which takes away the profits is a deterrence – a coercive deterrence – encouraging the polluter not to violate the

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⁴¹ Hawkins *Id.* p. 153.

⁴² See note 36 *supra* and accompanying text.

regulation again, because if he receives no benefit, he is unlikely to violate the law. The additional penalty is also a deterrence; however, extracting from the offender a greater amount than the benefits he received from noncompliance is not only deterring, but also punitive.

Thus, in this section, the reader may see that the goals of environmental enforcement may differ widely – there is a great distance between simple compliance and retribution. Enforcement approaches may incorporate multiple goals; however, the different types of compliance, deterrence and retribution provide the basis for discerning fundamental differences in enforcement strategies. Some of these differences will be explored in the following section.

Enforcement Models⁴³

There is a variety of literature on enforcement strategies available, most of which involves the discussion of two major types of enforcement strategies. Each author has his or her own terminology for the strategies which will be discussed briefly below; however, for the purposes of the analysis included in this paper, the two approaches will be *cooperative*⁴⁴ and *adversarial*,⁴⁵ as the description of the strategies in these terms is clearest with regard to the actual characteristics of the approaches. Other authors refer to the strategies in different manners. For example, Keith Hawkins refers to *compliance* and *sanctioning* strategies.⁴⁶ While these two major strategies refer more to the goal of enforcement – *compliance* concerns “securing conformity”⁴⁷ and *sanctioning* is more concerned with law-breaking and punishment – Hawkins’ two sub-styles of these, *penal* and *conciliatory* describe the strategic approaches with which we are concerned here.

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⁴³ Also referred to as enforcement approaches and enforcement regimes.

⁴⁴ Harrison *Id.* p. 221; Nancy Frank & Michael Lombness. “Gaining Regulatory Compliance: Law Enforcement and Power in an Interactionist Perspective.” *Administration and Society*. May 1988, p. 74.

⁴⁵ Harrison *Id.* p. 222; the adversarial strategy is also called command-control approach from time to time. This is the term most often used by the USEPA.

⁴⁶ Hawkins *Id.* p. 4.

⁴⁷ *Id.*

Christopher Hood refers to *softer* and *harder* strategies,⁴⁸ while M. L. Friedland suggests the terms *sanctioning* and *non-coercive*.⁴⁹ Shover, Clelland, and Lynxwiler refer to the cooperative strategy as *negotiated* and call the *adversarial* approach *enforced compliance*.⁵⁰ It should also be noted that Frank and Lombness suggest a third strategy of *accommodation*,⁵¹ in which the regulatory agency chooses to take no enforcement action. This approach could also be termed a self-enforcement strategy; that is, it is left to the industries to enforce the regulations among themselves without any direction or coercion from the government agency. This option will not be discussed here, as the focus of this section is on the interpretation of the positive enforcement actions taken by environmental regulation agencies.⁵²

Each of the authors mentioned above generally discusses the same options, characterized by the same tools, actors, and actions, despite the different terminology. It should also be noted that while the general strategies are discussed separately, elements of the two overlap. Thus, although a cooperative strategy is generally characterized by bargaining between parties, there are instances of the use of formal sanctions. The two enforcement strategies discussed here represent opposite ends of a continuum – at one end is the cooperative approach and at the other is the adversarial approach. See Figure 1.1. Real-world systems rarely embody all of the characteristics of one approach and none of the other. There is usually some combination of cooperative and adversarial characteristics, resulting in the creation of a hybrid approach which falls somewhere between the two extremes on the continuum. Systems that are described as cooperative have more elements of the cooperative strategy than of the adversarial and systems that are adversarial have more adversarial qualities, but some cooperative elements. The two strategies discussed here are models, the characteristics of which are examined to facilitate the reader's understanding of the differences between general adversarial and

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⁴⁸ Hood *Id.* pp. 51-55.

⁴⁹ M.L. Friedland. "Introduction." *Securing Compliance: Seven Case Studies*. ed. M.L. Friedland. Toronto: University of Toronto Press, 1990, p. 3.

⁵⁰ Neal Shover, Donald A. Clelland, & John Lynxwiler. *Enforcement or Negotiation: Constructing a Regulatory Bureaucracy*. Albany, New York: State University of New York Press, 1986, p. 11.

⁵¹ Frank and Lombness *Id.* p. 74.

⁵² See Chapter 3 for a discussion of the self-enforcement strategy with respect to bi-lateral environmental agreements.

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closed relations between industry and government.⁵⁸ This reliance on negotiation and cooperation stems from a belief that negotiations are necessary to ascertain continuing compliance⁵⁹ in an ongoing relationship between regulator and regulated. The argument is that the use of any adversarial mechanism will threaten that ongoing relationship and, in turn, threaten compliance. The closed relationship between the regulator and the regulated parties also leads to the exclusion of third parties, such as interested citizens, people affected by the actions of the industry, and interest groups, such as environmental groups. Harrison suggests that in a federal system in particular, the use of the cooperative strategy of enforcement leads to "...a closed, three-way relationship between federal and provincial governments [in Canada] and regulated firms."⁶⁰ Theoretically, third parties have recourse for action against violators and access to enforcement through the legal system; however, this option is not available in every cooperative system. Some systems, like Canada, limit access of third parties to legal recourse, through private prosecutions, civil suits, class actions, etc., generally because of tradition and structure of government.⁶¹ In Canada, for example, the traditional definition of class action to include only an immediately affected group has led to its limited use and usefulness in pursuing violators of air quality and environmental regulations. "...[F]or a class action suit to proceed there had [sic] to be a readily identifiable class of individuals with virtually identical grievances; those concerns had [sic] to meet the standards of private tort actions."⁶² Air quality suits, both private prosecutions and cases of a civil nature, are often difficult to bring because of the problem of proving causality – it is hard to trace something as ambient as air pollution to a particular source, especially in a highly industrialized area. In addition, in a closed system, third party involvement, especially

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⁵⁸ This concept is taken from the regulatory style in the United States in the 1930s. See George Hoberg. "Governing the Environment: Comparing Canada and the United States." *Degrees of Freedom: Canada and the United States in a Changing World*. ed. Keith Banting, George Hoberg, & Richard Simeon. Montreal, Quebec: McGill-Queens University Press, 1997, p. 350; George Hoberg. *Pluralism By Design*. New York: Praeger, 1992, Chapter 2 generally.

⁵⁹ See Russell, et al *Id.* p. 3 for concept of continuing compliance; also see note 17 *supra* and accompanying text.

⁶⁰ Harrison *Id.* p. 226.

⁶¹ See discussion of the American and Canadian courts and their legal principles in Chapter 4.

⁶² Michael Howlett. "The Judicialization of Canadian Environmental Policy, 1980-1990: A Test of the Canada-United States Convergence Thesis." *Canadian Journal of Political Science*. Vol. 27, no. 1, March

through the legal system, is seen as disruptive to the successful enforcement of the regulations: "...[third parties] can delay and distort implementation, as well as add to its cost."⁶³ The exclusion of third parties from enforcement and the limited use of the courts results in a very small number of actors operating in the enforcement process. In the cooperative enforcement strategy, the main actors are limited to the regulatory agency and the industry regulated. Occasionally, the courts may be involved; however, it is usually only in rare cases of blatant and harmful violation.

Another characteristic of the cooperative strategy is the absence or severely limited use of formal sanctions. Indeed, prosecution is used only as a last resort – in the cooperative enforcement regime, a prosecution is seen as a failure of the enforcement system.⁶⁴ Because the approach is based on that ongoing relationship between the regulator and regulated, the regulator is reluctant to strain relations by using formal sanctions. This is not to say that formal sanctions are never used, but that the regulator will rely primarily on conciliatory tactics to encourage compliance. If, as time progresses, the polluter continues to violate the regulations, the regulator will gradually move to more coercive tactics.⁶⁵

There are a variety of instruments which the regulator may employ in his attempts to bring the violator into compliance, which are used by enforcement officials in both the cooperative and adversarial enforcement regimes. Some instruments are more likely to be used in one strategy than in another. For example, sanctions are more common instruments in an enforcement approach which falls on the more adversarial end of the continuum. Various authors have considered the instruments available in the enforcement arsenal. The Law Reform Commission of Canada classifies enforcement instruments in three categories: 1) compelling (my term) – command-penalty mechanisms, 2) encouraging (my term) – financial incentives, and 3) persuading.⁶⁶ While these categories appear to be inclusive at first, upon closer analysis, one will realize the limitations of this cataloging. Keep in mind that this categorization is included in a paper

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1994, p.115.

⁶³ Law Reform Commission of Canada. *Id.* p. 14.

⁶⁴ Hawkins *Id.* p. 8.

⁶⁵ *Id.* p. 131; also see discussion *infra* at note 79.

reviewing the Canadian policy implementation system, which is believed to employ a more cooperative enforcement regime.⁶⁷ As such, a whole set of sanction-based instruments is excluded from the analysis. For example, in the command-penalty category are licenses, which can hardly be considered as compelling enforcement mechanisms.⁶⁸ In the encouraging category are grants, subsidies, tax breaks, etc.,⁶⁹ and in the persuasion category are such things as information and advertising.⁷⁰ The last two categories are slightly more inclusive than the first, but they also exclude other instruments of enforcement.

There are other methods of categorizing enforcement tools which have been presented by other authors. For example, Hood divides instruments into two categories – hard and soft.⁷¹ This approach is too dichotomous – it excludes from consideration the enforcement instruments, like threats of sanctions, which fall between the adversarial (hard) and the cooperative (soft). Similar problems arise in the use of the carrot/stick approach, taken from international relations theory, which divides enforcement instruments into those which are used to encourage the polluter to comply, and those which coerce the polluter to comply.⁷² This approach is also too dichotomous, precluding consideration of instruments which do not fit within the parameters of the two categories.

As these different terminologies and categorizations can be confusing, a new categorization has been developed for the purposes of this analysis – the enforcement instruments fall into three categories: 1) sanctioning, 2) agreement, and 3) information. Sanctioning instruments, as the name suggests, are tools which are used to sanction or punish a violator. As one may expect, they would be rare in a cooperative enforcement approach and more common in an adversarial enforcement regime. This category includes such tools as prosecutions, administrative penalties,⁷³ civil/tort liability,⁷⁴ as

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⁶⁶ *Id.* pp. 40-50.

⁶⁷ Harrison *Id.* p. 225; Brown & Rankin *Id.* p. 325.

⁶⁸ Law Reform Commission of Canada *Id.* pp. 41, 43.

⁶⁹ *Id.* p. 44-49.

⁷⁰ *Id.* p. 50.

⁷¹ Hood *Id.* p. 51-55.

⁷² This concept is also used by Harrison. See Harrison *Id.* p. 242.

⁷³ See Brown & Rankin *Id.* p. 347; Russell, et al *Id.* p. 26.

⁷⁴ Friedland *Id.* p. 13.

well as any other punishment-oriented devices.

Agreement tools are the broadest category, including everything that falls between information/persuasion and sanctioning. It includes instruments commonly used in both strategies, such as permits, licenses, as well as financial incentives like grants, subsidies, tax credits, etc. In order for an instrument to fall into this category, it must involve some sort of agreement between the regulator and regulated. For example, with a permit, the regulator allows the regulated source to emit a certain amount of a substance and the source agrees to emit only that amount. These instruments generally involve threat of force by the regulator if the agreement is breached.

The final category of information is very similar to the Law Reform Commission of Canada's persuasion category and the instruments involved are usually used in addition to instruments from other categories.⁷⁵ The instruments here are not simply limited to providing information to the regulated parties regarding technology and other matters, but also include such tools as warnings of violations, as well as meetings to discuss compliance.⁷⁶ Warnings and notices of violation are usually not without some potential use of force, so they are not exclusively information-providing. Thus, in this categorization, information tools are not entirely without teeth. Also included in this category are strictly information-based tools, such as advertising⁷⁷ – for example, a public awareness campaign regarding the hazards of acid rain.

Common to both strategies and related to enforcement instruments are the tactics which enforcement officials apply to gain compliance. According to Hawkins, in the cooperative strategy, the enforcement official will begin his approach to a violation with a conciliatory approach and, as time progresses and noncompliance continues, he will move on to the use of more coercive instruments.⁷⁸ The conciliatory approach is more informal, private and low visibility while the coercive approach is characterized by a more formal, high visibility approach.⁷⁹ Some examples within the range of tactics are: appealing to the violator's sense of social responsibility, portraying compliance as

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⁷⁵ Law Reform Commission of Canada *Id.* p. 71.

⁷⁶ Russell, et al *Id.* p. 24.

⁷⁷ Law Reform Commission of Canada *Id.* p. 50.

⁷⁸ Hawkins *Id.* p. 131; also see note 66 *supra*.

inevitable, and threatening prosecution.⁸⁰ According to enforcement officials at the US EPA,⁸¹ the US environmental enforcement officials also use tactics which begin at a conciliatory point and move on to more coercive tactics. It is likely that the difference between the strategies lies in how the enforcement officials define conciliatory and how quickly they are willing to move on to coercive tactics in the face of continuing noncompliance. That is to say that in an instance of continuing noncompliance, an enforcement official in an adversarial enforcement regime would move from the use of information and agreement tools to the use of sanctions and penalties more quickly than would his cooperative counterpart.

The categorization developed here is not perfect, as it does include the enforcement instruments that may be employed by third parties, such as citizen and environmental groups. Although the involvement of third parties in enforcement differs in the two types of enforcement regimes, it is important to note the availability of certain instruments in the enforcement tool-box⁸² to potential third party participants in the enforcement process. Depending on the law of the country in which they operate, third parties may be able to bring private civil suits against polluters or even against the government agency responsible for enforcement if the group feels that the agency is not enforcing the regulations properly.⁸³ If one were to categorize third party instruments, they would be included in the sanctioning category, as they tend to be more adversarial and penalty-seeking.

In the cooperative strategy, the regulator focuses more on the use of agreement and information instruments to encourage compliance. These include such tools as permits, licenses, financial incentives and information tools such as notices of violations and discussions of compliance.⁸⁴ However, the choice of tactics and instruments in both of the model enforcement regimes depends on the particular enforcement situation – the

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⁷⁹ *Id.*

⁸⁰ *Id.* pp. 141-149.

⁸¹ Confidential interview, enforcement officials Air Enforcement Division, USEPA, 4 December 1997.

⁸² The tool-box term is commonly used by the USEPA and by Alvin Alm, former EPA deputy administrator, in his article cited note 22 *supra*.

⁸³ See Chapter 4 for analysis of statutory and civil litigation; also see Chapter 2 for the discussion of citizen suits against the government and the enforcement of non-discretionary duties.

⁸⁴ For types of instruments see Russell, et al *Id.* p. 24.

nature of the relationship between regulator and polluter, the duration of that relationship, the compliance record of the polluter, and other dynamics – although the cooperative strategy is primarily based on discretion and an emphasis on negotiation and cooperation.

Advantages and Disadvantages of the Cooperative Enforcement Model⁸⁵

Advantages

There are a variety of advantages and disadvantages to the use of the cooperative enforcement strategy. Hawkins suggests as an advantage, that a cooperative enforcement regime is more efficient than an adversarial regime.⁸⁶ While he does not detail his reasons for this conclusion, one may assume that he refers to efficiency in terms of dollars and time spent on securing compliance.⁸⁷ The argument is that formal sanctions are too time-consuming and costly⁸⁸ and, as such, a cooperative approach, which does not rely on these formal sanctions, will be more efficient in ascertaining compliance with a given regulation. The cooperation on which the strategy relies may result in less expense in monitoring – that is, the system may be more efficient, in that it maintains or achieves compliance at a low cost. If there is a relationship of trust between the regulator and regulated, the regulator may be more willing to monitor less often and rely on the self-reporting of the regulated parties. As such, the enforcement agency does not need to employ a large number of people or expend a great amount of resources on monitoring for noncompliance. Those resources are then free to be utilized in some other way to promote environmental protection.

The discretion allowed to regulators in this system allows for the proper provision for smaller and more technical violations.⁸⁹ Proponents of the cooperative approach

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⁸⁵ This is intended to be a brief discussion of the advantages and disadvantages of the cooperative strategy with respect to the issues of this paper. There are other potential benefits and liabilities that may not be included here.

⁸⁶ Hawkins *Id.* p. 5.

⁸⁷ Counterpoints to the arguments found here may be found in the discussion of the advantages and disadvantages of the adversarial strategy.

⁸⁸ Russell, et al *Id.* p. 25.

⁸⁹ Hawkins *Id.* p. 197.

argue that the strict application of enforcement of regulations in the adversarial approach leads to unnecessary prosecutions, or the levying of sanctions for insignificant violations, creating the perception of the regulator as an enforcement machine.⁹⁰ Rather than punish these minor violations, regulators in a cooperative regime choose to make exceptions – to be flexible. As such, the cooperative strategy provides good terms for the ongoing working relationship that exists between the regulator and the regulated pollution source. The approach creates an environment of cooperation and flexibility which makes both parties feel at ease, and which may lead to faster and more ongoing compliance.⁹¹

In addition, regulators in a cooperative enforcement regime can keep the negotiations between the polluter and the agency on a low profile;⁹² that is, the general public need not know of a violation, allowing the violator to work toward compliance in peace. Indeed the lack of external involvement may result in less time and money being spent to bring the polluter into compliance, as neither the polluter nor the agency has to address the claims of external parties.

Disadvantages

Unfortunately, there are also many disadvantages to the cooperative approach. First, the model cooperative enforcement regime excludes third parties from participation.⁹³ While this may not seem significant on the surface, a closer examination reveals that this exclusion may in fact be detrimental to the compliance process. Third parties bring a new perspective to negotiations which may be beneficial in achieving compliance more quickly, as the perspective of the regulating agency and the pollution sources are limited because of their close relationship. In addition, “the personal relationship between regulator and polluter...can generate sympathy for the polluter’s plight...”⁹⁴ The third party generally does not feel that sympathy and may bring more objectivity to the enforcement process. Third parties, given the opportunity, may also

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⁹⁰ Hood *Id.* p. 54.

⁹¹ Harrison disagrees, see Harrison *Id.* p. 239.

⁹² Hawkins *Id.* p. 131.

⁹³ Harrison *Id.* p. 226.

⁹⁴ *Id.* p. 241.

assure that the regulatory agency is acting in the best interest of the public.⁹⁵

The cooperative strategy also risks the problem of free riders and feet-draggers.⁹⁶ If, as is suggested in the benefits section, there is less official monitoring, it may be in the polluter's self-interest to comply only when the inspectors actually inspect, thereby creating the appearance of compliance in an environment of almost total noncompliance. As such, the environment is continually degraded without the knowledge of the enforcement agency and the agency itself loses some of its legitimacy in the eyes of the pollution sources and the public. The enforcement agency is de-legitimized no matter how the continuing noncompliance is viewed. If the agency is unaware of the noncompliance, it is perceived as incompetent; on the other hand, if the agency knows about the noncompliance and allows it to continue, it is perceived as captured by the industry which it is supposed to be regulating and, as such, unable to properly enforce the relevant environmental regulations. As well, failure to address noncompliance problems may give the false impression – to the public and to industry – that pollution is acceptable or not significant. This impression leads to great frustration on the part of environmentally aware third parties, who will publicly charge that the government is failing to adequately address pollution problems.

The closed relationship between industry and the regulating agency not only leads to third party frustration, but also to potential delays in the gaining of compliance, as sources may continually delay the implementation of equipment, claiming expense, or claiming difficulty in complying for a variety of reasons. The regulatory agency is reluctant to levy sanctions precisely because of that close relationship, since, as mentioned above, they fear that levying fines will simply destroy the cooperative context of relations and the compliance that is achieved through such cooperation; however, the argument here is that compliance is rarely achieved – the agency and the pollution sources are always working toward compliance, but they never seem to actually achieve it. As well, generally in the context of a cooperative enforcement regime, in the event

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⁹⁵ This usually occurs through litigation in which the third party seeks an injunction to force the agency to perform a non-discretionary duty. See note 83 *supra* and accompanying text and further discussion in Chapter 2.

⁹⁶ Hood *Id.* p. 52.

that the agency chooses not to levy sanctions in the event of noncompliance, it is not directly accountable to anyone, as third party involvement in enforcement and government accountability through litigation is discouraged in the cooperative enforcement approach. Thus, the noncompliance continues, as the government is sympathetic to the pollution source and the third party environmentalist is barred from involvement in enforcement. Indeed, if the agency continues to avoid invoking sanctions in the event of continuing noncompliance, its authority will decrease – its threats of force will no longer be taken seriously by the sources against whom they are made. As such, current and future polluters are no longer deterred from degrading the environment.⁹⁷

The cooperative enforcement strategy also lacks structure and stability. While in and of itself, this means little, it may result in the uneven application of the law. For example, if the compliance approach is to negotiate informal agreements with the regulated parties – negotiations which are *not* open to third parties – it is possible that each company, although similar in mechanism and structure, may be given different compliance schedules. The schedule would be based not on ability to comply, but rather on the negotiating skills of the company representative – who would try to delay compliance as long as possible.

In a cooperative approach, as well, courts and lawyers are usually kept out of the enforcement arena, except in extreme cases of noncompliance or gross violations of regulations. As mentioned above, regulators are reluctant to use the legal system because the judges and lawyers are so unfamiliar with the issues and levy minute fines. Perhaps if the courts and lawyers were brought into the process more often, they would have a better understanding of the technical aspects of the compliance and of what comprises a serious violation worthy of a significant fine.

Adversarial Regime

The adversarial strategy is characterized by a more formal approach to enforcement and a greater reliance on formal sanctions to compel compliance. This is not to say that cooperative tactics go entirely unused; however, unlike enforcement

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⁹⁷ Law Reform Commission of Canada *Id.* p. 43.

officials involved in a cooperative strategy, officials operating within an adversarial enforcement regime are generally less tolerant of violations and quicker to use such enforcement instruments as prosecutions. Simply put, prosecutions are seen as a sign of success rather than of failure as they are perceived in the cooperative enforcement strategy.⁹⁸ The adversarial enforcement strategy has been termed the “legalistic”⁹⁹ approach because of its use of the legal system in ascertaining compliance. Where in the cooperative enforcement regime there is ongoing cooperation, punctuated by negotiation when a violation occurs, in the adversarial strategy, regulators are less tolerant of violations and quicker to sanction.¹⁰⁰

This difference in approach and tactics leads to a discussion of the ultimate enforcement goals and motivation for the two strategies. Compliance with the law is obviously sought regardless of the strategy used – where the two strategies differ is in the goal of deterrence. According to basic deterrence theory, if the penalty for violating the law is greater than the benefits of noncompliance, potential offenders will be deterred from violating the law and those who have violated will be deterred from taking the same course of action again.¹⁰¹ It would appear that deterrence as a goal of enforcement is more of a motivating factor in the adversarial strategy, as in the cooperative approach, sanctions and penalties are used so infrequently that they can hardly be considered deterrents.¹⁰² On the other hand, in the adversarial enforcement regime, enforcement officials rely on sanctions to deter potential violators, “...credibly threatening law breakers with the certainty of punishment, while maintaining the integrity of the process through impartial treatment of members of the regulated community.”¹⁰³ This difference in the motivating goals of the two strategies partially explains the greater use of sanctions in the adversarial approach.

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⁹⁸ *Id.* p. 8.

⁹⁹ See Harrison *Id.* p. 222 for the term.

¹⁰⁰ See note 81 *supra* and accompanying text.

¹⁰¹ For an excellent discussion of deterrence theory in a game theory model, see Kei Fukuyama, et al. “Penalty as a Component of Review Strategies for Effective Enforcement of Environmental Regulations.” *Environmentrics*. Vol. 7, 1996.

¹⁰² This problem with the cooperative strategy will be discussed further later in this chapter.

¹⁰³ James M. Strock. “EPA’s Environmental Enforcement in the 1990s.” *Environmental Law Reporter*. Vol. 20, August 1990, p. 10327.

Other characteristics of the adversarial strategy “...include reliance on formal, precise, and specific rules; the literal interpretation of rules; the reliance on the advise[sic] of legal technicians (attorneys); the quest for uniformity; and the distrust of and an adversarial orientation toward the regulated.”¹⁰⁴ It also “...relies heavily on the definition of compliance found in the ‘black letter law.’”¹⁰⁵ There are also suggestions that adversarial enforcement regimes display a centralization of regulatory power with the federal government and an increase in judicial activism.¹⁰⁶ In general, the adversarial enforcement approach is more pluralist – it is more dynamic, open and adversarial.¹⁰⁷

The use of force is different in the adversarial strategy as well. The cooperative enforcement approach calls for the use of force as a last resort – it is the perception of the power of the regulator and the threat of the use of that power, through imposition of sanctions, which are believed to deter the regulated party from violating. The adversarial strategy “...requires the power to move forward with formal action...”¹⁰⁸ Thus, the adversarial regulator relies on the actual use of his sanctioning power, whereas the regulator in a cooperative enforcement regime relies mostly on the perception of his power to levy penalties.

One final way to describe the adversarial strategy is as a “hard” as opposed to a “soft” approach.¹⁰⁹ While in its pure form the adversarial strategy may be described this way, in practice, it is more difficult to describe either strategy as hard or soft, simply because there are both hard and soft elements found within each enforcement regime. Perhaps it is better to describe the adversarial approach as taking a harder line against violations. Regardless the terms are merely tools to allow the reader to classify the two strategies in a general way and it should be understood that there will be overlap between the two strategies *in vivo*.¹¹⁰

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¹⁰⁴ Shover, et al *Id.* p. 11.

¹⁰⁵ Harrison *Id.* p. 222.

¹⁰⁶ Hoberg 1992 *Id.* pp. 45-46.

¹⁰⁷ *Id.* p. 54.

¹⁰⁸ Frank & Lombness *Id.* p. 74.

¹⁰⁹ Hood *Id.* p. 55.

¹¹⁰ This concept will be discussed further in the application of enforcement strategies to the US and Canadian air quality enforcement context in Chapter 2.

The adversarial strategy also leads to a more open system in that it allows for the involvement of third parties.¹¹¹ Adversarial enforcement regimes generally allow for more private prosecutions, civil suits, and class actions; however, the extent of access to legal recourse is dependent on the tradition and structure of the particular system.¹¹² In the adversarial approach, the opinions of third parties are introduced into the enforcement process to help keep an environment of objectivity. Third party involvement through the legal system also provides an additional deterrent to potential violators in that even if the pollution source escapes the enforcement activity of the government agency, it can still be held accountable, often financially, by the public. As such, third party involvement is generally encouraged in an adversarial strategy. Thus, the range of actors involved in the adversarial strategy is broader, including not only the regulatory agency and industry, but also private citizens and environmental groups. The more frequent use of formal sanctions results in the courts and other actors in the legal system participating as significant enforcement actors as well.

Thus one can discern the major differences between the two strategies – cooperation v. adversarial relationships, informal v. formal agreements, encouraging v. compelling tools, conciliatory v. coercive tactics, and simple compliance v. compliance/deterrence motivations for enforcement actions. Again, this section is meant to sketch the opposite ends of the continuum – real enforcement strategies fall somewhere between these two models. As the reader will discover in the next chapter, the Canadian enforcement strategy rests closer to the negotiated/cooperative end of the continuum, while the US strategy lies closer to the adversarial model.

Advantages and Disadvantages of the Adversarial Enforcement Model

Advantages

Among the advantages to the adversarial strategy are the structure and stability which it provides in the regulatory process. With this structure comes clear standards

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¹¹¹ Harrison *Id.* p.225.

¹¹² The relationship of the political institutions and structure of a nation to its environmental enforcement approach will be discussed in the context of the United States and Canada in Chapter 2.

and specific methods of implementing those standards and, as a result, uneven or inequitable enforcement of the regulations is less common. Vigorous enforcement of clear standards should lead to even enforcement. Also, given a clear explanation of what is and is not legal and what will be enforced, sources may find it easier to ascertain when they are not in compliance and to remedy that noncompliance of their own volition.

As mentioned earlier, third parties are afforded a greater role in the adversarial approach. In fact, Harrison, using the American enforcement approach as an example of an adversarial enforcement regime, suggests that "...many of the practices of closed and informal deal-making...would be illegal in the United States."¹¹³ Thus, the involvement of third parties in the implementation and enforcement processes indicates that the process is characterized by a more objective approach. As such, there is less room for the regulated parties to delay, playing on the sympathies of regulators. Third party involvement usually occurs through litigation and, as such, the courts are more involved in the enforcement process. Hence, the courts and attorneys become more familiar with environmental noncompliance issues and, as a result, the courts are able to recognize more serious violations in cases of environmental degradation and impose more significant penalties when they are warranted.¹¹⁴

One final advantage to an adversarial enforcement approach is the effect which it has on public perception. If the public perceives the government actively pursuing and prosecuting polluters, people will feel that the government is addressing the pollution/environmental degradation problem. They may also begin to view violations of environmental regulations in a harsher light; that is, they may begin to consider some forms of environmental degradation as worthy of criminal status. This may result in an even more vigorous pursuit of polluters, leading ultimately to an improvement in environmental quality.

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¹¹³ Harrison *Id.* p. 225.

¹¹⁴ It should be noted that the judicial discretion regarding penalties is somewhat limited, as the legislation often provides for the appropriate range of penalties; however, the judicial discretion exercised within that range can be quite significant.

Disadvantages

The main disadvantage of the adversarial enforcement strategy, as perceived by proponents of the cooperative enforcement strategy, is that the process strains the ongoing relationship between the regulator and the polluter which is needed for continuing compliance. "...[T]he inflexible, prosecution-oriented approach is not only inefficient in treating minor and significant violations equally, but counterproductive in provoking antagonistic relationships between regulators and the regulated."¹¹⁵ Opponents of the adversarial strategy argue that without the cooperation and close relationship with the polluter, the regulator will be unsuccessful in securing compliance. This is possibly because the polluter will be more inclined to comply if he feels that he is complying with the wishes of a "friend" or colleague. The adversarial strategy may prompt the regulated party to dig his heels in and fight against compliance.

In the quote above, Bardach and Kagan also suggest that the adversarial strategy results in the inefficient treatment of different violations. This is related to the rigidity of the approach as well as the cost, in dollars and time, of formal sanctions. According to Hood, the strategy may be too rigid to be modified in certain cases of harmless or technical violations.¹¹⁶ As such, the regulator turns into a blind enforcement machine,¹¹⁷ not taking into account the "practical realities" of implementation.¹¹⁸ This involves an issue of inequity – the fairness of equally punishing a polluter who has exceeded the emission limit by a small amount and one who has purposefully continued gross violations of the regulations is questionable. Some would argue that all excess emissions, no matter how they occur, should be punished. Opponents of the enforcement machine approach argue that there should be some difference in enforcement based on the magnitude of the violation and whether the polluter demonstrates intent. In the United States, for example, some gross violations in which the polluter demonstrates

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¹¹⁵ Harrison *Id.* p. 223, referring to Bardach and Kagan 1982.

¹¹⁶ Hood *Id.* p. 53.

¹¹⁷ See note 90 *supra*.

¹¹⁸ Hawkins *Id.* p. 199.

mens rea are considered environmental crimes under the US Clean Air Act.¹¹⁹

Equity is also called into question with regard to other elements in the enforcement regime. For example, Harrison suggests that the level of enforcement may be closely related – inversely proportional – to the power of the corporation regulated.¹²⁰

That is, the greater the power of a polluter, the less likely he will be strictly sanctioned in the adversarial enforcement regime. It is argued that as larger companies contribute more pollution to the environment, yet have more power, political, economic, or otherwise, the bulk of the violations will go unpunished.

Even if one admits that formal sanctions, such as prosecutions, are effective in deterring violations, no regulatory agency has sufficient resources to sanction all violators.¹²¹ “Criminal proceedings consume time as well as resources,”¹²² and formal sanctions are “cumbersome and costly.”¹²³ Prosecutions especially require a significant amount of time and resources and other sanctions are difficult to impose. For example, one may have great difficulty collecting a fine levied as part of an administrative sanction. Enforcement officials in the cooperative enforcement approach would claim that it is much easier to simply work out a cooperative schedule with the polluter than to waste time and resources pursuing charges against him. In addition, in order to have enough evidence for a prosecution or to impose a formal sanction, the regulator must continue to monitor the pollution activities of the regulated party.¹²⁴ This process of continuous or periodic monitoring is also expensive, in both time and resources. Formal sanctions also bring with them high visibility¹²⁵ for both the regulatory agency and the regulated party. If the prosecution does not result in a conviction for the agency, it may be scrutinized and criticized publicly.¹²⁶ Formal sanctions also have a stigma about them that may not be considered appropriate for a simple violation of an environmental

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¹¹⁹ See note 30 *supra* and accompanying text.

¹²⁰ Hawkins *Id.* p. 192.

¹²¹ *Id.*

¹²² Brown and Rankin *Id.* p. 346.

¹²³ Russell, et al *Id.* p. 25.

¹²⁴ *Id.* p. 25.

¹²⁵ For concept of high visibility in prosecutions see Hawkins *Id.* p. 131.

¹²⁶ *Id.* p. 194.

regulation.¹²⁷

Another problem with the adversarial approach is that lawyers and judges may be unfamiliar with the technical aspects of regulations and indeed, with what constitutes a gross violation of the regulations. Prosecutors may not know how large a fine to seek nor the judge know how heavy a fine to impose. The result is a system in which the courts levy light and almost meaningless penalties for severe violations.¹²⁸

Finally, as was mentioned earlier, environmental regulations are not based on a moral consensus, but rather a balance between economic interests and social welfare.¹²⁹ Thus, in punishing a regulated party for a violation of environmental regulations, one is also punishing that source for an activity that leads to the economic prosperity and increased standard of living for the nation in which it is located. Some opponents of the adversarial strategy believe that it is wrong to punish a company for its contributions to the economy.¹³⁰

In this discussion of advantages and disadvantages of the adversarial strategy, as well as in the similar discussion regarding cooperative strategy, one may see the arguments and counter-arguments of each approach. One's perception of the appropriate approach for successful enforcement of environmental regulations depends greatly on one's views regarding the place of cooperation in regulatory enforcement. The enforcement regime is also related to the political structure and institutions of a particular country, the development of regulatory law, and society's beliefs regarding environmental regulation in general. In Chapter 2, the development of enforcement strategies *vis a vis* environmental regulation in Canada and the United States, as well as the link between enforcement strategies and political institutions, political culture and government structure will be considered.

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¹²⁷ Brown and Rankin *Id.* p. 341.

¹²⁸ Russell, et al *Id.* p. 25; Brown and Rankin *Id.* p. 346.

¹²⁹ Hawkins *Id.* pp. 9, 194.

¹³⁰ This argument ignores the concept of the net benefits of an action, which includes a calculation of the benefits to the economy and the harm to the environment. This is still, although a supposedly objective cost-benefit analysis, a value-laden decision. It hinges upon what value one gives to the environment.

Conclusions

This chapter has established the two model enforcement strategies that provide the ends to the enforcement continuum and has considered the bases of the strategies and philosophies behind the different enforcement approaches. The enforcement goals of compliance, deterrence, and retribution should provide the reader with a philosophical base in which to view the following discussion of the Canadian and American enforcement strategies. In addition, the models and their benefits and liabilities should also provide a comparison for the Canadian and American approaches, which, as the reader will discover in the next chapter, fall somewhere between the ends of the enforcement continuum. No conclusions regarding the preferability of the model enforcement approaches are made in this chapter, as the regimes' effectiveness in securing compliance must be examined with respect to the environmental policy, regulations, enforcement, and political institutions, political culture, and government structure of a particular nation. These connections will be considered and analyzed in Chapter 2.

Chapter 2

The Application of Enforcement Theory to the American and Canadian Environmental Enforcement Regimes

“...[P]olicy systems of nations are so different that understanding one does not necessarily help the understanding of another.”¹

In the last chapter, the reader was introduced to the enforcement strategy continuum. While some vague references were made to both the Canadian and American environmental enforcement regimes² in the course of that discussion, neither enforcement approach was discussed in depth. It is the purpose of this chapter to apply the two regulatory enforcement models to both Canadian and US regulatory regimes in the area of clean air, specifically in the control of acid-causing emissions like sulphur dioxide (SO₂). As the reader will see, enforcement strategies of the two countries differ in many aspects; however, neither neatly fits within the parameters of the enforcement models at either end of the enforcement continuum. In fact the Canadian and American air quality enforcement approaches contain some similar elements. Thus, the two approaches fall somewhere between the model cooperative enforcement regime and the adversarial enforcement model. See Figure 2.1. The analysis of the air quality enforcement regimes in the two countries will be developed through an examination of the relevant legislation, regulations and enforcement practices in each country. In addition to providing an analysis of the air quality enforcement regimes, this chapter also provides an examination of the institutional, cultural, and structural origins of the two enforcement approaches, which will be utilized later in Chapter 3 in the consideration of the implications of the different strategies for the successful implementation and enforcement of the 1991 Canada-United States Air Quality Agreement (AQA).

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¹ George Hoberg. *Pluralism By Design*. New York: Preager, 1992, p. 9.

² As in Chapter 1, the terms regime, strategy, and approach are used interchangeably here to describe the set of enforcement mechanisms employed in the different countries. See Chapter 1, note 43.

Figure 2.1 Enforcement Continuum

Canada and the United States: A Legislative and Regulatory Comparison

Before considering the implementation of legislation and the enforcement of regulations related to that legislation, it is important to understand the purpose and scope of that legislation. To that end, the following analyses of the Canadian and American enforcement regimes begin with a discussion regarding the applicable air quality legislation and regulations in both countries. As well, an analysis of the air quality legislation gives some insight into the enforcement strategies employed with respect to air quality in Canada and the US and provides a basis for more detailed discussions regarding the enforcement tactics and instruments utilized in each regime. It should be noted that the air quality legislation of the respective countries is slightly different in form, due to the differences in the political systems within which it was developed and, as such, the analysis of the legislation and its relationship to the enforcement regime in each country differs slightly.

Canadian Air Quality Legislation and Enforcement: A Brief Overview and Analysis

Jurisdictional Issues

Because of the bifurcated nature of government in Canada, before the legislation itself is addressed, the nature of federal and provincial power to develop environmental legislation must be considered. It is important to examine which level of government has

historically exercised jurisdiction over environmental, especially air quality, issues.

Determining jurisdiction with respect to environmental issues requires consideration of the distribution of powers in the Constitution Act of 1867, especially in Sections 91, 92 and 92 A, and their development through judicial interpretation of the Act.

Section 91 maintains that the federal government of Canada has the power “...to make Laws for the Peace, Order and good government of Canada...” (POGG) Although *prima facie* this power appears to be broad, it has been narrowly interpreted by the Judicial Committee and the Supreme Court of Canada. Through various cases at the end of the nineteenth century and the beginning of the twentieth century, the Judicial Committee of the Privy Council limited the federal government’s ability to enact legislation under POGG. For example, in *Citizens Insurance Company of Canada v. Parsons*³ and the *Local Prohibition*⁴ case, the Committee determined that POGG is not a broad power, exclusively granted to the federal government, but rather a residual power, which allows the federal government to enact legislation in areas not enumerated in sections 91 and 92.⁵ “The exercise of legislative power by the parliament of Canada, in regard to all matters not enumerated in s. 91, ought to be strictly confined to such matters as are unquestionably of Canadian interest and importance, and ought not to trench upon provincial legislation with respect to any of the classes of subjects enumerated in s. 92.”⁶ By 1922, in *Re Board of Commerce Act and the Combines and Fair Prices Act, 1919*,⁷ it had been determined that POGG could only be used in extreme circumstances, “...such as those of war or famine, when the peace, order and good government of the Dominion might be imperiled.”⁸ Finally, in 1922, POGG was interpreted as an emergency power, only to be used when national crisis loomed.⁹ Although the federal government’s discretion in determining whether a national emergency exists was limited by the Judicial

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³ 7 (A.C.) 96 (1881)

⁴ *Attorney-General for Ontario v. Attorney General of Canada* (1896) A.C. 348.

⁵ General information contained in this section regarding the evolution of federalism in Canada is attributed to Richard J. Van Loon & Michael S. Whittington. *The Canadian Political System: Environment, Structure, and Process*. Fourth ed., Toronto, Ontario: McGraw-Hill Ryerson Limited, 1987, pp. 249-267.

⁶ See *Local Prohibition* at 360.

⁷ D.L.R. 513 (1922)

⁸ *Board of Commerce* at 513, quoted by Van Loon and Whittington *Id.* p. 251.

⁹ *Fort Frances Pulp and Paper Co. Ltd. v. Manitoba Free Press Co. Ltd.*, (1923) 3 D.L.R. 629, quoted by Van Loon & Whittington *Id.* p. 251.

Committee in 1937,¹⁰ the Supreme Court has been more generous in its decisions, maintaining that the federal government can declare a national emergency to justify legislation.¹¹ Thus, although some believe that the federal government's POGG power includes "...laws which involve the regulation of pollution,"¹² that power is limited the enactment of legislation regarding environmental problems which pose an immediate threat to the nation of Canada¹³ and those which may be considered part of one of the enumerated sub-sections under s. 91.¹⁴

Section 132 of the Constitution Act, regarding the powers of the federal government to make and enact treaties, was also a potentially broad power, which would have allowed the federal government to enact legislation to implement treaties with foreign countries.¹⁵ However, in 1937, the Judicial Committee held that although the federal government has the power to make treaties, it does not have the broad power to implement them through federal legislation.¹⁶ Hence, although the residual power of POGG, extends to the establishment of treaties, it does not include the necessary legislation to implement the treaties. As such, if Canada enters into an environmental treaty with another country, it must negotiate with the provinces regarding the implementation of the standards established as part of the agreement.¹⁷ Thus, s. 132, does not provide the basis for strong federal legislation regarding the environment.

Thus far, this analysis has focused on the federal power to enact environmental legislation; however, to fully understand the complexity of the jurisdictional issues, one

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¹⁰ *Attorney-General for Canada v. Attorney-General for Ontario* (1937) A.C. 355; (1937) D.L.R. 684, quoted *Id.* p. 252.

¹¹ Van Loon & Whittington *Id.* p. 260, citing Peter Russell. "The Anti-Inflation Case: The Anatomy of a Constitutional Decision." *CPA*, Winter, 1977, p. 632.

¹² Peter Nemetz. "Federal Environmental Regulation in Canada." *Natural Resources Journal*. Vol. 26, Summer 1986, p. 552.

¹³ Nemetz *Id.*; Paul R. Cassidy & Anne Sonnen. "An Overview of the Legislative Structure of Environmental Regulation and Enforcement: Federal and Provincial Authority and Legislation." *Environmental Inspections and Investigations*. Mississauga, Ontario: Insight Press, 1991, p. 4.

¹⁴ See for example, power to make laws regarding "Sea Coast and Inland Fisheries." *Constitution Act, 1867* s. 91(12)

¹⁵ It should be noted that in the text of the Act itself, s. 132 refers to treaties made on behalf of Canada by Great Britain; however, when Canada began to enter into treaties independently, the section was re-applied to the federal government of Canada.

¹⁶ *Labour Conventions Case* (1937), cited by Van Loon & Whittington *Id.* p. 257.

must also consider provincial power. Section 92A of the Constitution Act is particularly relevant to a discussion of provincial powers with respect to environmental protection, as it provides for provincial power regarding non-renewable resources. Under the section, a province: "...may exclusively make laws in relation to...development, conservation and management of non-renewable natural resources...in the province."¹⁸ Hence, any laws regarding the environment which are related to the development, conservation, or management of local, provincial resources generally fall within the realm of provincial jurisdiction, as s. 91 contains no similar sub-section regarding natural resources and the environment, except for its management of fisheries, which is beyond the scope of the discussion here. In the area of air quality, specifically with respect to SO₂ and NO_x emissions, the provinces appear to have more jurisdiction, as the activities which lead to the production of SO₂ and NO_x emissions are related to the exploitation and use of non-renewable fossil fuels. Indeed, the provincial powers under s. 92, particularly sub-section 13 regarding property and civil rights, have been interpreted relatively broadly by the Judicial Committee and later by the Supreme Court. The provincial powers regarding property and civil rights have been construed so broadly that they generally include almost all matters which are not specifically inter-provincial or international.¹⁹

This liberal interpretation of provincial power combined with a significant limiting of federal power by the courts has resulted in a political system in which power is generally decentralized and in which provinces have primary jurisdiction over many environmental issues, including air quality. As such, most of the specific legislation regarding air quality may be found in the provinces.²⁰ This is not to say that the federal government has been inactive in legislating on environmental issues in general, or on air quality specifically; however, its legislation, as the reader shall discover below, is generally non-specific and addresses issues of transboundary air pollution. As well, the federal government has negotiated some federal-provincial agreements regarding the

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¹⁷ Federal-provincial agreements will be discussed further below and the implications of this limited federal implementation power will be discussed in the context of the Canada-US Air Quality Agreement in Chapter 3.

¹⁸ *Constitution Act, 1867* s. 92A(1)(b); under s. 92(16), a province also has the power to make laws regarding "...all Matters of a merely local or private Nature in the Provinces."

¹⁹ See Van Loon & Whittington *Id.* p. 255.

reduction of SO₂ emissions which limit duplication and conflict between the federal and provincial legislation, and which are important to the implementation of the AQA.²¹ Essentially, the federal government and the provinces perform different roles in environmental/air quality regulation – the federal government addresses issues regarding transboundary and international air pollution, while the provinces develop and implement specific legislation and regulations.

Canadian Air Quality Legislation

There is one piece of federal legislation which is pertinent to the acid rain/air quality issue – the Canadian Environmental Protection Act (CEPA). The general purpose of CEPA is the protection of the environment, which is deemed “...essential to the well-being of Canada.”²² Until 1988, there existed a federal Clean Air Act, but with the consolidation of legislation in 1988, the Act became part of CEPA. The original Clean Air Act gave the federal government power to establish maximum emission limits for certain sources and to establish national air quality standards in certain situations – for example, if Canadian sources were contributing significantly to transboundary air pollution.²³ These powers were subsumed under CEPA generally, and the government’s powers regarding transboundary air pollution became Part V of CEPA. Part V states that the Minister of the Environment may establish air quality standards regarding air contaminants which contribute to air pollution in another country²⁴ or which will result in the violation of an international agreement;²⁵ however, the Minister must consult with the provinces in which the pollution sources are located and, if it is determined that a province has comparable controls to that which would be established under CEPA, the province may be exempt from the federal regulations.²⁶ Other parts of CEPA give the Minister the power to establish regulations regarding pollution control activities of

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²⁰ See Cassidy & Sonnen *Id.* p. 3.

²¹ See later discussion in this chapter and in Chapter 3.

²² *CEPA* Declaration

²³ Nemerz *Id.* p. 556.

²⁴ *CEPA* s. 61(1)(a)

²⁵ *Id.* s. 61(1)(b)

²⁶ *Id.* s. 63(3); see CEPA regulation stating Alberta’s exemption from federal regulation due to similar legislation at the provincial level.

federal departments, agencies, and Crown corporations;²⁷ however, air quality standards, specifically SO₂ standards, are conspicuously absent from CEPA Regulations – Part V is the only section of CEPA which addresses air pollution specifically. As the reader shall discover below, the specific air quality standards are generally established and implemented by the provinces, although some federal-provincial agreements regarding SO₂ emissions reductions have been developed.²⁸ In addition, it should be noted that the Minister is not compelled by CEPA to take any specific action regarding environmental protection, as the legislation is worded in such a manner that the Minister has great discretion in determining standards, provincial-federal agreements, and exemption from federal standards. CEPA also provides the Minister with the discretion to impose fines and penalties in the event that a source, within the jurisdiction of the federal government, fails to comply with the Act or its regulations,²⁹ although, as will be discussed below, these formal sanctions are rarely utilized.

The legislation also allows for private citizens to bring civil suits against polluters in the event that the citizens are harmed by a pollution source's failure to comply with the Act.³⁰ The provision for civil suits is significant, as it provides for some third party involvement in enforcement – a traditionally adversarial characteristic; however, it should be noted that civil suits are still considerably limited due to the procedural limits imposed on citizen suits by the courts.³¹ As well, the Act specifically recognizes due diligence as a defense in these civil suits, which allows the courts to limit a pollution source's liability if it demonstrates that it has taken all possible action to avoid polluting the environment.³² This is less strict than absolute liability in which the source can be liable simply for committing the act – whether or not it was intentional.³³ In addition, CEPA's applicability is limited generally to Crown corporations and federally controlled

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²⁷ *Id.* s. 52

²⁸ See discussion of the Eastern Canada Acid Rain Program *infra* at pp. 52-54.

²⁹ *CEPA* beginning at s. 111.

³⁰ *CEPA* s. 136.

³¹ See discussion *infra* at pp. 90-93; also see Chapter 4.

³² *CEPA* s. 125; Kernaghan Webb. *Pollution Control in Canada: The Regulatory Approach in the 1980s*. Ottawa, Ontario: Law Reform Commission of Canada, 1988, p. 35.

³³ Webb *Id.*

sources,³⁴ as given the jurisdiction established in the Constitution Act of 1867 the sources in the provinces are regulated by provincial authorities – as such, there will be limited opportunity for the filing of civil suits under CEPA. Hence, the incorporation of sanctions and civil suits into CEPA make the Canadian enforcement regime appear more adversarial than it actually is *in vivo*.

Many of the provinces also have air quality legislation; however because of time and space constraints here, only the Ontario Environmental Protection Act (OEPA) will be considered. OEPA is written in much the same way as CEPA – vague and affording much discretion to the Minister of the Environment. Its purpose, like that of CEPA is to “...provide for the protection and conservation of the natural environment;”³⁵ however, unlike CEPA, OEPA has no direct provision related to air quality – the legislation is general, defining a polluter as anyone who discharges any contaminant into the natural environment³⁶ and outlining the appropriate response of the Ministry in the event of pollution. The Act also provides the provincial Minister of Environment with the discretion to impose penalties for noncompliance with the Act or any of its regulations.³⁷ Again, the actual use of these sanctions is less frequent than the legislation may suggest.

OEPA regulations, eight of which pertain to SO₂ emissions, address emissions reductions of specific pollutants and are tailored to address the emissions of specific sources: Regulation 336 refers to the emissions of ferrous foundries; Regulation 337 is a general regulation of ambient air quality; Regulation 351 pertains to the sulphur content of fuels. The remaining regulations – 355, 660/85, 661/85, and 663/85 – are part of Ontario’s Countdown Acid Rain Program and address the particular emissions standards of major SO₂ sources in Ontario – Ontario Hydro, INCO, Falconbridge, and Algoma.

Thus, this brief examination of CEPA and OEPA has demonstrated that while neither piece of legislation specifically addresses air quality/acid rain problems, the provincial regulations are more specific regarding actual emissions reductions for individual sources. As well, it should be noted that while both CEPA and OEPA are

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³⁴ See note 27 *supra*.

³⁵ *OEPA* s. 3

³⁶ *Id.* s. 6(1)

³⁷ See for example *Id.* s. 186.

written in a manner suggesting an adversarial approach to enforcement, for example through the imposition of significant sanctions in the event of noncompliance, the discretion afforded the federal and provincial Ministers of Environment and the federal and provincial enforcement officials, limits the adversarialness of the legislation. As the reader shall discover below in the examination of enforcement and compliance policies, coercive enforcement tactics and sanctions are rarely used.

As mentioned briefly above, the federal and provincial governments often develop agreements which limit conflict and overlap in environmental legislation and regulations and which also facilitate the implementation of international or bi-lateral environmental agreements like the AQA. The Eastern Canada Acid Rain Program incorporates a set of federal-provincial agreements regarding air quality, specifically SO₂ emissions.³⁸ Each of the provinces of Manitoba, Ontario, Quebec, New Brunswick, Nova Scotia, Newfoundland, and Prince Edward Island have developed agreements with the federal government of Canada regarding limits on SO₂ emissions for the provinces.³⁹ Most of these agreements are vague and leave much discretion regarding the establishment and enforcement of regulations to the province. In fact, most of the provisions in the agreements relate to general cooperation and information exchange – the only agreement which contains any specific information as to how the standards are to be met is the Ontario Agreement. The other agreements outline specific standards to be met; however, they generally do not provide any guidelines on how the standards will be implemented or what actions the provinces will take in the event that a major source of SO₂ within the province fails to comply with the regulations. There have been some revisions of these agreements since their original drafting – the provincial SO₂ emissions caps in some of the agreements have been decreased over the years; that is, the province has agreed to emit even less SO₂. See Table 2.1 below. While the Eastern Canada Acid Rain Program federal-provincial agreements are written in formal language, they contain

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³⁸ The Program was announced in February 1985 – G. Bruce Doern & Thomas Conway. *The Greening of Canada: Federal Institutions and Decisions*. Toronto, Ontario: University of Toronto Press, 1994, p. 158.

³⁹ Information regarding the Eastern Canada Acid Rain Program is attributed to the texts of the seven agreements.

no enforcement provisions⁴⁰ and, as such, if a province overall SO₂ emissions for Ontario. As a result, Ontario may have to renegotiate its fails to meet its emission cap for a particular year,

Table 2.1 SO₂ Emission Limits for Eastern Canada⁴¹

<u>Province</u>	<u>Original Limit⁴²</u>	<u>1996 Limit</u>
<u>Manitoba</u>	550 ⁴³	550
<u>Ontario</u>	2300	885
<u>Quebec</u>	600	500
<u>New Brunswick⁴⁴</u>		175
<u>Nova Scotia</u>	204	189
<u>Newfoundland</u>	45	45
<u>Prince Edward Island</u>	5	5

there can be no action taken against it, either by the federal government or by concerned citizens. Indeed, a province may renegotiate its agreement at any time to accommodate for the industry within its borders. This may be significant considering the recent announcement by Ontario Hydro that it will be closing most of its nuclear power generating plants, as the company will have to return to the burning of fossil fuels, which will increase its emissions of SO₂. In turn, due to this increase in emissions, the government of Ontario may need to renegotiate its agreement with the federal government and Ontario Hydro may need to renegotiate its emissions cap with the Ontario government as well. Indeed, the Ontario Minister of Environment has already

⁴⁰ Confidential interview with an official at Environment Canada, Air Issues Division, 3 November 1997.

⁴¹ Current Figures for SO₂ emission limits were obtained from the *Annual Report on the Federal-Provincial Agreements for the Eastern Canada Acid Rain Program* 1996 as published by Environment Canada; the "original" figures were obtained from the texts of the various federal-provincial agreements.

⁴² The original agreements were made between March of 1987 and February of 1988.

⁴³ Amounts are in kilotonnes.

⁴⁴ The original agreement for New Brunswick was unavailable.

announced that Ontario will not be meeting its emission standards for 1997,⁴⁵ maintaining that the province has chosen not to meet its SO₂ emissions cap under the Eastern Canada Acid Rain Program until the United States begins to meet its standards under the 1990 Amendments to the US Clean Air Act and the AQA;⁴⁶ however, a more likely reason for the announcement is that Ontario simply *cannot* meet its SO₂ limits because of the great increase in emissions from Ontario Hydro.⁴⁷

Incidentally, Environment Canada has just recently announced significant budget cuts, which will result in the elimination of an estimated 200 jobs. The agency claims that the cuts are part of a “harmonization” policy which is giving more control of environmental regulation to the provinces; however, the provinces have also recently decreased the budgets of their environmental protection agencies. The Ontario Ministry of Environment (MOE), for example, has seen a cut of 43 percent and the Compliance and Enforcement Office’s budget has been diminished by 30 percent.⁴⁸ Given these sizable budget cuts, one wonders who is truly responsible for environmental protection and more, who can be responsible given the limited resources. The problem of enforcement of air quality standards in the face of budget cuts will be discussed further in Chapter 3.

Some new environmental legislation regarding acid rain may be on the horizon – the federal government has just released a report from The Acidifying Emissions Task Group which outlines a possible strategy for controlling acid rain-causing emissions post-2000.⁴⁹ The Report suggests that even with the sizable emissions reductions in SO₂ that have already been made, acid rain continues to be a significant environmental problem. New, even stricter standards for SO₂ emissions are suggested, and continued negotiations with the US to encourage further reduction of US emissions are recommended. Finally, the Task Group comments on the need for stronger commitments to stricter emissions

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⁴⁵ Andrew Duffy. “Ontario to Block New Acid-Rain Plan.” *The Ottawa Citizen*. 12 November 1997.

⁴⁶ See discussion of US obligations under the AQA in Chapter 3.

⁴⁷ The issue of increased Ontario Hydro/Ontario emissions suggests a problem with decentralized implementation of standards, which will be discussed further in the context of the US-Canada AQA in Chapter 3.

⁴⁸ Paul McKay. “Environment Canada Told to Cut Staff, Spending.” *The Ottawa Citizen* 4 October 1997.

⁴⁹ The information in this section is attributed to Acidifying Emissions Task Group. *Towards a National Acid Rain Strategy*. Environment Canada. October 1997.

standards from the provinces and the need for new federal-provincial agreements. The Plan is only in the proposal stage, thus any significant action by the legislature is still at least six months in the future; however, if the suggested improvements are adopted, it is likely that a further reduction in acid rain will be realized and, in turn, the regional Canada-US air quality will improve.

Canada's Enforcement Approach

Based on the discussions above regarding the decentralized nature of jurisdiction over air quality and the federal and provincial air quality legislation, one can already perceive some of the characteristics of a cooperative enforcement regime; however, an examination of the enforcement tactics and mechanisms utilized by Canadian enforcement officials will further demonstrate that the Canadian approach to the enforcement of environmental regulations contains many of the elements of the model cooperative enforcement regime discussed in Chapter 1. According to Peter Nemetz, "...the Canadian system is characterized by a relatively closed, consensual and consultative approach with a small number of prosecutions"⁵⁰ and Kernaghan Webb perceives the Canadian system as "...negotiating gradual compliance..."⁵¹ As well, Kathryn Harrison suggests that the Canadian enforcement approach fits within the parameters of the cooperative model.⁵² The goal of this section is to examine the characteristics of the Canadian environmental enforcement regime – the actors, networks, enforcement instruments, as well as the ultimate goal of the enforcement process – and determine where it falls on the enforcement continuum.

Before considering the different elements of Canada's air quality enforcement strategy, it is important to understand that there is a gap between the legislation/regulations which are to be enforced and the actual enforcement. Rankin and Finkle perceive a "...significant gap which has opened up between the words on paper, the 'black-letter' law, and the actual actions undertaken by politicians and officials to

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⁵⁰ Nemetz *Id.* p. 551.

⁵¹ Webb *Id.* p. 7.

⁵² Kathryn Harrison. "Is Cooperation the Answer? Canadian Environmental Enforcement in Comparative Context." *Journal of Policy Analysis and Management*. Vol. 14, no. 2, 1995, p. 223.

implement that law.”⁵³ For example, CEPA provides for some significant sanctions and penalties for noncompliance with the Act or its regulations and furnishes the Minister with the option of using those penalties;⁵⁴ however, as will be discussed below, these sanctions and prosecutions are rarely used and, as such, the penalty clauses in CEPA suggest that the Canadian approach is more adversarial than it actually is. As industries generally respond to the actions of the enforcement officials,⁵⁵ it is important to understand the actual enforcement and implementation actions, not simply the policy. While it is beyond the scope of this paper to consider the “real-world” actions of enforcement officials, it should be noted that the discretion afforded to enforcement officials provides for a variety of different enforcement approaches *in vivo*. Even so, the enforcement policies of the agencies at both the federal and provincial (Ontario) level discussed below will give the reader a sense of the actions which enforcement officials take to enforce the legislation.

An examination of the federal enforcement and compliance procedures with respect to CEPA will give some insight into the general environmental enforcement approach in Canada, despite the fact that the federal enforcement officials do not generally initiate enforcement actions against sources which are regulated by the provincial governments. The federal government *may* regulate the emissions of federal departments, agencies and Crown corporations⁵⁶ and the CEPA enforcement and compliance policy draws together ideas about enforcement and compliance, providing a general view of a “Canadian” enforcement approach. Also, as enforcement has fallen within the jurisdiction of the provinces,⁵⁷ it is likely that the federal government drew its ideas about enforcement from the provincial models. Indeed, the reader will see marked similarities between the federal enforcement policy and the Ontario Compliance procedure.

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⁵³ Murray Rankin & Peter Finkle. “The Enforcement of Environmental Law: Taking the Environment Seriously.” *University of British Columbia Law Review*. Vol. 17, no. 1, 1983, p.35.

⁵⁴ It should be noted that this gap between the policy and its actual implementation is a problem which also occurs in the American system, although to a lesser extent, as the legislation affords the enforcement officials less discretion in the US. See discussion of non-discretionary duties *infra* at pp. 71-72 & 88-90.

⁵⁵ Rankin & Finkle *Id.* p. 36.

⁵⁶ *CEPA* s. 61(2) regarding air pollution.

⁵⁷ Cassidy & Sonnen *Id.* p. 3; see note 19 *supra* and accompanying text.

The objective of the CEPA Enforcement and Compliance policy, is “...to facilitate compliance with the [Canadian Environmental Protection] Act,”⁵⁸ which suggests that the ultimate goal of enforcement is compliance – note the absence of any reference to deterring potential violators. Second, Environment Canada uses the term “facilitate” to describe the enforcement action in which it will take part – a relatively benign term, which is far less adversarial than “compel,” for example. Also the notion of Environment Canada as a facilitator suggests that the agency will be working along side polluters to gain compliance, rather than imposing strict standards on the sources in a traditional command-control manner.

The CEPA enforcement and compliance policy suggests two ways in which the government may reach the goal of compliance – through promotion and enforcement.⁵⁹ Promotion includes such activities as information gathering and sharing, and technical assistance⁶⁰ while enforcement activities include inspection, investigations and the use of sanctioning tools.⁶¹ Historically, the main task of the federal government *vis a vis* environmental regulation, given the constitutional limits on its power, has been information gathering and dissemination⁶² and incidentally, Environment Canada lists compelling compliance among its last enforcement activities, and compelling compliance through formal legal action prosecution – very last. Although the Policy maintains that enforcement officials “...will use rules, sanctions and processes securely founded in law,”⁶³ the processes to which the policy refers are at the discretion of the official.⁶⁴ Thus, if the official chooses to negotiate rather than compel compliance through a formal process, he is within the bounds of the law.

The authorities responsible for the implementation of CEPA are the Minister of Environment, Minister of National Health and Welfare, Attorney General and Officials,

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⁵⁸ Environment Canada *Canadian Environmental Protection Act Enforcement and Compliance Policy*. Ottawa Ontario. Ministry of Environment, 1988, p. 1.

⁵⁹ *Id.* p. 5.

⁶⁰ *Id.*

⁶¹ Nemetz *Id.* p. 557.

⁶² *Id.*

⁶³ Environment Canada *Id.* p. 9.

⁶⁴ See discussion of discretion *supra* pp. 50-51.

Courts, and Enforcement Officials, including inspectors and investigators.⁶⁵ Absent from this list are the third parties which are affected by the implementation enforcement, or lack thereof, of the legislation and the related regulations. Perhaps they are excluded from this section of the Policy because they are not considered “authorities”; however, this absence of consideration in the Policy more generally demonstrates the lack of a significant role for third parties in the enforcement of environmental/air quality legislation in Canada.⁶⁶

Inspectors are the officials who have the most frequent and direct contact with polluters and, their job, according to the Policy, is to ascertain that the subject of the inspection is in compliance with the Act.⁶⁷ The investigators gather evidence when a violation has been reported to them by an inspector⁶⁸ and they have great discretion in determining how to proceed. According to the Policy, the criteria used to determine how to proceed with an investigation are the nature of the violation – whether it causes great harm, was intentional, was repeated, etc. – and whether pursuing the violation in a formal way will lead to compliance, that is, whether there has been a history of compliance.⁶⁹ See Figure 2.2 for a graphic of the enforcement process as presented by Environment Canada. In reality, if the enforcement official decides that pursuing the violator through prosecution will harm the relationship between the official and the pollution source, thereby threatening future compliance, he may choose to ignore the violation. However, if the officials overlook violations too often, potential polluters will not be deterred from violating the

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⁶⁵ *Environment Canada Id.* p. 19.

⁶⁶ The implications of this exclusion of third parties from enforcement for the successful implementation of domestic and bi-lateral air quality standards will be discussed in Chapter 3.

⁶⁷ *Environment Canada Id.* p. 38.

⁶⁸ *Id.* p. 39.

⁶⁹ *Id.* p. 43.

Figure 2.2: CEPA Enforcement Process⁷⁰

⁷⁰ Source: Environment Canada. *CEPA Enforcement and Compliance Policy*.

regulations and the environment will not be protected.

Enforcement officials have a variety of enforcement instruments in their arsenal, which the Policy catalogs from most benign to most formal, beginning with warnings, and moving on to directions by inspectors, ticketing, orders by the Minister, injunctions, prosecutions, penalty orders upon conviction, and civil suits to recover costs.⁷¹ Again the choice of instrument is at the discretion of the enforcement official. Prosecutions are slightly more common than they were in the early days of environmental enforcement, that is in the 1970's and early 1980's.⁷² Until 1988, there were only ten prosecutions under the Canada Water Act, Environmental Contaminants Act, Clean Air Act, and Ocean Dumping Control Act combined;⁷³ however, between 1988 and August of 1997, there were 84 prosecutions brought under CEPA.⁷⁴ See Table 2.2.

Incidentally, in most of the cases, the accused, polluter plead guilty to the charge. There are a few possible reasons for this reliance on plea bargaining rather than on formal court proceedings. First, the fines levied against these companies were relatively minor, and as fines have historically been small, the companies may have calculated that it was in their best interest financially to pay the fines rather than incur the expenses associated with a court battle – expenses which could also include bad press. See Table 2.3 for the penalties assessed for prosecutions under CEPA. Second, the companies may have also felt that the evidence against them was of such a magnitude that they would be unable to escape conviction. Then again, instead of paying the expenses associated with the trial, they simply plead guilty and paid the fine up front. Both sets of reasoning mentioned

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⁷¹ This instrument is generally used in the case of a spill when the agency had to take emergency action to prevent harm to the environment; *Id.* pp. 45-54.

⁷² George Hoberg. "Environmental Policy: Alternative Styles." *Governing Canada: Institutions and Public Policy*. ed. Michael M. Atkinson. Montreal, Quebec: Harcourt Brace & Company, Canada, 1993, p. 309.

⁷³ Tom Conway. "Taking Stock of the Traditional Regulatory Approach." *Getting it Green: Case Studies in Canadian Environmental Regulation*. ed. G. Bruce Doern. Toronto, Ontario: C.D. Howe Institute, 1990, p.36; each of these Acts was subsumed under CEPA in 1988, except for the Canada Water Act – only Part III of that Act became part of CEPA.

⁷⁴ Environment Canada, Office of Enforcement. *Legal Activities: List of All Prosecutions Since 1988 (CEPA and the Fisheries Act)*. August 15, 1997.

Table 2.2 Prosecutions Under CEPA 1988-August 1997⁷⁵

<u>Conviction Status</u>	<u>Number of Cases</u>
Conviction	6
Guilty Plea	57
Acquittal	8
Out of Court Settlement	0
Charges Withdrawn	8
Pending	5
Total	84

demonstrate flaws within the enforcement approach: the first suggests that the fines are not significant enough to deter violations; the second suggests that monitoring is at such a poor level that polluters are getting away with obvious violations under the very noses of the enforcement officials. More research into the motivations of the companies charged is needed before any conclusive statements are made.

Although, in a more adversarial system, prosecutions may be used as a measurement of the success of enforcement officials in compelling compliance, the overall success of an enforcement approach should not be measured solely by the number of prosecutions of sources for noncompliance.⁷⁶ While increased frequency of prosecution may indicate greater success in monitoring and the ascertaining of compliance – because the agency is monitoring more efficiently, it is catching more offenders – a large number of prosecutions also may demonstrate a failure to gain compliance and a breakdown in negotiations and

⁷⁵ Source: Environment Canada, Office of Enforcement. *Legal Activities: List of All Prosecutions Since 1988 (CEPA and the Fisheries Act)*. August 15, 1997.

⁷⁶ Keith Hawkins. *Environment and Enforcement: Regulation and the Social Definition of Pollution*. Oxford: Clarendon Press, 1984, p. 8.

Table 2.3 Penalties Imposed for Convictions and Guilty Pleas Under CEPA 1988- August 1997⁷⁷

<u>Penalty⁷⁸</u>	<u>Number of Cases</u>
Over \$500,000	0
\$100,000 - \$500,000	1
\$75,000 - \$499,999	0
\$50,000 - \$74,999	0
\$25,000 - \$49,999	8
\$ 10,000 - \$24,999	10
\$5,000 - \$9,999	13
\$1,000 - \$4,999	25
Less than \$1000	4
Imprisonment	1 ⁷⁹
Pending⁸⁰	0
Other⁸¹	1
Total	63

cooperation between the regulator and the regulated source.⁸² An increased number of prosecutions might intimate a flaw in the ability of the agency to enforce its regulations – the polluters simply will not obey. The number of prosecutions under CEPA since 1988 is relatively small in comparison to the number of prosecutions under the US Clean Air Act,⁸³ for example and, as such, does not suggest any significant breakdown in the cooperative relationship between the regulatory agency and the pollution sources; however, the small number of prosecutions does demonstrate a reluctance on the part of enforcement officials to use formal sanctioning tools, and perhaps also, the reluctance of the court to levy significant fines.

The Ontario Ministry of Environment also has a compliance policy, although it is not specifically tailored to implementation and enforcement under OEPA. Instead it may

⁷⁷ **Source:** Environment Canada, Office of Enforcement, *Id.*

⁷⁸ Fines are cumulative fines for the case. In the case of multiple counts, the penalty listed here is the total penalty for all of the charges, including monetary fines that are part of court orders.

⁷⁹ Suspended sentence and community service hours.

⁸⁰ Pending here refers to a pending penalty phase in the prosecution process.

⁸¹ Includes absolute discharge, forfeiture of items, or court costs, donations, or a combination,

⁸² Nemetz *Id.* p.571; Hawkins *Id.* p. 8.

be found, in part, in the Investigations and Enforcement Branch's (IEB) Code of Conduct. The Code maintains that the purpose of the Compliance Policy is "to achieve province-wide compliance with all legislation for the protection and improvement of the environment"⁸⁴ – again, the ultimate goal of enforcement is compliance, not deterrence or retribution. This Policy applies to enforcement officials who have specific standards to enforce – the SO₂ emissions standards in the OEPA regulations are not vague;⁸⁵ however, enforcement is not considered until an inspector refers a violation to IEB. From that point, there is a long process subject to the discretion of various officials, through which the allegation must pass before formal enforcement action is initiated.

Once a violation has been referred to the Investigations and Enforcement Branch, it must be investigated and, depending upon the evidence which he collects, the investigator decides, in consultation with his supervisor, whether or not to recommend prosecution.⁸⁶ If the investigator does decide to proceed, he submits a brief to the IEB supervisor, who reviews and forwards it to the Director of IEB, who also reviews it and sends it to the Director of Legal Services Branch (LSB). In turn, the Director of LSB and the staff attorneys, often in consultation with the Attorney General, determine whether there is sufficient evidence to proceed. Then, the Directors of IEB and LSB make a joint decision whether to prosecute and finally, the matter goes to the Attorney General, who ultimately decides whether or not to prosecute. Thus, one may see the multiple levels of discretion involved in this process. If at any point, one of the officials involved in the process feels that prosecution is not the best choice given relations with the polluter, the issue is likely to be addressed interdepartmentally. Indeed, if the official feels that the violation is insignificant or will threaten his negotiations with the polluter, he may be inclined to address it through a negotiation process with the pollution source, without bringing the violation to the attention of his supervisor. It is also possible that inspectors may exercise their discretion and avoid referring a violation to IEB. If the inspector feels

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⁸³ In a conversation with an official in the Office of Air and Radiation, Acid Rain Division, USEPA, the author was informed that the number of prosecutions under the Clean Air Act per annum was unavailable, although it was certainly greater than Canada's average of 9 per annum under CEPA.

⁸⁴ Ontario Ministry of Environment. *Excerpts from Compliance Policy. Investigations and Enforcement Branch Code of Conduct*. p. B4-1.

⁸⁵ See discussion p. 51 *supra*.

that a prosecution could damage his relationship with his client source or industry, he may avoid the investigations and enforcement route and attempt to motivate compliance in his own, cooperative way. Thus, many violations may not even be investigated.⁸⁷

The Ontario IEB criteria for determining how to proceed with an enforcement action is very similar to that found in the federal CEPA Compliance Policy. Among those elements to be considered are the seriousness of the violation, whether the violation will significantly affect the overall regulatory objectives, whether the action was deliberate, repeated, or an act of negligence, whether information was concealed by the polluter, and whether the polluter has a history of noncompliance. As well, when imposing a penalty, the officials are to consider "...the seriousness of the offense, and the attitude and circumstances of the offender."⁸⁸ Given the recent budget cuts,⁸⁹ it is questionable whether IEB will even have the resources to investigate and pursue polluters. Resource constraints seriously limit enforcement capabilities, threatening the stability of the enforcement process and the protection of the environment.

Noticeably absent from the IEB enforcement procedures is the mention of third party involvement in the enforcement process. As the policy involves the appropriate behavior of ministry enforcement officials, this exclusion of third parties from consideration is logical; however, given the absence of any citizen suit provisions in OEPA itself, and the reliance on the discretion of the enforcement officials to negotiate compliance, one may conclude that third parties are not encouraged to participate in the enforcement of environmental regulations in Ontario. Hence, the Ontario enforcement regime demonstrates many of the characteristics of the model cooperative enforcement regime, including the reliance on a closed, cooperative relationship between the enforcement agency and regulated sources in which compliance is negotiated.

Thus, one can see from a brief overview of these enforcement policies, that the overall Canadian environmental/air quality enforcement regime falls close to the model cooperative enforcement regime on the enforcement continuum. Generally, it is a system

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⁸⁶ All information in this section is attributed to Ontario Ministry of Environment. *Id.*

⁸⁷ Please note that there is no official documentation of this pattern of behavior by investigators; however, given the cooperative nature of the enforcement strategy, it is likely that this occurs.

⁸⁸ Ontario Ministry of Environment. *Id.* p. B4-5.

closed to third parties and characterized by a reliance on cooperation to achieve an ultimate goal of compliance. One may see this emphasis on negotiation in the suggested reluctance to use more formal sanctioning tools and the use of instruments of a softer nature, such as information and persuasion – even the sanctioning tools which are commonly used, for example tickets and orders, are not coercive. Only as a last resort are serious formal sanctions, like injunctions and prosecutions, used. As well, the analysis of the enforcement and compliance policies of both the federal government under CEPA and Ontario in the general IEB policy suggests that the ultimate goal of enforcement within the Canadian enforcement regime is compliance, as retribution and deterrence would require more frequent use of formal enforcement tactics and sanctions. Potential polluters may be deterred slightly by the occasional enforcement action, but this deterrence is secondary to the ultimate objective of compliance.

Elements of a more adversarial enforcement approach are not totally absent from the Canadian enforcement regime, as prosecutions and formal sanctions are utilized from time to time, and third parties are afforded some means of involvement in enforcement at the federal level through civil suits, although the extent of third party involvement through these suits is questionable since most of the major sources of pollution are located within and are regulated by the provinces. As such, the Canadian enforcement regime does not totally fit within the parameters of the model cooperative enforcement approach, but falls very close to it on the enforcement continuum.

American Legislation and Enforcement: A Brief Overview and Analysis

It is important to understand that there are two questions at issue in this analysis of the American enforcement strategy – what the general American enforcement approach is, and what it is in relation to ambient air quality and SO₂ emissions specifically. As the reader will discover, because of different programs established by the Clean Air Act Amendments of 1990, air is a unique regulatory case in the United States, which deviates slightly from the regulatory norm.

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⁸⁹ See note 48 *supra*, and accompanying text.

Because of the nature of the governmental system in the United States, American air quality legislation is much different from its Canadian counterparts. The system of separation of powers, both horizontally and vertically,⁹⁰ lends itself to the development of a more adversarial enforcement regime.⁹¹ Indeed the structure and institutions also affect power distribution and jurisdiction with respect to a variety of issues, including environmental regulation. As with examination of Canadian legislation above, it is important to begin the analysis of American air quality legislation with a consideration of jurisdictional issues and an examination of the evolution of the federal-state power structure within the US. In order to understand the jurisdictional power distribution in the United States regarding environmental regulation, one must understand the evolution of federal-state relations from the signing of the Constitution to the present day. This is no small task and an in-depth discussion and analysis of this relationship is beyond the scope of this paper; however, some points regarding the nature of federal-state power differentials and how they have developed will be considered briefly.

Jurisdictional Issues

There has been argument about the extent of state and federal power since the advent of the United States of America, most of which focuses on the interpretation of a few clauses of the Constitution and the intent of the Framers who drafted these clauses. The sections of the Constitution most often at issue are Article I, Section 8 – which provides Congress with the power “to make all Laws which shall be necessary and proper for carrying into execution the foregoing Powers...” and Article VI, which states: “This Constitution, and the Laws of the United States which shall be made in Pursuance thereof; and all Treaties made, or which shall be made, under the Authority of the United States, shall be the supreme Law of the Land...”⁹² On the surface, these clauses seem to give the federal government the bulk of the legislative power in the United States; however, at issue also is the Tenth Amendment, which states: “The powers not delegated

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⁹⁰ See Hoberg 1992 *Id.* p. 81 for a discussion of the institutional fragmentation of American government.

⁹¹ See further discussion on this subject in the institutional and structural origins of the adversarial enforcement regime later in this chapter

⁹² Article VI, *United States Constitution*.

to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.” Thus, there is difficulty in determining what powers, aside from those enumerated in the Constitution, fall into federal or state jurisdiction.

Many scholars look to the writings of the Framers to obtain a sense of the original intent of the Constitution; that is, whether the Framers intended to create a federal system of government in which the states were of secondary import, or a union in which the states retained a great deal of their power. It is very difficult to determine the Framers’ intent, even in looking at writings of the day, like the *Federalist Papers*. While the *Papers* do provide some guidance as to the appropriate power differential between state and federal governments, it must be remembered that the *Papers* were propaganda, intended to encourage the states to sign the new Constitution and, as a result, they are replete with discussion of state supremacy in the new Union. For example, James Madison, in *Federalist* XLVI, suggests that “...the local or municipal authorities form distinct and independent portions of the supremacy, no more subject, within their respective spheres, to the general authority than the general authority is subject to them.”⁹³ Indeed, Madison speaks of a state’s control over its internal affairs: “The powers reserved to the several States will extend to all the objects which, in the ordinary course of affairs, concern the lives, liberties, and properties of the people, and the internal order, improvement, and prosperity of the State.”⁹⁴

Given this last statement by Madison, one would expect the issue of environmental protection and health of state residents to fall well within the jurisdiction of the state and, indeed, for many years, this was the case; however, as early as 1819, there were hints that the states might not be as powerful as they would like to believe they were. In the landmark *McCulloch v. Maryland*,⁹⁵ then Chief Justice John Marshall ruled that the federal government had the power to establish a national bank. In his opinion he highlighted the fact that the Tenth Amendment does not include the word

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⁹³ James Madison, Alexander Hamilton, & John Jay. *The Federalist Papers* ed. Isaac Kramnick. New York: Penguin Books, 1987. no. XLVI, p. 297; this is the concept of dual sovereignty or dual federalism.

⁹⁴ Madison *Id.* no. XLV, p. 296.

⁹⁵ 17 US 316 (1819)

“expressly,” that is, it does not read: “The powers not *expressly* delegated to the United States by the Constitution...are reserved to the States...” Marshall maintained that the absence of “expressly” from the text of the Amendment, in combination with the power to make any necessary laws, which is provided to the federal government in Article I, Section 8, suggests that the federal US government has broad legislative powers, beyond those which are enumerated in the Constitution. However, until the late nineteenth and early twentieth centuries, this broad power was not used in a way that infringed upon state jurisdiction and, as such, the states were undisturbed in their control of environmental and health issues.

At the turn of the century, the federal government became concerned with the regulation, or lack thereof, of health and safety by the states.⁹⁶ The original suits seeking extension of federal power into the regulation of sectors which had originally been under state control were turned back by the Supreme Court.⁹⁷ It was not until President Franklin D. Roosevelt’s New Deal and his threat to pack the Court to get the decisions favorable to federal regulation of health and safety, that the Court relented. In 1937, in *National Labor Relations Board v. Jones & Laughlin Steel Corp.*,⁹⁸ the Court expanded federal regulatory power under the Commerce Clause of the Constitution.⁹⁹ Through *NLRB* and the cases that followed, the federal government’s power with respect to regulation of issues originally within state jurisdiction was broadly construed under the Commerce Clause. Indeed, much of the original civil rights legislation of the 1960s was implemented by the federal government with the help of broad judicial interpretation of federal power under the Commerce Clause;¹⁰⁰ however, environmental regulation was not yet an issue ripe for address by the government. It would not be until the late 1960s that concern over the environment pushed the issue into the realm of government – federal

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⁹⁶ See such cases as *Hammer v. Dagenhart*, 247 US 251 (1918) & *Stafford v. Wallace*, 258 US 495 (1922).

⁹⁷ See Thomas Alpheus Mason & Donald Grier, Jr. *American Constitutional Law*. tenth edition. Englewood Cliffs, New Jersey: Prentice Hall, 1993, pp. 215-217 for discussion of these cases.

⁹⁸ 301 US 1 (1937)

⁹⁹ Congress, under Article I, Section 8 has the power “To regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes.”

¹⁰⁰ See *Heart of Atlanta Hotel v. US*, 397 US 241 (1964) & *Katzenbach v. McClung*, 397 US 294 (1964); also see Mason & Grier *Id.* p 242.

government – regulation.¹⁰¹ At that point, when the issue of environmental degradation came to the fore, it was expected that the federal government would be the leading actor. Indeed, environmentalists were unsatisfied with the first federal attempt at a Clean Air Act in 1967 precisely because it did not centralize standards and regulatory power with the federal government.¹⁰² The states also took some action of their own to address environmental problems, but the primary and most significant action was taken by the federal government. Thus, primary jurisdiction over environmental protection and standard-setting currently lies with the federal United States government – the states still play a very important role in the implementation of the standards, but the legislation and directives, as well as the standards, are established at the federal level.

American Air Quality Legislation and Enforcement Regime

American air quality legislation differs greatly from Canadian legislation discussed above, first, in that the US federal government is the dominant government enforcement actor, and second, in the range and specificity of the actual legislation.¹⁰³ The primary piece of air quality legislation in the US is the Clean Air Act (CAA). It was first passed in 1970, and helped establish the strong standard-setting and enforcement powers that had theretofore existed only at the state level in the realm of environmental regulation.¹⁰⁴ Prior to 1970, there had been an Air Quality Act of 1967; however, it was viewed by environmentalists as a disappointment, because the Act left standard-setting to the different states¹⁰⁵ which resulted in non-uniform standards across state borders. Thus, in 1970, Congress passed the Clean Air Act, which established national ambient air quality standards and emission standards for new stationary sources.¹⁰⁶ The Clean Air Act also marked the advent of the citizen suit – included in the Act is a clause which provides

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¹⁰¹ See later discussion of the two waves of environmentalism.

¹⁰² See discussion below.

¹⁰³ These differences are closely related to the governmental structure – institutions and processes – of the two nations, which will be discussed later in this chapter.

¹⁰⁴ Hoberg 1992 *Id.* p. 45.

¹⁰⁵ *Id.* pp. 73-74.

¹⁰⁶ *Id.* p. 74.

citizens the right to sue the EPA if the agency fails to perform a non-discretionary duty.¹⁰⁷ This is significant, as the clause establishes one of the main elements of the US adversarial enforcement approach – third party involvement in enforcement. Recall that CEPA also contains a citizen suit provision; however, the suits which may be brought by citizens under CEPA are civil suits against the individual pollution sources and not cases against the government enforcement agency.¹⁰⁸ The importance of non-discretionary duties within the adversarial enforcement regime will be considered below in the examination of institutional and structural origins of the Canadian and American enforcement regimes.

The Clean Air Act was amended in 1977 and again in 1990. The 1977 Amendments relaxed some of the standards, but retained the basic framework of the Act – the adversarial enforcement regime remained in tact.¹⁰⁹ The 1990 Amendments to the Act, introduced by former President George Bush, were intended to again strengthen the standards.¹¹⁰ These Amendments were proposed in large part due to the continued pressure from Canada on the US to further restrict SO₂ and other acid-causing emissions.¹¹¹ It is far beyond the scope of this paper to analyze the Clean Air Act of 1970, and the Amendments of 1977 and 1990, because the Act, as it is codified in Title 42 of the US Code, is huge. Thus, only a few of the important sections which demonstrate the adversarial nature of the US enforcement strategy and establish major differences between the US and Canadian legislation and enforcement approaches will be examined.

The following analysis of the CAA and the American enforcement differs slightly in form from the above analysis of the Canadian air quality legislation and enforcement because the form of the legislation in the two countries is different. While in Canada, the legislation is relatively non-specific regarding standards and enforcement, leaving discretion to the executive in implementation and enforcement, the US legislation is far

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¹⁰⁷ *Id.* p. 77; also see 42 USCS §7604

¹⁰⁸ See note 30 *supra* and accompanying text.

¹⁰⁹ Hoberg 1992 *Id.* p. 91.

¹¹⁰ Jeffrey L. Roeloffs. "United States-Canada Air Quality Agreement: A Framework for Addressing Transboundary Air Pollution Problems." *Cornell International Law Journal*. Vol. 26, 1993, pp. 442-443; interview with an official at the USEPA, Office of International Affairs, US-Canada Division, 4 December 1997.

¹¹¹ Roeloffs *Id.* pp. 440-444; also see discussion of the historical development of the AQA in Chapter 3.

more specific, establishing specific standards and directing the executive to implement and enforce in a certain manner. As such, while in Canada, understanding the enforcement regime involves understanding the relationship between the legislation and the enforcement and compliance policies of the enforcement agencies, in the US, understanding the enforcement regime involves analyzing the programs established by and the directives included in the actual legislation. Hence, the following analysis involves the examination of the CAA and its comparison to the Canadian legislation and enforcement programs. The CAA is compared to CEPA alone to simplify the analysis.

The primary difference between CEPA and the CAA is the specificity of the CAA. As was mentioned earlier, CEPA contains no specific air quality provisions or standards, except for Part V, which provides for limited federal government powers in the case of transboundary air pollution;¹¹² however, in the US, SO₂ and NO_x standards are contained within the CAA,¹¹³ as are Tables of the specific industries and companies that are targeted under certain parts of the Act.¹¹⁴ In addition, the CAA provides for specific programs and enforcement approaches, and includes legislative directives, which limit the discretion of enforcement officials in the implementation and enforcement of the Act. These directives are more commonly known as non-discretionary duties. Recall that the existence of non-discretionary duties is one of the characteristics of a more adversarial approach to enforcement. The duties provide third parties with the ability to ascertain that the government enforcement agency enforces the regulations by giving citizens grounds to bring suit against the Administrator of the US Environmental Protection Agency (EPA) “...where there is alleged a failure of the Administrator to perform any act or duty under this chapter which is not discretionary with the Administrator...”¹¹⁵ Non-discretionary duties abound in the CAA; there is one with almost every page turn, and they are used to limit agency discretion in a variety of areas, from the establishment of national ambient air quality standards¹¹⁶ to orders to comply with regulations.¹¹⁷ They are

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¹¹² The Clean Air Act also contains such a provision – Section 115 – which will be discussed later.

¹¹³ See 42 USCS §7409(c), 7473 – maximum allowable increases of SO₂ emissions over baseline.

¹¹⁴ See particularly 42 USCS §7651

¹¹⁵ 42 USCS §7604(a)(2)

¹¹⁶ 42 USCS §7409(a)(1)(A)

¹¹⁷ 42 USCS §7413(a)(1)

distinguished from discretionary duties by the use of positive language – the US Supreme Court has held that the use of “shall” in American legislation does indeed indicate that the duty stated is non-discretionary.¹¹⁸ For example, in the event that the EPA discovers a violation with a state implementation plan (SIP) “...the Administrator *shall* [emphasis added] notify the person and the State....”¹¹⁹ A discretionary duty is phrased in less definitive language – “The Administrator *may* [emphasis added] issue an administrative order against any person assessing a civil administrative penalty of up to \$25,000, per day of violation....”¹²⁰ Indeed, according to an official in the Air Enforcement Division of EPA, the EPA “...frequently get[s] sued by Sierra Club and some other...environmental groups for...failure to do a non-discretionary duty,”¹²¹ although, these suits are usually settled out of court when the environmental group agrees to give the EPA a limited extension on the completion of a non-discretionary duty.¹²²

Third parties may also bring private civil suits against the individual polluters under the Clean Air Act in the event that a source has violated either an emission standard or limitation established under the Act or an order issued by the EPA or State.¹²³ This third party civil suit apparently is a very effective deterrent instrument, as, according to the same official at the EPA, the sources would prefer to work with the government than with private individuals.

I’ve talked to industry people who say, look, we hate it when the Feds get involved. We would rather work with our state and local [agencies] to resolve this noncompliance problem we have. But we *really* hate it when the citizen groups do it because they’re so irrational and unreasonable.¹²⁴

Environmental groups are also more likely to go to the press and publicize the

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¹¹⁸ Stuart N. Keith. “The EPA’S Discretion to Regulate Acid Rain.” *Cleveland State Law Review*. Vol. 36, 1988, p. 145, referring to *New York v. Thomas* and *Train v. Natural Resources Defense Council*, 421 US 60 (1975).

¹¹⁹ 42 USCS §7413(a)(1); SIPs will be discussed below.

¹²⁰ 42 USCS §7413(1)(d)(1)

¹²¹ Confidential interview, USEPA, Air Enforcement Division, 4 December 1997.

¹²² *Id.*

¹²³ 42 USCS §7604(a)(1)

¹²⁴ Confidential interview, USEPA, Air Enforcement Division, 4 December 1997.

violation,¹²⁵ leading to possible public embarrassment for the source *and* the agency, as public awareness of and outrage regarding the source's noncompliance will increase. In turn, this public awareness can lead to further pressure on the agency to take strict enforcement actions against the polluting source, as well as public pressure on the source to come into compliance.

These comments raise an interesting point about the American enforcement approach. While the purpose of this discussion is to demonstrate the adversarial nature of the American strategy, the comments regarding sources "working with" the enforcement officials, suggest that there may be a somewhat cooperative relationship between the enforcement agency and the regulated sources. This cooperation is natural, even in a more adversarial enforcement regime. Recall that the two models presented in the previous chapter represent ends on a continuum and that the US and Canadian enforcement approaches fall somewhere in between the two models. In the "real-world" of enforcement, there must be some sort of cooperative interaction between the agency and the pollution sources – total adversarialness between regulator and regulated is undesirable; however, the cooperation discussed here is of a different nature than that found in a cooperative enforcement regime. The enforcement agency and the pollution source can work together to establish standards and to enforce those standards; however, the enforcement agency-pollution source relationship is open to third party involvement, that is, it is not characterized by closed negotiations between the enforcement agency and the pollution source. Cooperation is limited by third parties, both through civil suits against the polluters, and suits against the enforcement agency for failure to perform a non-discretionary duty. Thus, if the agency-source relationship becomes too cooperative and leads to a decrease in the rigor of enforcement, the openness of the American enforcement system allows third parties to compel the agency to enforce the regulations and the source to comply. Thus, cooperation in the realm of the American enforcement regime is of a limited nature. The enforcement approach is actually closer to the model adversarial enforcement regime, as it displays the characteristics of open enforcement in which third parties are active participants.

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¹²⁵ *Id.*

Another major difference between the Canadian and American enforcement regimes arises from the establishment of state implementation programs (SIPs) by the US CAA. It was mentioned above that federal-state power in the US has evolved in such a way that the federal government exercises broad power in the protection of the environment. This is not to say that states do not play an important role – in fact, state cooperation with the federal air quality programs is an important part of the American air quality enforcement regime; however, the states are limited in their approaches and in their standards by the federal government. The United States is simply too large a nation for the federal government to be able to successfully monitor and enforce regulations everywhere in a fair and equal manner. The solution which the CAA poses to solve this problem is the establishment of SIPs. Each state must have a plan to implement the national ambient air quality standards,¹²⁶ which must be submitted to and approved by the EPA and must contain various sections regarding emission limitations.¹²⁷ In the event that any state fails to submit a plan, or submits an unacceptable plan, the Administrator establishes a federal implementation plan for implementation in that state.¹²⁸ Thus, the reader can see that the federal authority is dominant here and that the US enforcement regime is very different from the Canadian enforcement approach, in that the US states, unlike the Canadian provinces, do not have a veto power over federal authority in this area. The federal government establishes the standards and the states merely have the authority to decide how to implement those standards – even that authority is limited in that the plan must be approved by the federal government. Recall that in Canada, the standards and enforcement are addressed primarily at the provincial and local levels. The provinces have agreements with the Canadian federal government, but the federal government does not have the power to enforce those agreements. Thus, the centralization of regulatory and enforcement power in the US, as demonstrated here through the power of the federal government to enforce the SIPs, provides another example of an adversarial characteristic of the American environmental enforcement regime. There are elements of cooperation in the regime, but generally enforcement

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¹²⁶ 42 USCS §7410; the standards are established in 42 USCS §7409

¹²⁷ 42 USCS §7410

¹²⁸ 42 USCS §7410(c)

originates with one, central authority which is very specific about the appropriate standards and methods of enforcement. Hence, thus far, the American enforcement regime appears to fall very close to the model adversarial enforcement regime on the enforcement continuum.

The 1990 Amendments to the CAA created a program which is unique to American air quality regulation – the SO₂ emissions trading program.¹²⁹ It is an element of air enforcement which significantly changes the American enforcement regime – the enforcement approach can no longer be considered entirely adversarial, as the emissions trading program is a market-based program which has as its goal the reduction of SO₂ emissions.

The purpose of this subchapter [Subchapter IV-A-Acid Deposition Control] is to reduce the adverse effects of acid deposition through reductions in annual emissions of sulfur dioxide of ten million tons from 1980 emission levels, and, in combination with other provisions of this chapter, of nitrogen oxides emissions of approximately two million tons from 1980 emission levels in the forty-eight contiguous States and the District of Columbia. It is the intent of this subchapter to effectuate such reductions by requiring compliance by affected sources with prescribed emission limitation by specified deadlines, which limitation may be met through alternative methods of compliance provided by an emission allocation and transfer system.¹³⁰

The program is dependent on two other important aspects of the Clean Air Act – permits and continuous emission monitors.¹³¹ The permits are issued to each major source¹³² and basically establish an emissions ceiling; that is, the source cannot emit more

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¹²⁹ See 42 USCS §7651- §7651o – Title IV of the CAA; Canada is currently considering an emissions trading program for Greenhouse gas emissions; however, no program has yet been established. See John Schofield. “Pollution For Sale.” *Maclean’s* 23 March 1998.

¹³⁰ 42 USCS §7651(b)

¹³¹ Permits are provided for in Title V of the CAA or Subchapter V of Title 42 of the US Code.

¹³² Note there may be more than one source in each company.

than its permitted emission limit or it is in violation of the Act and may be sanctioned.¹³³ In order for the EPA to ascertain that the sources are within their allowable emissions limits, each source must install continuous emissions monitors (CEMs). This requirement is not directly included in the legislation itself, but is part of the implementation of the trading program, according to sources at the Air Enforcement Division, USEPA.¹³⁴ The CEMs transmit emissions data electronically to the EPA,¹³⁵ and, in fact, many of the industries are connected to the World Wide Web and it is possible to obtain their hourly raw emissions data through the EPA Web page.¹³⁶ The CEMs are very important to the emissions trading program, as they allow the EPA to determine whether a source has exceeded its allowable emissions and by how much. An engineer with the Air Enforcement Division at EPA suggests that “without this [continuous emission] monitoring... the entire trading program would completely disintegrate.”¹³⁷

In order to understand the import of this statement, one must understand the mechanisms of the emissions trading program. Basically, a major source is given a permit, which allows it to emit a certain amount of SO₂ per year, based on an original baseline emission¹³⁸ – one ton of SO₂ emissions is equal to one emissions trading allowance.¹³⁹ The program operates by giving sources an incentive to reduce their emissions below its baseline or permissible emissions level, because when a source manages to reduce its emissions below that baseline, it can sell its excess allowances to other sources which need extra emissions for whatever reason. Thus, there is a financial incentive to reduce emissions – the more a source reduces its emissions, the more allowances it has to sell and the more money it makes. Conversely, if a source exceeds its permissible emissions limit, it can buy additional allowances to make up the difference and avoid paying an excess emissions penalty – \$2000 for each ton over its

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¹³³ 42 USCS §7661c(a)

¹³⁴ Confidential interviews, USEPA, Air Enforcement Division, 4 December 1997.

¹³⁵ *Id.*

¹³⁶ www.epa.gov

¹³⁷ Confidential interview, USEPA, Air Enforcement Division, 4 December 1997.

¹³⁸ Under 42 USCS §7651a(4)(A-C), this baseline is determined by the average fuel consumed during the years 1985, 1986, & 1987, or, for those sources who did not file the form from which this amount is to be taken, the baseline is determined based on emissions in 1985.

¹³⁹ 42 USCS §7651a(3)

permissible limit.¹⁴⁰ This amount per ton/allowance is usually far greater than the market price for one SO₂ allowance.¹⁴¹ In addition to the excess emissions penalty, the source may be fined for general violations under the Act – up to \$25,000 per day in some cases.¹⁴² As such, most sources assure that they are in compliance with the emissions trading program and with the Act in general.¹⁴³

The emissions trading program has two Phases. Phase I, which applies to large sources, such as power companies, began in 1995¹⁴⁴ and Phase II, which goes into effect in the year 2000, applies to smaller sources.¹⁴⁵ According to an enforcement official in the Air Enforcement Division, the true test of the emissions trading program will come in the year 2000, when the number of affected sources increases from around 200 to approximately 2000;¹⁴⁶ however, thus far, the Agency perceives the emissions trading program as a success. In 1995, SO₂ emissions levels for the Phase I sources decreased to 5.3 million tons from 1980 levels of 10.9 million tons.¹⁴⁷ The EPA reported “...significant levels of allowance trading and 100-percent utility compliance with all Phase I permitting, CEM, and reporting requirements.”¹⁴⁸ Another official at the Air Enforcement Division maintains that there have been very few violations under Title IV Acid Rain Program because of the continuous and accurate nature of the monitoring systems¹⁴⁹ – he calls the program a “terrific success.”¹⁵⁰ The attitude of the Agency is that the program is successful because it provides sources with an alternative way to meet emissions standards, not constrained within the traditional agency command-control approach. It is easy for the industry to determine whether or not they are in compliance and, in the event that they are not, to come into compliance through the market-based system. When asked how often companies exceeded their emission limits and paid the \$2000 penalty

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¹⁴⁰ 42 USCS §7651j(a)

¹⁴¹ For example, on 4 December 1997, the price for one SO₂ allowance was approximately \$110.

¹⁴² 42 USCS 7413(b) and generally.

¹⁴³ Confidential interview with an engineer at the USEPA Air Enforcement Division, 4 December 1997.

¹⁴⁴ 42 USCS §7651c(1)(a)

¹⁴⁵ 42 USCS §7651d(a)(1)

¹⁴⁶ Confidential interview, USEPA, Air Enforcement Division, 4 December 1997.

¹⁴⁷ *Canada-United States Air Quality Agreement Progress Report 1996*. p. 13.

¹⁴⁸ *Id.* pp. 13-14.

¹⁴⁹ Confidential interview, USEPA, Air Enforcement Division, 4 December 1997.

¹⁵⁰ *Id.*

per emission, one official stated:

It doesn't happen....they also know how to count. And they know the difference between the cost in the market...[and] the penalty of \$2000...¹⁵¹the emissions program is set up in such a way that unless you're crazy, you will not violate it.¹⁵²

The importance of the emissions trading program in the context of this discussion regarding enforcement regimes is the program's unique qualities which make it difficult to place it within the parameters of either model enforcement regime; however, for the purposes of this analysis, because the program is characterized by minimal agency involvement in the method which the sources employ to reduce their emissions, it shall be considered a more cooperative characteristic. Although the program shall be considered more cooperative overall, it should be utilized within a more adversarial enforcement regime to ascertain its success, because without the legitimate threat of sanctions in the event that a source exceeds its emissions and fails to buy allowances, the program will be ineffective. The emissions trading program introduces market forces into enforcement, but the market itself must be closely monitored and regulated. Thus, the American air quality enforcement regime may still be considered basically adversarial, but less so than the model adversarial regime.

There is another aspect of the CAA which helps to demonstrate the nature of the American air quality enforcement regime and, as such, will be considered here – the penalty clauses. It has already been established that the CAA is far more detailed and specific in its directives than its Canadian counterpart CEPA. As discussed earlier with respect to the Canadian enforcement approach, Canada's federal Department of the Environment, as well as the Ontario Ministry of Environment, both have enforcement and compliance procedures which are followed by the enforcement officials. EPA also has a code of conduct regarding compliance and enforcement, which is full of rules and regulations regarding appropriate behavior and response to particular types of violations; however, it does not lend itself to discussion here, as, unlike the Canadian codes which

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¹⁵¹ *Id.*

¹⁵² *Id.*

are relatively brief and direct, the American EPA's code of enforcement is two volumes of approximately 1000 pages each. Nonetheless, unlike CEPA, the text of the CAA itself contains actual enforcement directives, which allows for the consideration of the EPA's enforcement approach based on an analysis of the legislation. In the interest of time and space, only certain sections of the CAA involving enforcement will be highlighted to give the reader a sense of the overall enforcement regime.

Like CEPA, the CAA lists particular penalties for certain violations, leaving to the discretion of the Administrator what specific penalties to seek in each individual case; however, the Act provides the Agency with direction regarding certain types of violations.¹⁵³ It also lists the possible remedies which the Administrator may seek in the event of a violation – administrative penalty orders, civil actions, and criminal prosecutions.¹⁵⁴ The CAA also describes the detail of the procedure for pursuing any one of these possible courses of action, and the appropriate criteria to consider in assessing penalties.¹⁵⁵ Much of this criteria is similar to that found in the Canadian enforcement policy – compliance history, efforts to comply, duration of violation, etc.; however, the text of the CAA is worded in such a manner that compels the authority in charge of levying the penalty to consider the criteria listed. Indeed, some of the agency action which is to be taken in the case of noncompliance is non-discretionary. For example, if the

...owner or operator of an affected source, a major emitting facility, or a major stationary source [violates its permit or implementation plan]...the Administrator shall, as appropriate, commence a civil action for a permanent or temporary injunction, or to assess and recover a civil penalty of not more than \$25,000 per day for each violation.¹⁵⁶

The phrase “as appropriate” may suggest some discretion on the part of the Administrator, but recall that the US Supreme Court has held that the term “shall” suggests the existence of a non-discretionary duty. Hence, American air quality

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¹⁵³ 42 USCS §7413

¹⁵⁴ 42 USCS §7413(a)(3)(A-D)

¹⁵⁵ 42 USCS §7413(e)

enforcement officials are afforded less discretion in the consideration and imposition of penalties than are their Canadian counterparts. This limiting of discretion is one of the characteristics of a more adversarial enforcement regime.

When the Administrator or enforcement official is imposing a penalty, he is also to consider the economic benefit realized by the non-complying pollution source – “... we almost always want to extract from the polluter the benefit of noncompliance.”¹⁵⁷ This extraction of economic benefits suggests a goal of deterrence in the enforcement approach, as the polluter will be unlikely to violate the regulations again if he will realize no overall gain from noncompliance. As well, potential violators will be deterred from noncompliance by the knowledge that they will not benefit from noncompliance. “...[W]e put the fear of God into the rest of the regulated people out there – thinking hmmm, I’m next....I’ll have to suffer this kind of punishment.”¹⁵⁸ Recall that deterrence is a goal of a more adversarial enforcement regime, and, as such, the consideration of the economic benefits of noncompliance in the imposition of a penalty suggests that the American approach to air quality enforcement is relatively adversarial.

Like their Canadian Enforcement counterparts, American enforcement officials follow a general progression of violation from discovery to resolution; however, the American process is slightly more complicated, as suggested above by the existence of the 2000 page compliance procedure. First, there are both federal and state enforcement officials involved in enforcement, whereas in Canada, most enforcement action and inspection occurs at the provincial level. The progression of the violation through the US enforcement system depends on whether a federal or local inspector discovers the violation.¹⁵⁹ According to an official at the EPA, the regional offices of the EPA and the states often establish agreements to avoid overlap in monitoring and enforcement. States often address more minor cases of pollution, but the larger cases are handed over to the federal EPA, as the Agency tends to have more resources to pursue larger pollution

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¹⁵⁶ 42 USCS §7413(b)

¹⁵⁷ Confidential interview, USEPA, Air Enforcement Division, 4 December 1997.

¹⁵⁸ *Id.*

¹⁵⁹ All information regarding interactions between federal and state enforcement officials is attributed to a confidential interview, USEPA, Air Enforcement Division, 4 December 1997

sources.¹⁶⁰ While the enforcement processes in the states are likely to be similar to that of the EPA, there may be some slight differences in the progression of the violation through the enforcement process or the criteria that is considered in the imposition of penalties; however, these differences cannot be too significant. Recall that the states' implementation plans have to be approved by the EPA. Thus, if a state's approach to enforcement is viewed as too cooperative by the EPA, the state will have to revise its SIP. One can see here further evidence of the centralized, adversarial nature of the American air quality enforcement regime.

American inspectors,¹⁶¹ like their Canadian counterparts, have some discretion in whether to report the violation or attempt to remedy it in the field and, according to an official at the EPA, there is some cooperation between inspectors and sources. If the inspector feels that he can adequately address the violation in the field, he may very well try, or he may decide to report the violation to the enforcement branch, which then usually issues a notice of violation. In the event that the noncompliance continues, a penalty may be sought, either administratively or judicially. The difference between the US and Canadian approaches here, is that in the event that the US inspector allows noncompliance to continue unabated, it may be possible for an environmental group to compel the EPA to take action through suits regarding failure to perform non-discretionary duties and, as such, the discretion of US inspectors and enforcement officials is more limited.¹⁶²

One other distinguishing aspect of the American air enforcement approach is the Act's provision for environmental crimes.¹⁶³ A person may be charged for violating

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¹⁶⁰ *Id.*

¹⁶¹ For the sake of simplicity, the inspectors, investigators, and enforcement officials referred to in this section are federal officials.

¹⁶² It is unclear whether the non-reporting of a violation is a breach of a non-discretionary duty on the part of the inspector. An answer to this question requires further perusal of the Clean Air Act and a possible examination of the case law surrounding non-discretionary duties – both are beyond the scope of this paper.

¹⁶³ This is not to say that environmental crimes do not exist in Canada. Under CEPA, s. 115, a person may be charged if he wantonly or negligently causes harm to the environment or to human beings. Recall, however, that the federal Canadian legislation is only applied to Crown corporations and in cases where the provinces do not have programs of their own. As well, OEPA does not provide for any specific penalties covered by the criminal code. Even if one focuses on the federal CEPA crimes, the scope of the definition of environmentally criminal activity is narrower than that contained in the US Clean Air Act, as one will see in the discussion that follows.

implementation plans, making false statements, knowingly releasing hazardous air pollutants, and negligently releasing hazardous air pollutants.¹⁶⁴ Prosecutions regarding environmental crimes are brought in the courts by the US Department of Justice (DOJ) on behalf of the EPA, and the penalties for these crimes range from fines to imprisonment. Although the most severe penalties are for the knowing release of hazardous substances into the air, there are sanctions for noncompliance with implementation plans and permits. Of all the elements contained in the CAA, environmental crimes are the most adversarial, as prosecution for these crimes is an adversarial process and one more associated with the adversarial enforcement model. As well, the prosecution of crimes also involves elements of deterrence and retribution. Recall that cooperative enforcement approaches generally do not seek punishment as a goal of enforcement and, as such, the existence of crimes and criminal penalties in the CAA suggests that the US enforcement approach is closer to the adversarial enforcement model.

It should also be noted, that the provisions for environmental crimes were introduced in the 1990 Amendments. Prior to the Amendments, the EPA could only seek criminal misdemeanor penalties and the DOJ was often reluctant to pursue these cases because of the great amount of time and resources that would have to be spent to recover a minor penalty.¹⁶⁵ However, with the 1990 Amendments, EPA was given the power to ask for felony indictments, greatly increasing DOJ's interest and increasing the deterrence factor of criminal penalties.¹⁶⁶ Thus, time alone will demonstrate the extent of their use and the effect on enforcement, although given proper use, they will provide great deterrence to potential violators.

Because of the freedom of approach in decreasing emissions that is afforded to sources through the emissions trading program, the EPA has not found it necessary to seek criminal penalties for violations of SO₂ regulations.¹⁶⁷ The Agency has found that the issuance of notices of violation (NOVs) and administrative orders, as well as

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¹⁶⁴ 42 USCS §7413(c)

¹⁶⁵ Confidential interview, Air Enforcement Division, USEPA, 4 December 1997.

¹⁶⁶ *Id.*

¹⁶⁷ *Id.*

administrative penalty orders has been successful in addressing some of the minor, more technical violations, like failure to submit complete reports, or submit reports on time.¹⁶⁸ “Most of them [violations] are resolved in the field or with a NOV.”¹⁶⁹ Even most of the civil suits which are brought by EPA are settled out of Court;¹⁷⁰ however, it is important to note that these settlements can be opposed by third parties if they feel that the agreements are too lenient.¹⁷¹

Finally, both CEPA and the CAA contain clauses regarding government responsibility to take action regarding transboundary air pollution, which are very similar in each piece of legislation and are basically intended for the same purpose. As mentioned above, Part V of CEPA details particular the powers of the Canadian federal government with respect to standard-setting for the purposes of curbing transboundary air pollution. Section 115 of the Clean Air Act¹⁷² provides for US action on transboundary air pollution, establishing a non-discretionary duty to the Administrator to direct the states in which the major sources are located to revise their SIPs. The implications of these two sections in Canada-US relations regarding the long-range transport of air pollution will be discussed further in Chapter 3; however, it is important to note here, that Section 115 of the CAA fits within the parameters of a more adversarial enforcement regime, due to the section’s establishment of a non-discretionary duty.

Thus, the American strategy, while fundamentally more adversarial than the Canadian approach, contains some elements which distinguish it from the model adversarial enforcement regime. The American enforcement regime may be considered adversarial because of the availability and frequent use of traditionally adversarial tools and procedures, as well as considerable third party involvement in the open enforcement relationship between the enforcement agency and the sources. In addition, analysis of the enforcement approach as it is established in the text of the CAA suggests that deterrence and retribution are important objectives of the enforcement approach. Recall that both deterrence and retribution are goals of a more adversarial enforcement regime. Hence,

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¹⁶⁸ *Id.*

¹⁶⁹ *Id.*

¹⁷⁰ *Id.*

¹⁷¹ *Id.*

although the emissions trading program introduces cooperative elements into the enforcement regime, overall, the US enforcement approach, characterized by citizen suits, non-discretionary duties, and environmental crimes, is adversarial.

This analysis of CEPA, OEPA, the CAA, and the various enforcement processes of Canada and the US has demonstrated some significant differences in the air quality enforcement strategies employed in the two countries. The Canadian enforcement regime displays many of the characteristics of the model cooperative enforcement regimes, while the American approach is more similar to the adversarial model. These differences may have serious implications for the implementation of standards established or entrenched in bi-lateral environmental agreements between the Canada and the US. While these implications will be discussed in Chapter 3, it is important to first consider why these differences in domestic enforcement regimes exist. In the next section, the institutional and structural origins of the respective Canadian and American enforcement regimes will be considered.

A Brief Discussion of the Institutional Origins of the American and Canadian Enforcement Strategies

Although, the understanding of one regulatory strategy does not necessarily result in the understanding of another,¹⁷² a comparison of the American and Canadian enforcement strategies can be very useful and enlightening. Of any two systems in the world, the US and Canada share many similar situational and structural qualities. These qualities, such as similarity of historical background, geographical place in the world, similar concerns, as well as the existence of similar institutions like federalism, allow for a unique comparison. Many of the basic elements of the two systems are the same, thus, the slight differences in structure that exist can be very useful in the analysis origins of the different regulatory approaches.

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¹⁷² 42 USCS §7415

¹⁷³ Hoberg 1992 *Id.* p. 9.

The differences in the Canadian and American enforcement regimes are closely related to the political institutions, political culture, and government structure of the two countries. In both the Canada and United States environmental issues became a part of the permanent political agenda in similar ways – through the convergence of public opinion, environmental crises, and the opinions of scientists and other experts regarding the seriousness of environmental problems.¹⁷⁴ George Hoberg suggests that the development of enforcement strategy in Canada and the United States is closely related to the response of the governments, including the bureaucracy, to two waves of public interest in environmental issues.¹⁷⁵ The first wave which began in the late 1960's and lasted through the early 1970s, was related to the publication of Rachel Carson's *Silent Spring*, regarding the effects of DDT on certain bird populations, and high profile cases of serious pollution. The second wave, which began in the mid-1980s, was also triggered by environmental crises like the disaster at Union Carbide in Bhopal, India, and the discovery of the hole in the ozone layer.

In Canada, the government's response to this increased concern about the environment led to the drafting and implementation of new environmental legislation; however, the regulatory style of the bureaucracy remained unchanged.¹⁷⁶ The traditional regulatory style was characterized by a system of closed bargaining and negotiations between the government and industry, in which powerful business interests dominate a weaker state,¹⁷⁷ and a decentralization of environmental regulation¹⁷⁸ – what Hoberg calls the New Deal style of regulation.¹⁷⁹ The policy objectives of the New Deal style are generally dominated by economic concerns. In addition, there is limited availability and

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¹⁷⁴ This is called a "policy window" – a theory developed by John Kingdon to explain how and why certain issues become part of a nation's agenda. See description of policy windows and policy streams in Michael Howlett & M. Ramesh. *Studying Public Policy: Policy Cycles and Policy Subsystems*. Toronto, Ontario: Oxford University Press, 1995.

¹⁷⁵ Hoberg 1993 *Id.* pp. 313-316, and generally.

¹⁷⁶ *Id.* p. 313

¹⁷⁷ *Id.* p. 315.

¹⁷⁸ *Id.* pp. 314, 351.

¹⁷⁹ See George Hoberg. "Governing the Environment: Comparing Canada and the United States" *Degrees of Freedom: Canada and the United States in a Changing World*. ed. Keith Banting, George Hoberg, & Richard Simeon. Montreal, Quebec: McGill-Queens University Press, 1997, p. 350; Hoberg 1992 *Id.*, Chapter 2 generally.

use of sanctioning enforcement instruments, a minimal amount of judicial involvement, and a reliance on education and persuasion to encourage compliance.¹⁸⁰

The US also responded to the first wave of environmentalism with an increase in legislation and the creation of new government agencies. According to Hoberg, between 1964 and 1979, Congress created 62 new statutes related to environment, health, and safety,¹⁸¹ and the US EPA was created through an executive order issued by President Richard Nixon on December 2, 1970.¹⁸² However, in the United States, the first wave also resulted in a paradigmatic shift of regulatory styles: "...in the United States, the first wave of environmentalism unleashed profound changes in policy-making institutions and procedures."¹⁸³ The US moved from a New Deal style of regulation to what Hoberg calls a system of "pluralist legalism"¹⁸⁴ – a hybrid of the adversarial approach, characterized by a centralization of regulatory power at the federal level, the establishment of non-discretionary duties and assignment of specific authority to regulatory agencies, increased role of the courts, and an increased role for third parties in not only standard-setting, but in enforcement as well.¹⁸⁵

The second wave of environmentalism, which began in the mid-1980s, resulted in a slight opening of the Canadian regulatory system to the involvement of third parties, although *not* with respect to the enforcement process.¹⁸⁶ Traditionally, the Canadian citizen perceived the state as representing environmental interests. "...[E]nvironmental interests were to be represented in the policy process not by private interest groups as in the pluralist model, but by the relevant government agency headed by the minister"¹⁸⁷ and, as such, the role of the citizen in implementation was essentially nonexistent. Prior to the second wave of environmentalism, the Canadian public began to realize that the government was not well-suited to represent its interests in environmental issues¹⁸⁸ and,

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¹⁸⁰ Hoberg 1992 *Id.* pp. 20-31; Hoberg 1993 *Id.* p. 314.

¹⁸¹ Hoberg 1992 *Id.* p. 44.

¹⁸² *Id.* p. 119.

¹⁸³ Hoberg 1993 *Id.* p. 313.

¹⁸⁴ Hoberg 1997 *Id.* p. 348.

¹⁸⁵ Hoberg 1992 *Id.* pp. 8-9; Hoberg 1997 *Id.* p. 348.

¹⁸⁶ Hoberg 1993 *Id.* pp. 316, 322.

¹⁸⁷ *Id.* p. 314.

¹⁸⁸ "Public" is used here for the sake of simplicity. The public is not necessarily unified in its approach to environmental issues – it too balances economic and environmental values.

as a result, citizens were granted more of a direct role, at least with respect to standard-setting;¹⁸⁹ however, despite the small steps taken by the government to include third parties in bargaining processes, public access to enforcement continues to be impeded. “For the most part, the enforcement function seems to be characterized still by government-business negotiations, resulting in frequent concessions. If business continues to dominate that process, environmental gains may be limited.”¹⁹⁰

In the United States, that trust in government to represent environmental interests in the face of other economic interests ended with the regulatory paradigm shift of the early 1970s, during the first wave of environmentalism. See Figure 2.3 “The New Deal ideal of the agency as expertise [sic] in the service of the public interest gave way to the indictment that agencies were captives of regulated industry.”¹⁹¹ Because of this belief that the agencies were not representing public interest, but bowing to the desires of industry, the regulatory system was altered to allow for third party involvement in both standard-setting *and* enforcement. Thus, during the second wave of environmentalism, there were no major changes to the regulatory structure or enforcement regime in the US, but rather an increase in interest in environmental issues and suggestions regarding the amendment of existing legislation.

Figure 2.3: The Regulatory Paradigm Shift

¹⁸⁹ Hoberg 1993 *Id.* p. 316.

¹⁹⁰ *Id.* p. 322, referring to Gibson 1983.

¹⁹¹ Hoberg 1992 *Id.* p. 58.

As the reader can see, although the circumstances surrounding the introduction of environmental issues to the permanent political agenda in Canada and the US were similar, the two countries developed different environmental enforcement regimes. Hence, the differences in the regimes must be related to other elements within the two political systems. According to Hoberg, a country's regulatory approach and enforcement regime are related to four main political/governmental attributes:¹⁹²

- 1) the structure of the federal government; that is, whether the executive and legislative branches are combined or fragmented.¹⁹³
- 2) the relationship between the citizens and the state, including the role of public opinion in the regulatory process – political culture.¹⁹⁴
- 3) the role of the courts in regulation and enforcement, including their level of activism.
- 4) federalism – the relationship between the federal and local governments, including the power dynamics with regard to environmental issues.¹⁹⁵

Hoberg discusses these elements with respect to the regulatory process in general, considering standard-setting, implementation and enforcement. The examination of the Canadian and American institutions, political culture, and government structure that follows is tailored more to address enforcement, since domestic and bi-lateral enforcement is the focus of this paper.

*A Combined v. a Fragmented Legislative and Executive*¹⁹⁶

One major structural difference between the Canadian and American governments is the combination of the executive and legislature in the Canadian parliamentary system and their bifurcation in the US system. Non-discretionary duties are usually found in systems in which the executive and legislature are divided into

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¹⁹² See Hoberg 1997 *Id.* p. 348, and generally.

¹⁹³ *Id.* p. 377.

¹⁹⁴ *Id.*

¹⁹⁵ *Id.* p. 378.

¹⁹⁶ The information in this section is attributed to Hoberg 1997 *Id.* p. 377, and generally.

separate branches, as the duties arise out of legislative distrust in the executive implementation of the legislation.¹⁹⁷ The legislature fears that if it allows the executive too much discretion in implementing the legislation, that the executive will alter the legislation in its implementation – implementing only certain parts, or interpreting the legislation in a different manner. As such, the legislature includes specific directives to diminish the executive discretion and to ascertain that the legislation will be implemented properly. In a system in which the executive and legislature are combined, as they are in Canada, this suspicion of power does not exist and as the executive and legislature are generally of the same party, it is assumed that the executive will implement the legislation in the way that was intended by the legislature. As such, in the Canadian system, specific legislative directives are not utilized and the executive is afforded a great amount of discretion in implementation. Hence, the cause for action by third parties which is created by the existence of non-discretionary duties in the US does not exist in Canada because of the lack of use of specific legislative directives – resulting in more third party involvement in the US and an opening of the enforcement agency-pollution source enforcement relationship. The Canadian enforcement agency-pollution source relationship remains closed and third party involvement is significantly limited.

The relationship of executive and legislature in the two countries may also be used to explain why the US experienced a regulatory paradigm shift during the first wave of environmentalism, while Canada's regulatory and enforcement regimes remained relatively static. See Figure 2.3. Essentially, the separation of the executive and legislature in the US government provided the basis for the inclusion of legislative directives in the environmental/air quality legislation which, in turn, provided the basis for citizen involvement in enforcement through suits against the enforcement agency for failure to perform a non-discretionary duty. Hence, the regulatory system as a whole moved from a New Deal, cooperative regime, to a more adversarial, pluralist legalist regime, because the executive enforcement agency became more directly accountable to the citizens. Because the structure of the Canadian government, namely the combination of the executive and legislative, does not provide a basis for the inclusion of non-

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¹⁹⁷ *Id.* p. 378, and generally.

discretionary duties in legislation, citizens are not afforded the opportunity to directly question and influence the enforcement officials and, as such, the regulatory and enforcement regime remains cooperative.

Relationship Between Citizen and State – Political Culture

The extent of third party and citizen involvement in enforcement is also a product of the political cultures of Canada and the US. The purpose of the Canadian government is to “...make Laws for the Peace, Order, and good Government of Canada...,”¹⁹⁸ while the purpose of government in the US is to establish and implement laws which do not infringe upon the individual’s rights of life, liberty, and the pursuit of happiness.¹⁹⁹ As such, the Canadian political culture has developed in such a manner that Canadians generally defer to the decisions of the government – in creating legislation and enforcing it.²⁰⁰ On the other hand, the US political culture is less deferential to government decisions as it has developed in the adversarial environment of a rights-based system; that is, because the Bill of Rights enumerates several of the rights with which each citizen is endowed at birth, it provides the basis for litigation in the event that those rights are violated in any way. Hence, the US political system is inherently adversarial, while the Canadian system is inherently cooperative. Thus, it is logical that the environmental enforcement regimes in the two countries would also have those cooperative or adversarial attributes.²⁰¹

Role of the Courts

The Canadian courts have not been activist in the environmental field, or, in general, for that matter – they have been reluctant to extend standing to third parties in

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¹⁹⁸ *Constitution Act, 1867* s. 91

¹⁹⁹ See *United States Declaration of Independence*, 1776; also see the *Preamble* to the *United States Constitution*: “...and secure the blessings of liberty to ourselves and our posterity...”

²⁰⁰ Hoberg 1993 *Id.* p. 314; This may have changed slightly since the Charter of Rights was passed in 1988, as it is similar to the US Bill of Rights and may provide more cause for actions and litigation regarding rights within the Canadian political system.

²⁰¹ This is just a brief synopsis of a much larger argument, which, due to time and space constraints, will not be explored further here.

many cases²⁰² and have limited the use of class action suits against polluters.²⁰³ There has also been very limited use of private prosecutions, that is, cases in which private citizens bring suit against the polluter through the Attorney General's office.²⁰⁴ The courts' reluctance to become actively involved in the enforcement of environmental regulations through lowering the bar citizen suits has limited the development of the Canadian environmental enforcement regime. In order for the regime to become more adversarial, third parties would have to be allowed the greater opportunities to confront polluters in court. Hence, the traditional structure of the Canadian court system limits the type of enforcement regime which may be developed. With the increasing interest in Environmental Bills of Rights in Canada, it is possible that the courts will take a more active role in the enforcement of environmental regulations, also opening a door for greater third party access to enforcement;²⁰⁵ however, thus far, provincial Environmental Bills of Rights have done "...virtually nothing to impose substantive duties on the government or to grant substantive rights to environmentalists; thus it is unlikely to cause a significant increase in the role of the courts."²⁰⁶

In the United States, on the contrary, citizens are encouraged to participate in enforcement generally through the application of sanctioning tools found in the legal system – "the idea of private enforcement of regulatory statutes existed at least since the 'private attorney general' concept had been created in the 1940s."²⁰⁷ As well, the courts have been relatively active²⁰⁸ in environmental enforcement²⁰⁹ since "the judicial activism

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²⁰² Nemetz *Id.* p. 551.

²⁰³ *Id.*; also see Michael Howlett. "The Judicialization of Canadian Environmental Policy, 1980-1990: A Test of the Canada-United States Convergence Thesis." *Canadian Journal of Political Science*. Vol. 27, no. 1, March 1994, p. 115.

²⁰⁴ Webb *Id.* p. 56.

²⁰⁵ *Id.* p. 324.

²⁰⁶ Hoberg 1997 *Id.* pp. 353-354, referring to Estrin and Swaigen 1993.

²⁰⁷ Hoberg 1992 p. 77, citing Boyer and Meidinger 1985.

²⁰⁸ As a side note, while visiting Washington, DC for the purpose of conducting interviews, I met with a friend and mentor who is also a Wellesley graduate and an associate judge on the District of Columbia Court of Appeals. In a discussion about this paper, she mentioned that she had attended a talk given by Lois Schiffer, Assistant Attorney General of the Environment and Natural Resources Division at the US Department of Justice, and also a Wellesley graduate. Ms. Schiffer discussed the concept of environmental crime with the judges that attended, impressing upon them the need to think outside of the traditional boundaries of crime and to understand the criminality of some environmentally degrading actions. The discussion was an attempt to further educate members of the judiciary on environmental issues and encourage continued and further judicial activism in the field of environmental enforcement.

that began in the areas of civil rights and social policy in the 1950s was extended to the regulatory policy arena in the late 1960s.”²¹⁰ In the US, there is also a broader definition of standing and class action suits than there is in Canada and, as a result, the third parties are afforded more access to the justice system to enforce environmental regulations. Some legal scholars suggest that the differences in standing and class action principles in Canada and the US stem from the different evolution of law from its English roots in the two countries. In the US, the concept of a “public trust”²¹¹ has developed, allowing for the expansion of the concept of who is affected by an action.²¹² If air, for example, is a public trust, then pollution of that air can theoretically harm any member of the public who breathes that air. Standing was expanded considerably in the 1940s, and was expanded further with the inclusion of the “citizen suit” clause in the Clean Air Act of 1970, which provides for a citizen’s right to bring action against the EPA in the event that it does not complete its non-discretionary duties.

The concept of public trust is also involved in class actions in the US, as class actions are generally a group of private actions which are perceived as public actions. According to Michael Howlett, this idea was “... formalized in court decisions in the 1930s which ruled that individual grievances had only to be broadly similar, rather than virtually identical, if a class action was to proceed.”²¹³ The Canadian approach to class actions, on the other hand, is very close to the traditional British approach in which the class must be a “... readily identifiable class of individuals with virtually identical grievances; and class actions could not substitute for public actions....”²¹⁴ Thus, the reader may see that the interpretation and evolution of English law in the two countries leads to different perceptions of the appropriate role of the court and different application of legal

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²⁰⁹ Hoberg 1992 *Id.* pp. 50-53.

²¹⁰ Hoberg 1997 *Id.* p. 349, citing Stewart 1975.

²¹¹ Examples include air, land, water, etc.

²¹² Howlett *Id.* p. 115.

²¹³ *Id.* p. 116, citing Arthur Miller. “An Overview of Federal Class Actions: Past, Present and Future.” *Justice System Journal* 4 (1978), 673-87.

²¹⁴ *Id.* p. 115.

principles with respect to citizen suits.²¹⁵ In turn, the different role that the court plays in each country affects the type of regulatory and enforcement regimes that are developed.

Federalism

As discussed in great detail above, in the Canadian political system, jurisdiction over environmental issues remains with the provinces, leading to a system of decentralized power. In the US, on the other hand, federalism has evolved in such a way that the primary jurisdiction over environmental regulation lies with the federal government, leading to a system of centralized power. The centralization and decentralization of power over environmental enforcement influences the type of enforcement regime which is developed in a particular country. For example, the decentralization of the Canadian system necessitates the creation of federal-provincial agreements if any coherent national standards are to be established. These agreements, as well as the standards contained therein, are negotiated between the federal government and the provincial governments in a closed, cooperative relationship. As such, the federal-provincial relations, on environmental and other issues, along with the political culture of deference to government decisions, creates a culture of cooperation in the Canadian regulatory and enforcement system. Hence, cooperation and negotiation in enforcement relationships between enforcement agency and pollution sources are logical, given the dynamics of the overall regulatory environment and, as such, a cooperative enforcement regime is developed.

In the US, on the other hand, the centralization of environmental enforcement power, coupled with the suspicion of power which arises from the separation of the branches of government, leads to a more adversarial enforcement regime. The “culture of cooperation” did not develop in the US precisely because of the centralization of power – the federal government does not have to negotiate with the states to develop and

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²¹⁵ One may indeed expect this difference in evolution given the dissimilarity of the methods by which the US and Canada sought separation from Great Britain; that is, the US intended to sever themselves from Great Britain and although the Americans maintained many British practices, in law and government, they altered them to create their own system. The Canadians, although independent, maintain close ties with Great Britain, and thus, it follows that Canada retains many of the legal and governmental practices of Great Britain.

implement standards, as the government itself may establish, implement, and enforce its own standards. Instead, the suspicion of power that stems from the horizontal fragmentation of the US government creates a “culture of mistrust,” which exists between the different branches *and* levels of government in the US. As such, the regulatory and enforcement system as a whole is less discretionary and provides little room for negotiation and bargaining in the enforcement process. Hence, the federal-state and federal-provincial relationships within Canada and the US, in combination with other characteristics of the respective systems, influence the type of enforcement regime that is developed within the two countries.

Other Factors

There is one other factor which helps to explain why Canada has developed a more cooperative environmental enforcement regime, while the US employs a more adversarial environmental enforcement approach – the availability of resources that may be used in monitoring and enforcement. Canada is a country of vast expanse and a relatively small population and, as such, the government has a small base from which it is able to draw resources to govern over a great amount of land. This results in a constraint on resources; that is, Canada has a limited amount of resources to apply to a large number of problems. Thus, the government generally does not have a large amount of time or money to spend on the enforcement of environmental regulations. Enforcement of any kind requires some monitoring of compliance and in a cooperative system, Canada can rely on some self-reporting from the regulated sources to determine compliance levels. If it used a more adversarial approach, it is assumed that the Canadian government would not be able to depend on the regulated parties to offer information regarding compliance and would, therefore, have to increase monitoring significantly to ensure that emission standards were being met. The government would also theoretically increase its costs with respect to prosecutions in an adversarial enforcement regime. Thus, one can see how in a system of such limited resources, the government has relied

on the regulated sources to assist in monitoring and on negotiation with the sources to achieve compliance.²¹⁶

Contrarily, the US, although also a large country geographically, is a country of great resources, as well. The US has a large population and tax base from which it can draw monetary resources and, as a result, continuous monitoring and inspection is more feasible. This is not to say the US has unlimited resources which it can use to monitor and inspect every possible source of SO₂ emissions constantly – on the contrary, the US also has to engage in a balancing of resources between important problems. According to an official at the USEPA, the enforcement division usually maintains a good part of its budget, even in the face of budget cuts, because “... we’re seen as the cop on the beat, if you will and somehow, it’s not very good to kick the cop in the shins;”²¹⁷ however, he does admit that in times of budget cutbacks, there are generally fewer inspectors employed and, as a result, some violations may go unnoticed.²¹⁸ Recall, though, that in the area of SO₂ emissions, the EPA has required each source to install a continuous emissions monitor as part of the emissions trading program.²¹⁹ This continual monitoring, combined with the trading program itself, generally results in fewer violations, as the line between compliance and non-compliance is clearly delineated and sources have more discretion in the methods they employ to achieve emission reductions. “...[E]nforcement relies on precise and carefully crafted regulation and permits that clearly mark the line between compliance and noncompliance.”²²⁰ Thus, the greater amount of resources which are available for monitoring and enforcement in the US allow for the development of a more adversarial environmental enforcement regime, because the government has the money to spend on monitoring and adversarial enforcement actions like prosecutions.

Hence, the previous analysis has demonstrated the importance of political institutions, political culture, government structure, and the availability of resources in

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²¹⁶ See later discussion of the problems of relying on self-reports from industry in ascertaining compliance levels.

²¹⁷ Confidential interview, USEPA, Air Enforcement Division, 4 December 1997.

²¹⁸ *Id.*

²¹⁹ See note 134 *supra* and accompanying text.

the development of domestic environmental enforcement regimes. In Canada, a relatively cooperative enforcement regime has developed due to the culture of cooperation which is created by the political institutions and government structures. The combined executive and legislature lead to an absence of legislative directives, and less involvement of third parties in enforcement; however, these third parties have traditionally not sought direct involvement in regulation or enforcement, because the political culture is such that citizens have deferred to government decisions. As well, the decentralized nature of power over environmental problems in Canada also contributes to an environment of cooperation and negotiation in regulation and enforcement.

In the US, on the other hand, the institutions and structure of government have led to the development of a more adversarial environmental enforcement regime. The separation of the executive and legislature has led to increased third party involvement through the enforcement of non-discretionary duties. In addition, the American political culture is generally more adversarial than the Canadian culture, due to the rights-granting nature of the US Constitution and, as such, American citizens more readily challenge government decisions. As well, because of this culture of adversarialness, the courts have been more active in environmental enforcement and have been more open, in general, to citizen suits.

Conclusions

In this chapter, the reader has been introduced to the air quality regulatory and enforcement regimes in Canada and the US, and an analysis of the air quality legislation and enforcement procedures of the two countries has revealed considerable differences in the enforcement approaches. The Canadian enforcement regime displays many of the characteristics of the cooperative enforcement model; however, the occasional use of coercive tactics and imposition of sanctions distinguish it from the model. As such, the Canadian environmental enforcement regime, while it is considered cooperative overall, falls slightly short of the cooperative model on the enforcement continuum. The US

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²²⁰ James Strock. "EPA's Environmental Enforcement in the 1990s." *Environmental Law Reporter*. Vol. 20, August 1990, pp. 10327-10328.

enforcement approach is almost the polar opposite of the Canadian approach, as it exhibits many of the characteristics of the model adversarial enforcement regime; however, the use of the emissions trading program within the American enforcement regime makes the overall regime slightly more cooperative than the adversarial model. As such, like its Canadian counterpart, the American enforcement regime falls slightly short of the adversarial model on the enforcement continuum. Again, see Figure 2.1.

The Canadian and American enforcement regimes were then examined with respect to some of the institutional and structural components of the political system within each country. Through this analysis, it was determined these components significantly affected what type of enforcement approach was developed within each political system. This close relationship of enforcement regimes to political institutions and government structure has important implications for the implementation and enforcement of domestic *and* bi-lateral regulations and standards. As such, the analysis of the Canadian and American air quality enforcement regimes and their institutional origins which has been presented in this chapter, provides the basis for an examination of the implications of the different strategies on the implementation and enforcement of the bi-lateral standards included under the 1991 Canada-United States Air Quality Agreement (AQA). An understanding of the differences in the enforcement regimes, their origins, and their implications for bi-lateral enforcement may help to improve the success of the implementation of the AQA and other current Canada-US environmental agreements. The ramifications of the use of the different Canadian and American enforcement regimes in the implementation of AQA standards will be discussed further in Chapter 3.

Chapter 3

The 1991 Canada-United States Air Quality Agreement and the Implications of Canadian and American Air Quality Enforcement Regimes For Its Implementation

As mentioned in the Introduction, Acid Rain was a contentious issue between the United States and Canada during the late 1970s and 1980s, which was brought to the attention of both governments by a study released by the International Joint Commission (IJC)¹ in 1978.² The study suggested that much of the pollution of the Great Lakes could be attributed to atmospheric pollutants.³ Canada was concerned about the potential adverse effects of acid rain on its eastern lakes and forests, while the United States was concerned about effects from newly proposed Canadian power plants.⁴ While 1978 marked the first appearance of acid rain as a major issue between the two countries, the issue of transboundary pollution, even air pollution, has been on and off the bi-lateral agendas of Canada and the US since the early twentieth century.

In this chapter, the history of Canada-US relations regarding acid rain will be examined within the greater context of general Canada-US relations on the environment in the twentieth century. The knowledge of the environmental history of the 1991 Canada-United States Air Quality Agreement (AQA) is important to the understanding of the later analysis of its parts. Following the discussion of the textual elements of the AQA, the domestic and bi-lateral implications of the Canadian and American enforcement regimes for the successful implementation of the AQA will be considered.

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¹ The origins and duties of the IJC will be discussed in further detail below.

² Jeffrey L. Roeloffs. "United States-Canada Air Quality Agreement: A Framework for Addressing Transboundary Air Pollution Problems." *Cornell International Law Journal*. Vol. 26, 1993, p. 439.

³ *Id.*

⁴ Shawn M. Rosso. "Acid Rain: The Use of Diplomacy, Policy and the Courts to Solve a Transboundary Pollution Problem." *Journal of Natural Resources and Environmental Law*. Vol. 8, 1992-1993, p. 425, citing Jutta Brunnee. "Acid Rain and Ozone Layer Depletion." *International Law and Regulation*. 1929(1988) and John E. Carroll. *Environmental Diplomacy: An Examination and a Prospective of Canadian-U.S. Transboundary Environmental Relations* 260 (1983).

General History of Canada-United States Environmental Relations

The 1909 Boundary Waters Treaty

One can trace the beginning of twentieth century relations between Canada and the US⁵ regarding pollution and environmental degradation to the Boundary Waters Treaty of 1909. Although the Treaty was primarily concerned with navigation and the diversion of bodies of water along the Canada-US border, it briefly addressed the issue of water pollution.⁶ In addition, the Treaty created the International Joint Commission (IJC), a non-national body comprised of six Commissioners from both countries, which was given both judicial and investigatory powers.⁷ However, the Commission's powers are limited, as its only binding decisions involve "...rules and procedures by which boundary waters (including waters flowing across as well as those forming the boundary)[sic] would be allocated in relation to upstream and downstream interests and among various categories of users."⁸ As well, it may make recommendations regarding water works projects and pollution reduction, but it is unable to enforce compliance with its recommendations.⁹ In addition, the IJC cannot take action in a particular area unless directed to do so by both governments.¹⁰ Despite its limitations, the IJC has played an important role in addressing transborder pollution issues. Its involvement in the transboundary air pollution issue will be discussed later in this chapter.

The Great Lakes Water Quality Agreements

As mentioned above, the IJC's original jurisdiction was over the development and navigation of water sources on or crossing the boundary between Canada and the US; pollution was considered as a secondary issue. However, two later agreements expanded

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⁵ Canada was represented by Great Britain in the negotiations for this treaty, as the country was still under British control. – See Rosso *Id.* p. 422.

⁶ Roeloffs *Id.* p. 425; See Article IV of the 1909 Boundary Waters Treaty for the reference to water pollution.

⁷ Rosso *Id.* p. 423.

⁸ Kenneth M. Curtis & John E. Carroll. *Canadian-American Relations: The Promise and the Challenge*. Toronto, Ontario: Lexington Books, 1983, p. 28.

⁹ Roeloffs *Id.* p. 427.

¹⁰ Rosso *Id.* p. 425.

the power and presence of the IJC in transboundary pollution issues – the Great Lakes Water Quality Agreement (GLWQA) of 1972 and the amended GLWQA of 1978.¹¹ These Agreements, as their names suggest, addressed the pollution of the Great Lakes¹² – they were basically established to institute water quality standards and monitoring in the Great Lakes region.¹³ According to Jeffrey Roeloffs, the 1978 GLWQA expanded the IJC's powers, but "... failed to provide the IJC with any enforcement powers."¹⁴ The GLWQAs *did* authorize the IJC to identify pollution sources beyond merely the border areas – it could now identify sources anywhere in Canada and the US that posed any threat to transboundary environmental quality.¹⁵ This authority is significant in the context of transboundary air pollution because sources of transborder air pollutants are not necessarily located directly on the border. Hence, the GLWQA, at least of 1978, recognized the broader scope of transboundary pollution and set the stage for future developments in the fight against transboundary pollution.

The Trail Smelter Arbitration

The two examples of Canada-US environmental relations given above specifically pertain to issues of water quality and transborder water pollution; however, as the focus of this paper is transboundary air pollution, it is important to consider the precedents of Canada-US interactions regarding transboundary air pollution. The first major dispute between Canada and the US regarding transboundary air pollution occurred in the mid-twentieth century. In 1949, citizens in Washington state became concerned about property damage which they believed was caused by the sulphur dioxide (SO₂) emissions of a smelter plant in Trail, British Columbia.¹⁶ The case was submitted for dispute resolution to the IJC, which decided that the smelter company should reduce

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¹¹ Rosso *Id.* pp. 423–424; Roeloffs *Id.* pp. 427–428.

¹² The GLWQA of 1978 did recognize some of the potential effects of air pollution on the quality of the Great Lakes, but the agreement did not specifically involve any significant or specific air quality provisions. See Roeloffs *Id.* p. 428.

¹³ Roeloffs *Id.* p. 427.

¹⁴ *Id.* p. 428.

¹⁵ Rosso *Id.* p. 424.

¹⁶ All historical details of the *Trail Smelter* arbitration are attributed to Roeloffs pp. 428–429 and Rosso p. 424 unless otherwise noted.

its emissions to prevent further damage. As neither the Canada nor the US was satisfied with this decision, the two countries negotiated an executive agreement which resulted in Canada paying for previous damage and both countries agreeing to submit the question of future liability and responsibility to arbitration. In an opinion that has become the basis of some basic principles in international law, the arbitral tribunal maintained that Canada has a duty to ascertain that activities which take place within its borders do not adversely affect those in another country and, as such, the smelter was required to limit its emissions.

Trail Smelter demonstrates some of the weaknesses of the IJC – specifically that the Commission’s recommendations are not binding. The two countries, as they were unsatisfied with the IJC’s decision regarding the dispute, were able to discard the decision completely. On the other hand, *Trail Smelter* is also notable because it marks the IJC’s first foray into the area of transborder air pollution, establishing that the Commission can indeed be consulted on transboundary air pollution issues. Unfortunately, the case does not apply generally to other transboundary air pollution problems – the decision of the arbitral tribunal was only binding because Canada and the US agreed in advance, through a specific executive agreement, that they would be bound by the decision and, as such, jurisdiction was only afforded to the tribunal in this one specific instance.¹⁷ In addition, Roeloffs maintains that the *Smelter* case was not particularly complex, because “...the link between source and damage was clear.”¹⁸ This is not characteristic of most air pollution cases, particularly in the era of acid rain, as it is often very difficult to link polluter to damage in this age of tall stacks.¹⁹

Multilateral Approaches: The Long-Range Transboundary Air Pollution Convention

Both Canada and the US have also taken part in a variety of multi-lateral agreements to curb transboundary pollution. Most relevant to the issue of transboundary air pollution is the Economic Commission for Europe Convention on Long-Range

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¹⁷ Roeloffs *Id.* p. 429.

¹⁸ *Id.*

¹⁹ See discussion of tall stacks in Introduction; also see Stuart N. Keith “The EPA’S Discretion to Regulate Acid Rain.” *Cleveland State Law Review*. Vol. 36, 1988, p. 137.

Transboundary Air Pollution (LRTAP) of 1979.²⁰ While an in-depth discussion of the LRTAP is not relevant to the analysis here, it should be noted that both the US and Canada's participation in the Convention demonstrates the early involvement of the two countries in the acid rain issue at the multi-lateral level. Indeed, Doern and Conway suggest that : "this convention gave a further symbolic boost to the acid-rain issue."²¹ In addition, the Convention also gave an early presentiment of the position that the US would take in the bi-lateral Canada-US acid rain debate – the US refused to agree to one of the more specific protocols of the LRTAP, which restricted national SO₂ emissions.²² Throughout the Reagan Administration, the US repeatedly maintained that "...scientific evidence concerning acid rain was inconclusive, asserting that further research was necessary prior to implementing any comprehensive and expensive control programs."²³ Hence the LRTAP has not been very successful in addressing the specific issue of transboundary air pollution between Canada and the United States due to the US refusal to sign the specific protocol, and because of the LRTAP's lack of enforcement and dispute resolution mechanisms.²⁴

Thus, as the reader may see from this brief overview of Canada-US relations regarding the environment, there is a long history of diplomatic relations between the two countries regarding environmental issues. Although problems of water quality and specific cases of transboundary air pollution have generally been addressed to the satisfaction of both countries, few issues have been as contentious or so colored the tenor of Canada-US relations as acid rain. Indeed, it has been suggested that "... acid rain poisoned not only Canadian and American waters but the tone of the official Canada-

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²⁰ Joel Gallob. "Birth of the North American Transboundary Environmental Plaintiff." *Harvard Environmental Law Review*. Vol. 15, 1991, p. 123.

²¹ G. Bruce Doern & Thomas Conway. *The Greening of Canada: Federal Institutions and Decisions*. Toronto, Ontario: University of Toronto Press, 1994, p. 154.

²² Gallob *Id.* p. 124; The protocols were adopted in the years following the original Convention. According to Roeloffs, there were protocols signed in both 1985 and 1988 – Roeloffs *Id.* p. 434.

²³ Roeloffs *Id.* p. 441, citing *Acid Rain and Friendly Neighbors: The Policy Dispute Between Canada and the United States*. (Jurgen Schmandt & Hillard Roderick eds. 1988)

²⁴ Roeloffs *Id.* p. 434; Rosso *Id.* p. 427; Gallob *Id.* pp. 125-126.

U.S. relationship.”²⁵ In the next section, these contentious acid rain relations will be further explored.

The Diplomatic History of the 1991 Canada-United States Air Quality Agreement: A Brief Overview²⁶

As was mentioned above, acid rain became a significant bi-lateral issue at the end of the 1970s. In response to the IJC’s report, Canada and the US established a Bilateral Research Consultation Group on Long-Range Transport of Air Pollutants in October of 1978.²⁷ In 1979, the Consultation Group issued a report stating its findings that large areas of North America are sensitive to acid deposition, thereby prompting the governments of Canada and the US to issue a Joint Statement on Transboundary Air Quality in June of that same year.²⁸ In the Statement, both countries maintained that they were committed to reducing certain kinds of transboundary air pollution.²⁹ This Statement was made more official in the 1980 Memorandum of Intent Concerning Transboundary Air Pollution (MOI), in which both parties agreed to develop a bi-lateral agreement as soon as possible, to take interim actions until that time to reduce transboundary air pollution through reductions in domestic emissions, and to establish a joint coordinating committee to begin negotiations on the bi-lateral agreement by June 1, 1981.³⁰ In addition, under the MOI, there was to be monitoring and data collection, which would provide technical data for the bi-lateral negotiations.³¹

It is interesting to note that such an agreement was reached even in the wake of the 1970s oil crisis, although, Shawn Rosso maintains that “the oil crisis forced President Carter to approve the conversion of oil fueled utilities to coal and consequently, the hope for reaching a solution to the problem of acid rain quickly vanished,”³² the existence of

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²⁵ Joseph T. Jockel. “Canada-U.S. Relations in the Bush Era.” *Canadian-American Public Policy*. No.1, April 1990, p. 10.

²⁶ See Figure 3.1 below for a time line of significant diplomatic and non-diplomatic events during the period from prior to the signing of the AQA.

²⁷ Reeloffs *Id.* p. 439.

²⁸ *Id.*

²⁹ *Id.*

³⁰ Reeloffs *Id.* p. 440.

³¹ Rosso *Id.* p. 426.

³² *Id.* p. 425, quoting Carroll at 260.

the MOI suggests otherwise. Despite the set-back that the oil crisis may have caused in the fight against acid rain, the Carter Administration was still willing to attempt to address the issue of transboundary air pollution. It was only with the change of Administrations in the US that the acid rain stalemate began. Note that EPA Administrator Douglas Costle, prior to leaving office after the new elections, found that the US was responsible for some of the acid deposition problems in Canada, and, as such, determined the US Government should take action to mitigate those effects under Section 115 of the Clean Air Act. The circumstances surrounding this determination and subsequent actions will be discussed in Chapter 4. For now, it is important to note that the determination was made and that while the Carter Administration was on the verge of taking action on the transboundary air pollution problem, the Reagan Administration focused on economic³³ and other foreign policy/Cold War issues, pushing the concern for environmental issues, including transboundary air pollution, to the back burner.

The Reagan Years

“When the Reagan Administration took office in 1981, it gave environmental concerns a much lower priority than the Carter Administration,”³⁴ and, as a result, progress on the reduction of transboundary air pollution ground to a halt. The Administration claimed that it was not convinced by the scientific research on acid rain³⁵ – a claim that essentially became the official position of the Administration, which dug in its heels and refused to take any further steps to negotiate a bi-lateral transboundary air pollution agreement. “...[T]he Reagan team offered, in the eyes of senior Canadian players, not even an intention to cooperate after it inherited the Memorandum of Intent.”³⁶

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³³ It has been suggested that “...the United States’ desire to minimize the costs associated with industrial activity...continually inhibited...[a] comprehensive agreement with Canada on acid rain.” See “Assent to and Enforcement of International Environmental Agreements.” *Harvard Law Review*. Vol. 104, no. 7, 1 May 1991, p. 1566 (hereafter *Harvard Law Review*).

³⁴ Roeloffs *Id.* pp. 440-441, citing Erik K. Moller, Comment: “The United States-Canadian Acid Rain Crisis: Proposal for an International Agreement.” 36 *UCLA Law Review* 1207 (1989) at 1213.

³⁵ Roeloffs *Id.* p. 441.

³⁶ Doern & Conway *Id.* p. 156.

In Canada, as frustration with US inaction grew, the government turned its attentions inward, negotiating with the eastern provinces a 50 percent reduction in SO₂ from the 1980 level.³⁷ Also in 1984, the Canadian Liberal government was replaced by the Conservatives, who were led by Prime Minister Brian Mulroney.³⁸ Everett Cataldo maintains that there was a better rapport between the Reagan and Mulroney Administrations, and that Mulroney's approach to relations with the US government was less adversarial than that of his predecessor John Turner.³⁹ "Not unrealistically, they may have anticipated being able to resolve the acid rain dispute on the basis of partisan accommodation between governments who saw eye-to-eye on most matters."⁴⁰ As a possible result of this "kinder and gentler" relationship, Mulroney and Reagan agreed to appoint two special envoys on acid rain in 1985.⁴¹ The Report of the Special Envoys was released a year later, the language of which was very similar to that of the MOI – non binding and recommending in nature.⁴² The Envoys concluded that acid rain was a serious issue and called for a \$5 billion commitment by the US to develop technologies to reduce acid rain.⁴³ Although Reagan asked for the \$5 billion from Congress, no real action was taken.

It is interesting to note that during the 1985 – 1986 period of increased US cooperation with Canada regarding acid rain reduction, litigation regarding US responsibility to take action under the US Clean Air Act (CAA) to decrease domestic emissions for the purpose of decreasing transboundary air pollution was being heard in the US courts. See Figure 3.1. While the case, *New York v. Thomas*,⁴⁴ will be discussed in further detail in Chapter 4, it is important to note the impact of the decisions of the courts on US diplomatic relations with Canada. In 1985, the DC District Court ruled in favor of the plaintiffs, who were seeking to force the US Environmental Protection

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³⁷ *Id.*; the reductions were to be in place by 1994 – see discussion of the Eastern Canada Acid Rain Program in Chapter 2.

³⁸ Everett Cataldo. "Acid Rain Policy in the United States: An Exploration of Canadian Influence." *The Social Science Journal*. Vol. 29, no. 4, 1992, p. 400.

³⁹ *Id.*

⁴⁰ *Id.*

⁴¹ Roeloffs *Id.* p. 442.

⁴² Cataldo *Id.* p. 400.

⁴³ *Id.*; Roeloffs *Id.* p. 441.

⁴⁴ 613 F. Supp. 1472 (D.D.C. 1985), 802 F.2d 1443 (D.C. Cir. 1986), *cert. denied* 107 S.Ct. 3196 (1987)

Figure 3.1 1991 Canada-United States Air Quality Agreement: Time Line of Significant Events

Agency (EPA) to take action under Section 115 of the CAA to reduce acid-causing emissions to further study transboundary acid rain. That same year, Reagan agreed to appoint a special envoy. It is highly likely that he was prompted to this action by the court's ruling against the EPA – Reagan realized that the US was going to be forced to take action by its own courts and that he had to take some sort of action to save face. However, when the DC Appellate Court overturned the lower court's ruling in 1986 – at the same time that the Report of the Special Envoys was released, the Reagan Administration returned to its original position of inaction – asking Congress for the money to implement new emissions standards, but never actively pursuing an emissions reduction program. Hence, even the high-point of Canada-US cooperation on acid rain reduction during the 1980s was not motivated by a true desire on the part of the US to cooperate, but rather by temporary political concern. Thus, when Reagan left office in January of 1989, the acid rain situation was much the same as it had been when he took office in January of 1981 – eight years had passed with virtually no progress; however, the prospect for a bi-lateral agreement on transboundary air pollution improved with another change of Administration.

Bush and the Clean Air Act Amendments of 1990

Although Reagan was succeeded by his vice-president George Bush, the acid rain issue did not continue to founder. Canada was the site of Bush's first trip abroad in 1989, where he voiced to Prime Minister Mulroney his desire to complete a bi-lateral agreement on acid rain with Canada.⁴⁵ From that point onward, things began to move at a rapid pace. As mentioned in the previous chapter, the Bush Administration introduced its amendments to the Clean Air Act to Congress, who revised them and passed the Clean Air Act Amendments in October of 1990, the Act was signed into law by Bush on November 15, 1990. The Amendments, although not as strict as recommended by the various working groups in the 1980s, were acceptable to the Canadians and, as such, Bush and Mulroney signed the Canada-United States Air Quality Agreement on March 13, 1991.

It has also been suggested that Bush, like Reagan, was motivated to take action on acid rain reduction due to pending litigation in the courts. Around 1989, the province of Ontario brought a suit against the EPA, again, trying to force the EPA to take action to reduce domestic emissions under Section 115 of the CAA.⁴⁶ The court ruled against Ontario in 1990 and the province sought an appeal; however, according to a source at the US EPA, the appeal was dropped because US action to improve emission standards through Amendments to the CAA was taken, and negotiations on the bi-lateral AQA ensued.⁴⁷ As well, Doern and Conway suggest that environmentalists had been successful in compelling seven states to reduce acid-causing emissions.⁴⁸ Hence, US action to reduce acid rain was finally initiated as a result of some domestic political will and a great deal of fear regarding the outcome of the ongoing litigation.

Non-Diplomatic Actions Taken During the Reagan Years

The previous discussions of the events leading up to the signing of the AQA and the brief history of environmental relations between Canada and the United States have focused on the formal diplomatic relations between Canada and the United States; however, since the two countries are so closely situated and culturally related, formal diplomacy is only part of the history behind the AQA. In terms of bi-lateral relationships, the association between Canada and the United States is unique.

The U.S.-Canadian relationship is inherently a close one for a number of reasons, including the sharing of common values between the two peoples, the existence of a high level of economic interdependency, and the important positions both nations have historically given to human rights.⁴⁹

This is not to say that there are not differences; however, the close proximity of the two countries in both culture and geographic location, as well as the sheer amount of land

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⁴⁵ Cataldo *Id.* p. 401.

⁴⁶ See Chapter 4 for further discussion of *Her Majesty the Queen in Right of the Province of Ontario v. U.S. EPA*, 912 F.2d 1525 (D.C. Cir. 1990) (hereafter *Ontario v. EPA*).

⁴⁷ Confidential interview, USEPA, 4 December 1997.

⁴⁸ Doern & Conway *Id.* p. 164.

that is shared along an extensive border, provide for a situation in which interaction occurs on many levels besides the formal diplomatic level. People from different states and provinces interact almost daily and goods pass from one side of the border to another, as do cultural elements like television programs and motion pictures. According to Kenneth Curtis and John Carroll, there are elements of both a public and private relationship between Canada and the US. "A steady, easy relationship has evolved, one of blood and family ties, of close friendship, of intimate business and professional relationships, all of which ignore the border and sometimes even deny its reality."⁵⁰ Also included in the context of private relationships are the information exchanges which take place between the scientific and epistemic communities in the US and Canada, which can be very significant for addressing environmental issues and obtaining a place for them on bi-lateral and international agendas.

In addition to private, informal relationships between citizens, there are relationships between states and provinces in particular regions. According to Curtis and Carroll, the north-south/Canada-US dialogue has developed on a regional basis rather than around the entire national boundary.⁵¹ One of the most prominent of the regional relationships is the Eastern Canada-New England association.⁵² This relationship has been particularly important in the developing cooperation on acid rain reduction, as both regions experience the effects of acid rain which is attributed to pollutants emitted in the Midwest. Eastern governors and premiers meet to discuss issues important in their areas⁵³ and there is also informal contact between state and provincial government officials, as well as conferences between legislatures.⁵⁴

As well as regional and private relationships, there also exist informal relationships between officials in the Canadian and US governments, at the state level, as mentioned above, and also at the federal level. An official at the US EPA maintains that these informal relationships play an important role in setting the groundwork for the

⁴⁹ Curtis & Carroll *Id.* p. 1.

⁵⁰ *Id.* p. 8.

⁵¹ *Id.*

⁵² See discussion of the Northeastern Regional Air Quality Committee (NERAQC) in Chapter 4.

⁵³ Curtis & Carroll *Id.* pp. 8-9.

⁵⁴ *Id.* p. 65.

more formal diplomatic interactions and agreements.⁵⁵ As such, it is likely that informal negotiations between officials in the environmental protection agencies in both countries provided much of the foundation upon which the formal negotiations regarding the development of the AQA were based. Also included in this category of informal action by government officials is the direct lobbying of the foreign government – in the case of Canada and the US, Canada’s lobbying of members of Congress to pass legislation improving American emissions standards – and other indirect means of influence like the litigation that was mentioned in the previous section. Essentially, any action taken by government officials outside of the traditional diplomatic channels, and which does not fall into the private or regional interaction categories, may be considered within this category of informal official action.

There was significant activity on the acid rain issue in each of these areas – private, regional, and informal official – during the 1980s. In the private area, the epistemic community was very active, producing studies and examining the impact of acid rain on the environment as well as on human health. Regionally, states and provinces entered into their own environmental agreements, however official or unofficial – Curtis and Carroll specifically mention agreements between Maine and New Brunswick.⁵⁶ By far, though, the most action was seen in the informal official arena, as Canadian officials were involved in both lobbying on Capital Hill and in formal litigation in the US courts.⁵⁷ This is not to say that all activity can be easily placed into these three categories – on the contrary, there is a great deal of overlap between each; however, for the purposes of this analysis, and in the interest of simplicity, the interactions discussed here will be considered within the context of these three categories.

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⁵⁵ Confidential interview, USEPA, 4 December 1997; this same official also suggested that much of the environmental side agreement to the North American Free Trade Agreement (NAFTA) – the NAAEC – was established during meetings of lower level officials in the Environmental Protection Agencies of Canada, the US, and Mexico, who laid the basic groundwork for more formal negotiations between the Environment Ministers.

⁵⁶ Curtis & Carroll *Id.* pp. 66-67.

⁵⁷ Cataldo *Id.* p. 399.

Private

Since the Reagan Administration took its position behind the lack of scientific evidence surrounding the acid rain issue, the work of scientists and the epistemic community was very important. Recall that it was scientists, albeit working in the employ of the IJC, who brought this issue of long-range transport of air pollutants to the attention of both governments in 1978 and scientists continued to work on the acid rain problem throughout the 1980s. Indeed, the MOI and subsequent agreements highlighted the need for continued scientific cooperation. As well, in 1986, the Special Envoys, also with scientific help, concluded that acid rain was indeed a serious problem.⁵⁸ This is not to say that all scientists agreed, in fact, "...scientists engaged in contentious and bitter debates about the seriousness of the acid rain problem, the causes and effects of acid rain, the effectiveness of proposed solutions, and who was to blame."⁵⁹ Today, however, there appears to be little debate about the seriousness of the acid rain issue, although there are ongoing studies to determine its effects on environment and human health. The AQA itself provides for continuing studies and scientific cooperation to further understanding about the sources and effects of acid rain.⁶⁰ Thus, one may conclude that scientific activity/private activity was very important to support the diplomatic action taken on the acid rain issue and in the eventual establishment of the AQA.⁶¹

Regional

As mentioned earlier, regions play an important role in Canada-US relations. The actions of the New England states and the Eastern Canadian provinces are particularly important in the fight against acid rain, as it was in these areas that there was the most

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⁵⁸ See note 43 *supra*, and accompanying text.

⁵⁹ Leslie Alm. "Scientists and the Acid Rain Policy in Canada and the United States." *Science, Technology, & Human Values*. Vol. 22, no. 3, Summer 1997, p. 352, citing Gould 1986; Kahan 1986; Regens & Rycroft 1988.

⁶⁰ Scientific activity is encouraged under Article VI of the AQA to foster "...understanding of transboundary air pollution concerns and to increase...capability to control such pollution." *AQA* Article VI(1)

concern about the effects of acid rain. The New England-Eastern Canada relationship is one of the strongest in Canada-US relations⁶² and the Eastern region has established many formal mechanisms to facilitate discussion and cooperation on regional problems. For example, the Conference of New England Governors and Eastern Canadian Premiers provides a forum for state-provincial issues⁶³ and there are also relationships between individual states and provinces, like Maine and New Brunswick.⁶⁴ Although an examination of the negotiations between provinces and states during the period leading up to the signing of the AQA is beyond the scope of this paper, one may discern state-provincial cooperation in the litigation which was brought in the US during the 1980s. In *New York v. Thomas*, several states, environmental groups, and a few individuals took the EPA to court to force action on what they believed was a non-discretionary duty under Section 115 of the Clean Air Act.⁶⁵ The opinion mentions six states; however, nine are listed on the case itself – New York, Pennsylvania, Maine, Massachusetts, New Hampshire, Vermont, New Jersey, Rhode Island, and Connecticut.⁶⁶ These states were concerned with the issue of transboundary air pollution and it is logical to assume that the New England states, at least, were in contact with the Eastern Canadian provinces, who were also concerned about the transboundary issue.⁶⁷ Indeed, an official at the US EPA maintains that “...to accomplish our objectives on the long border, we need to have a lot of effective regional cooperation.”⁶⁸ Thus, both the US and Canada looked to these regional activities and cooperation for direction in the development of the AQA.⁶⁹

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⁶¹ Indeed, an official at the IJC maintains that the AQA will be successful in part because of the unofficial information exchange between scientists in Canada and the United States. Information obtained in a confidential interview 3 December 1997.

⁶² Curtis & Carroll *Id.* pp. 70-72, generally.

⁶³ *Id.* pp. 70-71.

⁶⁴ *Id.* p. 70.

⁶⁵ See further in-depth discussion of this case in Chapter 4.

⁶⁶ Keith *Id.* p. 134, note 12.

⁶⁷ There are many complex issues at stake here – the applicability of Section 115, as well as questions of standing for foreign plaintiffs – which will be considered in Chapter 4.

⁶⁸ Confidential interview, USEPA, Office of International Affairs, US-Canada Division, 4 December 1997.

⁶⁹ *Id.*

Informal Official

As mentioned above, during the 1980s, there was much action in the informal official arena, most of which was taken by Canadians and Canadian government officials in the US or at least targeting the US. For example, Canada lobbied Congress and members of Congress to get the acid rain issue on the agenda in the US and to attempt to decrease acid-causing emissions. According to Everett Cataldo, the US treats the interests of other nations as “another interest,” that is, another interest group; as such, Canada chose to present its interests in the same manner that a domestic interest group would.⁷⁰ Indeed, there was a significant lobbying group at the Canadian Embassy in Washington which attempted to influence members of Congress directly and with the help of domestic US environmental interest groups.⁷¹ This influence was significant in gaining support for the 1990 Amendments to the Clean Air Act in Congress.

As mentioned in the previous section, Canada also became involved in legal actions against the US government, in which the litigants sought to force the EPA to take action under Section 115 of the Clean Air Act. Because these cases will be discussed in further detail in Chapter 4, the details will not be presented here; however, it is important to note that Canada was indirectly involved through its influence on the opinions within the border states in *New York v. Thomas* and directly involved in *Ontario v. EPA*. Although the litigation was ultimately unsuccessful, it demonstrates a willingness on the part of Canada to involve itself in activities which fall outside of the realm of traditional diplomacy.

One other informal approach taken by the Canadian government in its efforts to convince the US to reduce its emissions, was the targeting of tourists in the national parks of the eastern provinces. During the stalemate of the Reagan years, as part of a consciousness-raising program, Environment Canada embarked on an information program through the Parks Service. Tourists, particularly Americans, were given

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⁷⁰ Cataldo *Id.* p. 399.

⁷¹ *Id.* pp. 401-402; Cataldo maintains that Canada’s lobbying was not overbearing, but “...covert and unobtrusive.” (405)

information about the acid rain problem threatening the sensitive forests in the protected areas of the national parks. The hope was that by educating Americans tourists, particularly those with a propensity to engage in outdoor activities, Canada could influence knowledge and awareness of the acid rain problem in the US and influence policy-making in the US by shaping some of the US public opinion.⁷² Indeed, during the height of the acid rain debate between the two countries, the Canadian DOE “...even hired an American journalist to write articles to spread the word about Canada’s [acid rain] concerns.”⁷³

Thus, the reader may discern from this brief overview of the history of events leading to the adoption of the 1991 AQA, that the dynamics of the relationship between Canada and the US on this issue have been various and complex. The diplomatic actions – the MOI, the Special Envoys, and, indeed, the AQA itself – were not only the product of official relations between the negotiators for both countries, but also of the various other unofficial and informal official relationships and interactions that were occurring across the border.

The reader may have noticed that the discussion of non-diplomatic action involves steps predominantly taken by Canada. This is not to say that the US did not engage in informal activity; however, as the impetus for action regarding the reduction of acid rain originated in Canada, one would expect more activity from the Canadian side of the border – recall that, although there is some transport of Canadian SO₂ and NO_x emissions to US territory, the wind patterns are such that more US emissions travel to Canada.⁷⁴ Hence, as the dynamics of the acid rain issue developed throughout the 1980s, Canada was usually in the position of trying to convince the US of the importance of decreasing transboundary air pollution and attempting to influence the US to take action to curb its own acid-causing emissions. Thus, while both Canada and the United States took part in non-diplomatic relations, Canada was more active.

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⁷² This example is drawn from the author’s personal experience. While traveling through some of the national parks in New Brunswick and Nova Scotia in the mid-1980s, as an American, I was given a great deal of information about acid rain, its effects and sources.

⁷³ Doern & Conway *Id.* p. 156.

The 1991 Canada-United States Air Quality Agreement: A Textual Analysis

Before examining the implications for the use of the Canadian and American air quality enforcement regimes in the implementation and the enforcement of the AQA, it is important to understand the purpose of the AQA, its targets and objectives, as well as the elements related to its implementation and enforcement. The Agreement has been perceived by some as a great step forward by the two countries in addressing the issue of transboundary air pollution. Roeloffs, for example, maintains that "...the Agreement is a vast improvement over past bilateral and multilateral efforts to confront transboundary air pollution issues."⁷⁵ While this may be true, the following textual analysis of the AQA will demonstrate that the Agreement does not solve all of the problems of transboundary air pollution, or even sufficiently address those problems involved with transborder acid rain. This is important to note, as the AQA has brought to a close much of the debate about acid rain and other transboundary pollution issues.⁷⁶

Standard-Setting, Enforcement, and Dispute Resolution

According to the text of the Agreement,⁷⁷ its purpose is "...to establish, by this Agreement, a practical and effective instrument to address shared concerns regarding transboundary air pollution."⁷⁸ Note that this purpose is vague and the tone suggests that the Agreement itself will not address the concerns of the two Parties, but rather provide a framework⁷⁹ within which to address those concerns. The specifics of the Agreement, the standards which are agreed upon, are included in the Annexes and will be discussed briefly following this section. Thus, the AQA itself is a mere framework, according to Roeloffs, "...an effective framework in which to bilaterally address present and future

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⁷⁴ See Figure 1 included in the Introduction to this paper.

⁷⁵ Roeloffs *Id.* p. 454.

⁷⁶ This will be discussed further later in this chapter and in Chapter 4. The issues of acid rain and transboundary air pollution, have fairly dropped off the bi-lateral agenda and out of the public consciousness.

⁷⁷ For the text of the AQA see Appendix A.

⁷⁸ AQA, Article II

⁷⁹ Richard Smith and Susan Biniaz maintain that the AQA is a "...dispute prevention and management device." Richard J. Smith & Susan Biniaz. "Beyond Dispute: An Air Quality Agreement in the Context of a

transboundary air pollution problems between the United States and Canada.”⁸⁰ The Agreement provides for both general and specific air quality objectives. The general objective of the AQA is to control transboundary air pollution, while the specific objectives are to address the emission reductions of specific air pollutants, and are provided for in the Annexes of the Agreement.⁸¹ In attempting to reach specific objectives, each of the parties is responsible for adopting its own domestic emission reduction programs: “The Parties shall...establish specific objectives for emissions limitations or reductions of air pollutants and adopt the necessary programs and other measures to implement such specific objectives.”⁸²

Annex 1, agreed upon and signed with the original Agreement, is entitled “Specific Objectives Concerning Sulphur Dioxide and Nitrogen Oxides” and establishes emissions caps for sources in the United States and Canada. Under the Annex, the US agrees to reduce its SO₂ emissions by 10 million tons from its 1980 levels by the year 2000 and cap national emissions permanently at 8.95 million tons by 2010. Canada, in Part B, agrees to reduce SO₂ emissions in the seven eastern provinces to 2.3 million tonnes per year by 1994, cap eastern emissions that amount per annum, from 1995 through December 31, 1999, and cap national emissions at 3.2 million tonnes by the year 2000.⁸³ The Annex also addresses reductions in NO_x, for mobile and stationary sources; however, for the sake of simplicity and in the interest of time and space, only SO₂ emissions standards will be considered here. These emission caps for each country appear to be very sizable until they are more closely examined. Those emission reductions agreed to in Annex 1 are those which have already been established by domestic legislation in the US and Canada. The US emission reductions are included in the 1990 Amendments to the US Clean Air Act⁸⁴ and the Canadian reductions are taken from the Eastern Canada Acid Rain Program, established in the mid-1980s.⁸⁵ Thus, the

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Consultative Relationship.” *Canada-United States Law Journal*. Vol. 17, 1991, p. 427. This statement will be challenged by the discussion of AQA dispute resolution which is included later in this chapter.

⁸⁰ Roeloffs *Id.* p. 454; the effectiveness is questionable, as will be discussed later in this chapter.

⁸¹ *AQA*, Articles III, IV generally.

⁸² *Id.* Article III(2)(a)

⁸³ 1 ton = .91 tonnes; 1 tonne = 1.1 tons

⁸⁴ See especially CAA §401 & §403; 42 USCS §7651(b) & §7651b (a).

⁸⁵ See discussion in Chapter 2.

specific objectives agreed to in the Annex do not mark a step forward for the US and Canada, but merely a bi-lateral legitimization of the programs which already exist.

There is no explicit reasoning for this use of domestic standards as bi-lateral standards contained in the text of the AQA; however, given the relations between the US and Canada in the years leading up to the signing of the AQA, one may establish a general hypothesis. As mentioned above, the struggle to reach a bi-lateral air quality agreement continued for over a decade, with Canada constantly petitioning the US to improve its standards and to enter into a bi-lateral agreement. Once the US passed the 1990 Amendments and agreed to sign a bi-lateral agreement, it is probable that Canada did not wish to seek any further improvements in standards for fear that the bi-lateral agreement would disintegrate. In addition, both countries were generally satisfied with the other's standards. As the US was not experiencing large amounts of environmental degradation due to cross-border transport of Canadian pollution, it was not as concerned with Canada's air quality standards. Canada's concerns were somewhat placated by the 1990 Amendments to the USCAA and the US improvements in emission standards were generally viewed as adequate for the protection of the Canadian ecosystems at risk.⁸⁶ The implications of this use of domestic standards as bi-lateral standards will be discussed further below.

In addition, the AQA does not provide for bi-lateral enforcement mechanisms to ascertain compliance with the standards established in Annex 1. Under Article IV, each country is required to "...adopt the programs and other measures necessary to implement its specific objectives set forth in any Annexes."⁸⁷ Recall, there is a similar clause included in Article III of the Agreement as well.⁸⁸ In addition, Article XIV, which refers to implementation, maintains that the obligations under the Agreement "...shall be subject to the availability of appropriated funds in accordance with the respective constitutional procedures of the Parties"⁸⁹ and requires the Parties to seek appropriation for the implementation of the AQA, the enactment of domestic legislation to ascertain

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⁸⁶ Cataldo *Id.* pp. 401-402.

⁸⁷ *AQA*, Article IV(3)

⁸⁸ See note 82 *supra*.

⁸⁹ *AQA*, Article XIV(1)

implementation, and the cooperation of sub-national entities.⁹⁰ Thus, each country has a responsibility to enforce its own standards, as they are re-stated in the AQA, within its own borders. In essence, then, the AQA only provides the recognition of a vague, non-binding obligation to consider the effects of domestic emissions and the enforcement of domestic standards on foreign citizens and ecosystems, reiterating the same principle that was established by the *Trail Smelter* arbitration – that a nation has the responsibility to avoid permitting “...the use of its territory in such a manner as to cause injury...in or to the territory of another or the properties or persons therein...”⁹¹ The only difference is that the principle is applied specifically to the case of transboundary air pollution between the US and Canada. The implications of the reliance on domestic enforcement for the implementation of the AQA will be considered below.

Let us take a moment to examine the Agreement’s dispute resolution mechanisms in light of the history of Canada-US diplomatic relations, environmental agreements, and dispute resolution. If one closely examines the elements of dispute resolution provided for in the AQA, one can discern a simple re-iteration of the precedents that were developed during earlier disputes and environmental negotiations. In the event that a dispute between Canada and the US arises under the AQA, the two countries are to attempt to settle the dispute through consultations regarding the issue in dispute.⁹² If the US and Canada fail to reach a settlement through consultations and the matter at issue involves the “interpretation or the implementation”⁹³ of the Agreement, the countries are to engage in negotiations.⁹⁴ If the negotiations fail, the countries have two options: they may submit the dispute to the International Joint Commission (IJC) under the Boundary Waters Treaty of 1909, or to “...another agreed form of dispute resolution,”⁹⁵ or, in the event that they do not find the IJC resolution of the dispute acceptable, they may agree to another form of resolution.⁹⁶ This dispute resolution process is remarkably similar to that

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⁹⁰ *Id.* Article XIV(2) & (3); Bi-lateral enforcement in this form and in alternative forms will be discussed in the next chapter.

⁹¹ Roeloffs *Id.* p. 429, quoting *Trail Smelter* at 1965; also see note 16 *supra* and accompanying text.

⁹² AQA Article XI

⁹³ *Id.* Article XIII(1)

⁹⁴ *Id.*

⁹⁵ *Id.* Article XIII(2)

⁹⁶ *Id.*

which was used in the *Trail Smelter* arbitration and it has been suggested that the *Trail Smelter* model, although successful in that case, only worked because of the local nature of the pollution and the unique circumstances surrounding that particular dispute.⁹⁷ It has also been suggested that the *Smelter* model is not an efficient method of addressing transboundary pollution disputes.⁹⁸ As such, including such a model in the AQA weakens its implementation and enforcement significantly.

In the event that dispute resolution fails, either party may opt-out of the Agreement, in accordance with the procedures outlined in Article XVI, which states that the Agreement and its annexes can be terminated by either party with one year's advance notice⁹⁹ and each of the annexes can be terminated in accordance with its specific terms.¹⁰⁰ These opt-out clauses have implications for the successful implementation and enforcement of the AQA which will be discussed in a later section; however, it is important to note here that if a party can simply stop complying with the Agreement or enforcement standards, the regional environment is not well-protected. The solution to transborder air quality problems which is embodied in the AQA is only temporary and will not endure significant disputes between the US and Canada on air quality issues. One could argue that the close relationship between Canada and the US diminishes the likelihood of any *carte-blanche* opt-out by either Party; however, the Parties may engage in slight defections from the Agreement which are overlooked in the interest of cooperation and for the sake of keeping the Agreement together. As well, the lengthy dispute between Canada and the US regarding acid rain which occurred in the 1980s is demonstrative of the severity of potential conflict between the two countries regarding air quality issues. Although the AQA was established to prevent such a conflict from occurring again, the inclusion of the opt-out clause allows either country to back away from its obligations under the agreement, resulting in a new air quality conflict between the two countries.

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⁹⁷ See note 17 *supra*.

⁹⁸ Roeloffs *Id.* p. 429.

⁹⁹ *Id.* Article XVI(3)

¹⁰⁰ *Id.* Article XVI(4).

Other Aspects of the AQA

The AQA does establish a new bi-lateral organization – the Air Quality Committee – which is to be comprised of an equal number of representatives from Canada and the US;¹⁰¹ however, its responsibilities do not involve any activities related to the enforcement of standards or other elements of the AQA. The Air Quality Committee is primarily responsible for reviewing the implementation of the Agreement and preparing and releasing a progress report to both Parties and to the public on the status of implementation every two years – 1992, 1994, 1996, 1998. The Board cannot be considered an independent bi-lateral entity, as the AQA provides that it meet only once a year or “...additionally at the request of either Party.”¹⁰² Thus, its powers are limited and it generally is beholden to the governments of Canada and the US.

The IJC also has some minor responsibilities under the AQA, although nothing that significantly expands its power or realm of influence. Under Article IX, the IJC is responsible for hearing public comment on the Agreement and on the progress reports, and completing a report of those comments to be distributed to Canada and the US.¹⁰³ In addition, as mentioned in the discussion of dispute resolutions above, the Commission also provides a forum for dispute resolution for disputes which arise under the AQA, should the parties agree to submit the conflict to the Commission.¹⁰⁴

Under Article V of the AQA, Canada and the US are supposed to notify each other of proposed actions that may contribute to significant transboundary air pollution, and of existing air pollution problems of which the country becomes aware.¹⁰⁵ In the Article, the parties also reiterate their commitment to avoid actions that could be potentially harmful to the citizens or ecosystems of the other nation. In the event that an activity is proposed or a new transboundary pollution problem is discovered, the parties seek an appropriate solution through consultations,¹⁰⁶ which are governed under Article XI. This article is relatively non-specific, maintaining simply that consultations are to

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¹⁰¹ *Id.* Article VII generally.

¹⁰² *Id.* Article VII(3)

¹⁰³ *Id.* Article IX(1)

¹⁰⁴ *Id.* Article IX(2)

¹⁰⁵ *Id.* Article V(1)

occur as soon as possible but no later than thirty days from the time of the request for the consultation by either Party.

The rest of the Articles in the Agreement address information exchange and the procedure for the entry of the Agreement into force. Article VI provides for scientific and technical cooperation between Canada and the US on transboundary pollution issues, while Article VII calls for the exchange of information between the two countries in such areas as monitoring, emissions, technologies, etc., which is to be addressed by the Air Quality Committee. The extent of scientific research and cooperation is further outlined in Annex 2.¹⁰⁷ Article XV, maintains that the AQA does not nullify or in any way diminish the rights of the two Parties under previous agreements¹⁰⁸ and Article, XVI, as mentioned above in the discussion of dispute resolution, establishes the ground-rules of the entry of the Agreement into force, amendment to the AQA and termination of annexes.

Thus, this brief textual analysis of the AQA has demonstrated that the Agreement is a broad framework, created originally to address problems regarding acid rain, specifically the transport of SO₂ and NO_x emissions across the Canada-US border; however, close examination of the Agreement reveals that it is primarily a bi-lateral reiteration of domestic standards, domestic enforcement procedures, and previously established forms of dispute resolution. Indeed, it is interesting to consider AQA enforcement with respect to the enforcement continuum established in Chapter 1. Because the AQA is an international agreement of sorts, it should be examined with respect to the precedents and protocols of international agreements and their enforcement mechanisms; however, it may be helpful within the context of this paper to compare the AQA to the model domestic enforcement regimes. It should be noted that most international environmental agreements are similar to the AQA with respect to

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¹⁰⁶ *Id.* Article V(3)

¹⁰⁷ See Appendix A for the text of the AQA and its annexes.

¹⁰⁸ *AQA* Article XV

enforcement mechanisms – that is, they rely on self-enforcement and, as such, fall at about the same place on the enforcement continuum.¹⁰⁹

The AQA does not fit within the parameters of either model enforcement regime, as the parties to the agreements are afforded great deference in how they meet their obligations under the agreements. This deference is suggestive of a cooperative environmental enforcement regime; however, the absence of the existence or use of sanctions in the event of party noncompliance with its obligations under the Agreement, requires that the AQA bi-lateral enforcement regime be considered even more cooperative than the cooperative enforcement model. As such, the AQA enforcement approach falls outside of the boundaries of the enforcement continuum. See Figure 3.2. In essence, the Agreement is self-enforcing – very similar to Frank and Lombness's model of limited direction from a superior regulatory body¹¹⁰ – in which the pollution sources are left to their own devices to remedy the pollution problems. In a way, the AQA enforcement framework is also very similar, although more cooperative, than Canada's model. The US and Canada could be equated with the provinces, agreeing to remedy the SO₂ emission problems, but only held to that agreement by their good faith; however, instead of negotiating with a federal government, the parties negotiate with each other.

Figure 3.2 Enforcement Continuum

¹⁰⁹ The restrictions on bi-lateral and international environmental agreements in the current bi-lateral enforcement framework will be discussed in Chapter 4.

¹¹⁰ See Chapter 1, note 51 and accompanying text.

In some instances, the language of the AQA may be misleading with regard to the actual discretion that it affords the signing Parties. In various instances, the drafters of the AQA use the language of non-discretionary duties. For example, with respect to the specific objectives, the text reads: “Each Party *shall* [emphasis added] adopt the programs and other measures necessary to implement its specific objectives set forth in any annexes.”¹¹¹ In the context of the US CAA, this language would indicate the existence of a non-discretionary duty; however, because there exists no supra-national enforcement body to take enforcement actions against the countries if either fails to perform the alleged non-discretionary duties, in reality, they have a great deal of discretion in determining how to meet their obligations under the Agreement.¹¹² Hence, despite its adversarial language, the AQA establishes a highly cooperative enforcement regime, based primarily on the domestic standards and air quality enforcement regimes of Canada and the US. The successful implementation of the AQA and, in turn, the protection of the Canada-US regional environment, are significantly affected by this reliance on domestic standards and enforcement.

Domestic Standards and Enforcement Regimes: Implications for the Successful Implementation of the AQA

*Domestic Standards*¹¹³

One of the major disadvantages of using domestic emissions standards as bi-lateral standards is that the bi-lateral agreement fails to improve upon what has already been accomplished domestically and, as such, does not fulfill its purpose as a bi-lateral agreement. It must be assumed that if the two countries have sought an agreement, they wish to address the environmental problem in a way which moves beyond what they have achieved in their own domestic arenas. If the agreement merely reiterates the domestic

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¹¹¹ *AQA* Article IV(3)

¹¹² The possibility of extra-territorial suits based on the non-discretionary language of the AQA will be discussed in Chapter 4.

¹¹³ The term “standards” used here refers to SO₂ emissions standards established in Annex 1 of the 1991 AQA.

standards, it fails to improve upon the domestic accomplishments of the two countries. As well, domestic standards apply only to activities within the borders of the particular country within which they were developed and, as such, neither the concerns of foreign stakeholders nor the effects of the standards on areas outside the nation's borders are considered. Indeed, Shawn Rosso maintains that:

Domestic policy-making procedures fail to solve international environmental problems for several reasons. First, political systems...are designed to represent the interests of their constituents. Second, conventional political methods fail to consider the effects felt outside national boundaries. Furthermore...the interests of those outside our borders are not encompassed by the circle of interests that shape policy, even though neighboring populations experience the very real consequences and costs of actions taken within our borders.¹¹⁴

Hence, although in the standard-setting process, the concerns of domestic stakeholders are considered, the concerns of foreign citizens who could be affected by the standards are either excluded or given less weight than those interests of domestic citizens. As such, given a pollution problem like acid rain, in which the pollution sources exist primarily in one country, while the other country experiences most of the negative effects of pollution, domestic standards fail to mitigate the problem. Because domestic stakeholders are not experiencing the pollution and its effects, they generally have no serious interest in its abatement. The Canada-US acid rain issue is slightly different because the Northeastern US, particularly New England, experiences the effects of acid rain. As well, given the history of Canada-US relations on acid rain in the 1980s, one could argue that the US Clean Air Act (CAA) was established in a manner counter to these theories of domestic focus. During the period of the consideration of the 1990 CAA Amendments, Canada lobbied extensively and made its views as a stakeholder known to the US Congress.¹¹⁵ It is likely that Congress did consider some of the issues raised by Canadian interests and, as such, the CAA/AQA model does not fit entirely

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¹¹⁴ Rosso *Id.* p. 421.

¹¹⁵ See note 57 *supra* and accompanying text.

within this critique of the domestic focus of environmental/air quality standards; however, despite the evidence of consideration of the Canadian point of view in the deliberations on the 1990 Amendments to the CAA, it is likely that much of the focus remained on the concerns of domestic stakeholders.¹¹⁶ The 1990 Amendments were, at least in part, motivated by Canadian pressure to improve SO₂ emissions standards; however, the standards developed were done so primarily with deference to the domestic industries and what was acceptable and feasible for them.¹¹⁷ There were domestic economic issues at stake, many of which would have carried a great deal of weight with Congressional representatives.¹¹⁸

On one hand, it is logical that domestic interests should be given greater consideration in the establishment of domestic standards, as those who are subject to the regulations should have considerable input in the standard-setting process. As well, if the standards are acceptable to the domestic stakeholders, it may be easier to enforce them, as those sources against whom they are enforced will have already agreed to them in the standard-setting process. On the other hand, failure to consider the interests of those outside of the borders who are affected by the standards, leads to the establishment of standards which do not mitigate the pollution problem and, as such, one could say that the state is not taking full responsibility for the effects of the actions which take place within its borders. However, one could also argue that the domestic standards may be rigorous enough in the domestic sphere to extend the benefits of protection to those living outside the national boundaries – that is to say that curbing domestic activity that is harmful to the environment, may produce benefits which are not only experienced domestically, but also abroad. The reduction of SO₂ emissions in the US is a good example of extended benefits, as when the US curbs SO₂ emissions in the Midwest, Eastern and Atlantic Canada reap the benefits, because the wind patterns generally transport the emissions from the Midwest to New England and Eastern Canada for deposition. See Figure 1 in the Introduction. Thus, one could say that this is an instance

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¹¹⁶ More research into the deliberations of the Congressional committees and the Congress as a whole is necessary before any definitive statements regarding the balance of the consideration of different stakeholders and their concerns is addressed. Such research is beyond the scope of this paper.

¹¹⁷ The development of the emissions trading program is a good example.

in which domestic standards contribute to the protection of the region; however, these benefits are secondary, as protection of the sensitive ecosystems in Eastern and Atlantic Canada is not the primary focus of the CAA standards. Indeed, the combined effect of the enforcement of the Canadian and American domestic standards may not be sufficient to protect the regional environment. Such concerns have been raised by citizens, commenting on the progress made under the AQA: “Regarding acid deposition, many respondents said that more needed to be done to protect sensitive ecosystems.”¹¹⁹ As such, the AQA reliance on domestic standards is a considerable defect in the framework of the Agreement, which perpetuates the perception of the environment as divided by national borders. What is necessary is the establishment of new, bi-lateral standards, which consider the sources of acid-causing emissions, the effects on the environment, and the emissions reductions necessary to assure protection of the Eastern Canada-Northeastern US regional environment.

The use of the American and Canadian domestic standards as bi-lateral standards for the AQA also raises some questions of equity and fairness, as the overall SO₂ emissions caps for Canada and the US are different. According to Annex 1 of the Agreement, the US is to establish “... a permanent national emissions cap of 8.95 million tons of sulphur dioxide per year for electric utilities by 2010...”¹²⁰ while Canada, is to achieve “... a permanent national emissions cap of 3.2 million tonnes per year by 2000.”¹²¹ The reader may note that the caps are expressed in different measurements – the US cap is in tons, while the Canadian cap is listed in metric tons (tonnes). If one converts the Canadian measurement into tons,¹²² it becomes 3.52 million tons, revealing a greater overall SO₂ emissions cap for the US. This is an obvious inequity, which is explained by the fact that the US has a greater number of sources of SO₂ emissions – as such, one can argue that a greater overall emissions reduction from the US is indeed equitable; however, the question of how equitable remains. An examination of the

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¹¹⁸ The focus on economics and its limitations on environmental action will be discussed briefly in Chapter 4.

¹¹⁹ *Canada -United States Air Quality Agreement Progress Report 1996*. p. 65 (hereafter *Progress Report*).

¹²⁰ *AQA* Annex 1(1)(A)(2)

¹²¹ *Id.* Annex 1(1)(B)(2)

¹²² 1 tonne = 1.1 tons

percentage reduction of SO₂ emissions from the 1980 levels for Canada and the US respectively, reveals that while Canada is to reduce its emissions by 50 percent, the US is required to reduce its emissions for major SO₂ sources only by approximately 40 percent. Some might argue that given that the US is a greater contributor of acid-causing emissions, it should reduce its emissions by a greater percentage to ascertain protection of the regional environment; however, recall, that even this lesser percentage reduction results in a larger absolute emissions reduction for the US. In order to determine the appropriate reductions for each country, one would have to trace the emissions and determine how much acid rain can be attributed to the emission sources in both countries. In addition, to determine the equity of the current standards, one would have to examine the standards for individual sources within each country – the comparison of sources with similar inputs and production capacities would be preferable. If the sources in one country are held to more lenient standards than those in the other country, one could then determine that inequity in standards does indeed exist. Such a detailed and in-depth examination requires further research and is beyond the scope of this paper.

It would seem that a bi-lateral agreement truly committed to the improvement of air quality should ascertain that the emissions sources which fall within the realm of influence of the agreement are held to the same standards despite their geographical location; however, when the AQA was created, Canada and the US were satisfied with the level of protection afforded to the regional environment by their existing domestic SO₂ standards and, as such, they did not engage in the difficult process of harmonizing source standards. As well, neither nation had the desire or the political will to establish stricter bi-lateral standards¹²³ – for the most part, both were happy to end the decade-long struggle over acid rain that had influenced every aspect of their relations. Essentially, the AQA is more of a symbolic agreement, indicating Canada's satisfaction with the improvements made in US SO₂ emissions standards through the 1990 CAA Amendments and symbolizing the commitment of each country to consider the effects of their emission standards on the ecosystems and citizens of the other country. The standards which it reiterates may have some effect on the reduction of acid rain in the Eastern Canada-

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¹²³ Confidential interview with an official at the IJC, 3 December 1997.

Northeastern US region; however, these improvements will not be enough to totally mitigate the problems caused by acid rain.

The AQA is an important step forward in the fight to decrease transboundary air pollution between Canada and the US, as the Agreement does establish a stronger basis for cooperation on air quality problems which did not exist prior to 1991; however, Canada and the US should learn from the problems of using domestic standards as bi-lateral standards in the case of SO₂ emissions. For example, there are current efforts between the two countries to expand the AQA to include ground level ozone (smog) and particulate matter.¹²⁴ In the establishment of these new standards, both parties need to look to the weaknesses of the existing SO₂ standards and attempt to create more equitable and effective *bi-lateral* standards. In doing so, they will move past the limitations of domestic standards and set a precedent of considering the regional environmental problem, without focusing on national boundaries. Indeed, there are suggestions, both in public comments on the AQA¹²⁵ and by the Northeast Regional Air Quality Committee (NERAQC), as well as by the US and Canadian park services¹²⁶ that the current standards are not sufficient to protect the more sensitive areas of Eastern Canada and the Northeastern United States.

Domestic Enforcement Regimes

As mentioned above, the AQA also relies on the domestic enforcement regimes of Canada and the US to implement and enforce its standards. Given the AQA reliance on domestic emission standards, in one sense it is logical that the Agreement would rely on domestic enforcement regimes for the implementation and enforcement of those standards, because the standards, as well as the enforcement approach, have been developed within the same parameters of the domestic political system. Recall the close relationship between the political institutions, culture, and government structure of a particular country and the enforcement regime which is developed. Hence, domestic

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¹²⁴ Confidential interview, USEPA, Office of International Affairs, US-Canada Division, 4 December 1997.

¹²⁵ *Progress Report*, 1996, p. 65.

¹²⁶ See Parks Canada & US National Park Service. *International Air Issues Workshop*. June 5-8, 1995, pp. 3-4.

standards are designed to be implemented by the particular domestic enforcement regime and, in turn, the domestic enforcement regime is designed to successfully implement and enforce standards within the particular parameters of the domestic political system. Thus, domestic implementation and enforcement of domestic standards is believed to be more efficient than bi-lateral enforcement of bi-lateral standards; however, the close relationship between the domestic political system and the domestic environmental enforcement regime limits the regime's usefulness in the protection of the regional environment. Precisely because the domestic enforcement regime is created within the particular political system and responds to interests and influences within that system, it is biased. Domestic enforcement/implementation is a process which does not consider the implications of enforcement in the domestic arena on areas outside of the realm of influence of the particular country and, as such, it is not concerned with the protection of the regional environment.

In addition, the AQA's use of domestic enforcement fetters the implementation of the Agreement's standards to the problems which arise within the domestic enforcement regimes of Canada and the US. Indeed, as was suggested in the discussion of the model enforcement regimes in Chapter 1, each approach to enforcement has its advantages and disadvantages, which are tolerated or addressed within the particular enforcement regime; however, when the domestic enforcement regimes are used for the purposes of bi-lateral implementation and enforcement, these problems become hindrances to the successful implementation of bi-lateral agreements. As well, as the reader shall discover below, in the context of Canada-US air quality, the differences in the types of enforcement problems which are experienced in each enforcement regime can often lead to misunderstanding and mistrust between the two countries, thereby threatening the implementation of current agreements and the establishment of future bi-lateral environmental agreements between Canada and the US. As the problems which arise in domestic enforcement are closely related to the political systems within which the enforcement regimes were developed, the following examination of problems in domestic enforcement analyzes the disadvantages of the Canadian and American

enforcement approaches with respect to the political institutions, political culture, and government structure of the two countries.

Enforcement Problems Within the Domestic Enforcement Regimes

Canadian Environmental Enforcement Regime

Government Structure

The primary disadvantage of the Canadian environmental/air quality enforcement regime is related to government structure in Canada, namely the combination of the executive and legislature. Recall from the examination of the institutional and structural origins of the Canadian and American enforcement regimes which was presented in Chapter 1, that because the executive and legislature are combined, there is no basis for suspicion of power between the two. As a result, the legislature does not include specific directives in its legislation which limit executive discretion in implementation. In fact, one could say that the legislature in the Canadian system is more directed by the executive than vice-versa. This lack of non-discretionary duties leads to limited third party involvement in enforcement, as citizens are not provided with a vehicle for involvement in assuring that the executive agency is indeed implementing and enforcing the standards established within, or in accordance with, the legislation. As such, the relationship between the enforcement agency and the pollution sources remains closed and generally cooperative, due to the great deal of discretion that is afforded enforcement officials in the absence of specific legislative directives. There are a variety of problems which arise from this closed, cooperative relationship, which threaten successful enforcement of domestic environmental standards in Canada. For example, the closed network in enforcement could lead to the growth of sympathies between the bureaucracy and the industry regulated.¹²⁷ While some sympathy for the difficulties of implementation is understandable and even desirable in some cases, sympathy in the context of a closed relationship, in which the enforcement official is afforded much discretion, will likely

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¹²⁷ Kathryn Harrison. "Is Cooperation the Answer? Canadian Environmental Enforcement in Comparative Context." *Journal of Policy Analysis and Management*. Vol. 14, no. 2, 1995, p. 241.

lead to a reduction of enforcement standards and long delays by the source in reaching compliance. The closed, cooperative relationship leads to industry capture of the enforcement agency and enforcement officials, which results in continual noncompliance by the pollution sources that is overlooked by the agency in the interest of future cooperation. Indeed, there appears to be a reluctance to distinguish between negotiation and compliance in the Canadian enforcement system,¹²⁸ which Webb blames on the recruitment of bureaucrats from industry positions.¹²⁹ As well, Nemetz suggests that there exists a pattern of accommodation within the enforcement agencies toward pollution sources.¹³⁰ Such accommodation between the agency and sources leads to the reluctance of enforcement officials to rely on coercive tactics and sanctions in cases of noncompliance. As was discussed in Chapter 1, if sanctions are hardly ever used, potential violators of the environmental standards are not likely to be deterred, as they realize that even if their noncompliance is discovered by the enforcement agency, they will be able to negotiate compliance with the enforcement officials, at the same time keeping the benefits which they accrued in their noncompliance. Thus, the closed, cooperative, discretionary relationship which, at least partly, grows out of the structure of the Canadian government, results in accommodation of the pollution sources, which, in turn, leads to less vigorous enforcement and insufficient protection of the environment.

Political Culture

The closed relationship of accommodation between enforcement officials and pollution sources may also be partly attributed to Canada's political culture, in which citizens generally defer to the decisions of the government.¹³¹ As such, until recently, Canadian citizens have not sought any great involvement in the enforcement of environmental standards and have allowed the closed, cooperative relationship between

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¹²⁸ Murray Rankin & Peter Finkle, "The Enforcement of Environmental Law: Taking the Environment Seriously." *University of British Columbia Law Review*. Vol. 17, no. 1, 1983, p. 48.

¹²⁹ Kernaghan Webb. *Pollution Control in Canada: The Regulatory Approach in the 1980s*. Ottawa, Ontario: Law Reform Commission of Canada, 1988, p. 52.

¹³⁰ Peter Nemetz. "Federal Environmental Regulation in Canada." *Natural Resources Journal*. Vol. 26, Summer 1986, p. 564.

¹³¹ See discussion in Chapter 2.

enforcement officials and pollution sources to continue. Hence, the objectivity of third parties has been excluded from the enforcement process, leading to agency accommodation of the pollution sources and the continued degradation of the environment.

Despite public deference to government decisions, public opinion is an important motivating factor for government activity, including enforcement. In the context of the enforcement of air quality standards, and environmental enforcement in general, this reliance on public opinion, combined with the exclusion of third parties from enforcement creates a Catch 22 of sorts for public involvement in enforcement. When the public becomes interested in a particular environmental issue like air quality, the regulatory agency, including the enforcement officials, respond and enforcement of air quality standards becomes a priority. Indeed, the Ontario Ministry of Environment's *Code of Conduct*, which governs the behavior of enforcement officials in Ontario, states that "following the 'Code' is imperative to obtain and retain the respect of the public for both investigative competence and ethical conduct,"¹³² suggesting that public perception of the agency is as great a motivating factor in enforcement as is the necessity for environmental protection. As such, the enforcement officials respond to public opinion and pay particular attention to enforcement in areas which the public expresses greater interest or concern. However, there is likely to be a delay between the increased public interest in a particular environmental problem and increased enforcement action in that area, as the government has to first realize that public opinion has changed, and then transfer resources into enforcement of regulations related to the problem in which the public has demonstrated increased interest. As a result of this delay, the frustrated public seeks to improve the environment and enforcement of existing regulations without the help of the government; however, because they are excluded from the enforcement process by the absence of non-discretionary duties and by bars to citizen suits in the courts, the public cannot improve enforcement and is further frustrated. Thwarted by both the government enforcement agency and the legal system, the public frustration

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¹³² Ontario Ministry of Environment. *Excerpts from Compliance Policy. Investigations and Enforcement Branch Code of Conduct*. p. A1-1.

turns to apathy and public interest declines once again. Thus, the environmental regulations in such a system are not well-enforced for any significant period of time.

Public opinion motivation of enforcement is also a problem because of its crisis-oriented nature with respect to environmental issues – the public generally tends to become interested in environmental issues after large, high-profile, environmental disasters like Love Canal, the Exxon Valdez oil spill, and the announcement regarding the hole in the Ozone layer.¹³³ While these events may increase public awareness about environmental protection, regarding both the pollution that is associated with the disaster itself and environmental degradation in general, the interest and calls for government action tend to be short-lived. The increased interest may, as was the case in Canada in the first wave of environmentalism, prompt the government to create new legislation and heighten enforcement of existing environmental regulations; however, recall that Canadian environmental legislation is relatively vague and affords the enforcement agencies great discretion in implementation and enforcement. As such, when public interest wanes again, there is no lasting effect – the regulations may be there, but the motivation to strictly enforce them is not. This is not to say that no progress in environmental protection has been made – the two major waves of environmentalism created a paradigmatic shift of sorts with respect to what is acceptable environmental degradation. For example, it is no longer acceptable for a pesticide production company to dump its untreated toxic waste into a nearby river; however, the rigor with which the regulations regarding pesticide waste are enforced in Canada is dependent on the level of public interest in toxic waste, water pollution, or in environmental protection in general.

Role of the Courts

As was discussed in Chapter 2, the Canadian courts have not been particularly active in the area of environmental protection, nor have they welcomed citizen suits, seeking to enforce environmental regulations against a particular pollution source. This passive stance on environmental protection, as well as the bars against citizen suits helps to maintain the closed relationship between the enforcement agency and the pollution

sources. As well, it contributes to the public frustration regarding enforcement and the Catch 22 of public involvement in enforcement that was discussed in the previous section. Hence, the role of the courts, or lack thereof, in the enforcement of environmental regulations in Canada, contributes to the cooperative nature of enforcement and, in turn, to the insufficient protection of the environment.

Federalism

Another problem in the enforcement of air quality regulations within the Canadian air quality enforcement regime set forth in Chapter 2, is the decentralization of enforcement power with the provinces. Recall that the Canadian federal government may establish federal emissions standards only in certain circumstances – indeed, its power to establish such standards for the implementation of treaties and agreements is also considerably limited.¹³⁴ Hence, the federal government relies on informal agreements with the provinces, which help to create an atmosphere of informality in environmental enforcement throughout the system. Again, this informality leads pollution sources to consider pollution standards less seriously and, in turn, results in greater source noncompliance with the regulations. As well, the federal government's inability to establish national standards for the purposes of implementing treaties and agreements has the potential to hinder Canada's ability to negotiate future agreements like the AQA. If other countries realize that Canada may not be able to implement the standards to which it agrees at the bargaining table, they may be unwilling to commit themselves to higher standards established as part of a bi-lateral agreement – why should they improve their standards if Canada will not, or more likely cannot, improve its standards? Indeed, it should be noted that the US has recently expressed concerns about Canada's ability to implement its standards regarding the prevention of serious deterioration of air quality (PSD) under the AQA.¹³⁵ If the US perceives problems with Canada's enforcement of AQA standards, it may begin to doubt Canada's ability to

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¹³³ See discussion of the two waves of environmentalism in Chapter 2.

¹³⁴ See discussion of the development of federalism in Chapter 2.

¹³⁵ *Progress Report 1996*, p. 62.

implement and enforce any of its bi-lateral standards and mistrust Canada's future commitments to regional environmental protection. This mistrust may be, for the most part, unfounded and based in an American misunderstanding of the Canadian enforcement regime, but it has the potential to have detrimental effects on the establishment of future bi-lateral environmental agreements. If the US feels that Canada cannot enforce the existing bi-lateral standards, Americans may back away from future agreements, thereby limiting the protection of the regional Canada-US environment.

Other

One final problem with the Canadian air quality/environmental enforcement regime is the limited amount of resources which Canada has to allocate among the enforcement of a wide variety of regulations. As was discussed in Chapter 2, Canada's resources are limited because of its small population and large land mass. Limited resources in combination with enforcement which relies, at least partially, on public interest for motivation, results in the allocation of resources away from environmental problems and enforcement in times of economic hardship. In such periods, the public expects government spending to be focused on social welfare programs and, as such, in the face of limited resources, the government must transfer funds from other programs which are not considered by the public to be as vital. During times of increased unemployment and economic downturn, environmental issues are usually not as important to the public and, as a result, the mitigation of environmental problems and the enforcement of existing environmental regulations falls to the bottom of the government's list of priorities. This is not to say that this shifting of resources does not occur in other political systems; however, it is a particular problem in Canada because of the lack of specific environmental legislation. Since the environmental legislation and regulations tend to be so vague and informal, they generally do not establish a minimum threshold of enforcement – that determination is left to the discretion of enforcement officials. As such, in times of severe resource constraint, environmental regulations could be virtually un-enforced and recall that no cause for action for third parties to force the officials to enforce the regulations exists in Canada. Thus, within the Canadian

environmental/air quality enforcement regime, the potential for an absence of enforcement exists.

Many of these domestic enforcement problems of the Canadian enforcement regime could be mitigated by involving third parties in the enforcement of environmental regulations. Third party involvement would open the closed relationship between the government enforcement agency and the pollution sources, thereby limiting industry capture of the enforcement agency and continual noncompliance by the pollution sources. As well, allowing citizens to be involved in the enforcement process would help to eliminate the Catch 22 of public involvement which exists within the current system – when citizens became frustrated with diminished agency enforcement, they could take the agency to court themselves to enforce the regulations. As well, in times of limited resources third party enforcement can supplement agency enforcement to assure source compliance with the existing regulations. Involvement of third parties in actions holding the government enforcement agency responsible for failure to enforce is less feasible within the Canadian system, as such enforcement of enforcement has its basis in non-discretionary duties, which are not utilized in the Canadian system due to the existence of the combined executive and legislature. However, third party involvement in enforcement through civil suits could eliminate some of the problems of agency sympathy for and accommodation of pollution sources, create a greater deterrence to source noncompliance and, in turn, assure better protection of the environment.

American Environmental Enforcement Regime

There are also a variety of problems involved in enforcement within the American environmental enforcement regime, which are also related to the government structure, political institutions, and political culture of the US; however, precisely because the American political system is different from the Canadian system, the problems which arise in enforcement of environmental regulations in the US are distinct from those which were discussed above with respect to enforcement within the Canadian environmental enforcement regime. As the reader shall discover, the disadvantages of

the American enforcement approach are often the opposite of those of the Canadian approach to environmental enforcement – where the Canadian approach is often too cooperative, the American approach has the potential to be overly adversarial.

Government Structure

Unlike the Canadian government, the US government is structured in such a way that allows for, and in some cases even encourages, third party involvement in enforcement – specifically enforcement of agency enforcement. Recall that the executive and legislature are separated into different branches in the US, and the suspicion of powers between the branches leads the legislature to include specific directives within the legislation which limit executive discretion in implementation and enforcement of that legislation.¹³⁶ In turn, these non-discretionary duties provide a cause of action for third parties to ascertain that the agency is effectively enforcing environmental regulations. While third party involvement does have the advantages of increasing the enforcement agency's direct accountability to the public and limiting industry capture of the agency, as well as accommodation of source noncompliance, it also has some potentially serious disadvantages. The major problem with third party involvement in enforcement through the enforcement of non-discretionary duties is the potential for excessive litigation. If citizens and environmental groups become particularly active in litigation, much of the resources which the enforcement agency, usually the EPA, could be spending on monitoring and enforcement will be used in litigation with the environmental groups. As well, although most third parties engage in litigation to improve the enforcement process, too much litigation may have the opposite effect of actually decreasing the efficiency of enforcement by lengthening the enforcement and compliance process. In such a case, the adversarial American enforcement regime would be no more successful in enforcing standards and ascertaining compliance than its cooperative Canadian counterpart.

Non-discretionary duties may also create problems in times of limited resources. Although the non-discretionary duties provide a threshold of enforcement below which

the enforcement agency may not fall, in the face of resource constraints, the enforcement agency simply may not physically be able to perform all of its non-discretionary duties. In such a case, the agency is likely to be sued by third parties seeking the performance of those duties and, as such, the agency is forced to spend more resources to defend itself in litigation – resources which are taken from monitoring or enforcement that is to be performed as part of some other non-discretionary duty. Hence, the agency is forced into a position in which it must utilize resources that it does not have and, if the resources do not exist, no matter how much litigation is initiated by third parties, the enforcement agency will not be able to perform all of the duties which it is supposed to perform. Thus, there exists the potential for non-discretionary duties to become less effective as enforcement instruments.

Political Culture

The American political culture is far more adversarial than the Canadian political culture and, as such, third party involvement in environmental enforcement is more encouraged in the American environmental enforcement regime.¹³⁷ Although this third party involvement opens the relationship between the enforcement agency and the pollution sources and limits accommodation of noncompliance, as was stated in the previous section, adversarialness and third party involvement can lead to excessive litigation, which threatens the efficiency of the enforcement process. However, third party involvement in enforcement limits the Catch 22 of public opinion that is created by their lack of involvement in the Canadian system – American third party frustration turns to litigation rather than to apathy in the face of bars to citizen involvement. Hence, enforcement of environmental regulations does not fluctuate as often with public opinion in the American enforcement approach as it does in the Canadian approach. The existence of non-discretionary duties in the American environmental enforcement regime further limits fluctuations in the rigor of agency enforcement of environmental regulations and standards, as even in periods of overall decline in public interest, the

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¹³⁶ See Chapter 2.

¹³⁷ See Chapter 2.

agency can be compelled to effectively enforce by one or two continually active environmental groups. Thus, in the US, public involvement in enforcement is more direct – instead of agency enforcement being motivated by general public opinion, third parties themselves play an active role in enforcement and in compelling the agency to enforce environmental regulations.

Role of the Courts

Unlike their Canadian counterparts, American courts have been active in the enforcement of environmental regulations and standards, granting access to third parties who seek to bring civil suits against polluters for the violation of regulations; however, this activism can lead to some problems within the American environmental enforcement regime. Thus far, the courts have been relatively sympathetic to the cause of environmental protection, ruling against the noncompliance of pollution sources; however, if the composition of the courts was to change in the future, they may become more sympathetic to the plight of the pollution source. In cases other than the most blatant violations of the statutes, they could then interpret the regulations in such a way which would allow the sources to continue to pollute, thereby diminishing the effectiveness of the citizen civil suit as an enforcement tool.

As well, the openness of the courts to civil litigation regarding source noncompliance with regulations can lead to excessive litigation and a decrease in efficiency of the enforcement process. If third parties are constantly suing sources for violations of environmental regulations, the sources must spend resources, which they could be using to come into compliance with the regulations, to fight the third parties in court. As such, the litigation could have the opposite effect of that which was intended – it could result in further source noncompliance.

Federalism

For the most part, the centralization of jurisdiction over environmental problems in the US is a positive characteristic of the American environmental enforcement regime,

as the centralization allows for the creation of national environmental standards which are enforced in the same manner throughout the country; however, the concentration of enforcement power with the federal government could lead to some problems in monitoring and enforcement. Since the US is such a large country geographically, it would be very difficult for one centralized enforcement agency to monitor compliance of all the pollution sources in the US and compel compliance when any source violated environmental standards. As such, the EPA not only has a central office in Washington, DC, but also maintains various regional offices for the purpose of addressing problems in the different regions of the US. As well, the EPA delegates some implementation and enforcement power to the state and local environmental protection agencies, although the ultimate power of implementation and enforcement remains with the federal EPA – recall that if a state fails to develop a state implementation plan (SIP) or fails to implement the appropriate federal standards, the federal EPA will take over implementation and enforcement in that particular state.¹³⁸ It is in this failure of a state to develop a SIP or to implement EPA standards that the potential problems in enforcement are based. Because the EPA must ascertain that the states, as well as the pollution sources are complying with its standards, the Agency must spend more resources on monitoring for noncompliance. As the EPA has regional offices, it is possible that the regional offices may be able to keep closer tabs on the state's actions; however, in the face of limited resources, the regional office may not have the time or personnel to devote to such activities. It also is possible that the noncompliance on the part of the state may be reported by an individual citizen or citizen group; however, citizens in a particular area may benefit financially from the activity which is contributing to environmental degradation. As such, they may be willing to overlook the pollution and also encourage state authorities to ignore the environmental degradation. Hence, the state's violation of its SIP is not only overlooked by the local citizenry, but actually encouraged.

Thus, EPA use of the states to implement its standards may result in continual source noncompliance in certain areas, which continues without the Agency's

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¹³⁸ See Chapter 2.

knowledge. As well, even if the EPA discovers the state noncompliance with its own SIP, the Agency may not have the resources to take direct responsibility for monitoring and enforcement in the state, particularly in the face of recent budget cuts and the limitation of resources. In such a case, enforcement of regulations in that particular state languishes, potential polluters are not deterred from violating the environmental standards, and the environment suffers as a result. It should be noted that the existence of environmental groups and the involvement of third parties in enforcement limits the extent to which noncompliance can occur. For example, if a national environmental protection group discovers significant noncompliance in a particular area, it may initiate a law suit against the source; however, the potential for state failure to implement EPA standards and the problems in enforcement which result still remain.

Other

The emissions trading program is unique to the American air quality enforcement regime and so are the problems and potential problems which arise from its use. Despite the benefits of the emissions trading program which were discussed in Chapter 2, it has the potential to create problems in the implementation and enforcement of domestic air quality standards, as well as the implementation of AQA standards. One of those problems is the possible development of pollution pockets – areas in which SO₂ emissions are concentrated. If sources in a certain area, for example near the Canada-US border, continue to emit large amounts of SO₂, while sources in other parts of the US decrease their emissions below their permissible levels, the sources near the border can buy up the excess emissions allowances on the market, and continue to pollute at or above current levels. The concentration of the emissions allowances among the sources in a certain area will mean that the air quality in that area will be poorer – it will be a pollution pocket. If that pollution pocket is located near the border, or indeed even if it is simply upwind from Canada's sensitive ecosystems, the problem of long-range transport of SO₂ across the Canada-US border will not be mitigated, in fact, it may even be exacerbated.

As well, unless the emissions trading program is implemented in a certain way, it does not guarantee a decrease in overall SO₂ emissions over time. Recall that sources participating in the emissions trading program are given the incentive of being able to sell their excess emissions in the event that they decrease their own emissions below their permissible emissions level; however, as long as the sources trade their excess emissions to other sources which are emitting more than their permissible level, the overall SO₂ emissions for the US will not decline – they are merely transferred from place to place each year. As such, in order for the program to result in a decrease in overall emissions, the permissible emissions level for each source should be decreased after a period of time, for example after five years. In this hybrid of the emissions trading program, the sources benefit from their decrease in emissions for a period of time – until their permissible level is reduced after five years – and then they are given the opportunity to benefit again by further decreasing their emissions. Such a periodic reduction in the permissible SO₂ emissions level for each source will lead to an overall decrease in national SO₂ emissions over time. If such an overall reduction is not implemented, the emissions trading program has the potential to become nothing more than a green facade for continuing environmental degradation. Pollution sources will benefit financially, either from the sale of excess emissions or from the increased production that is possible due to the fact that more emissions allowances may be bought.

Further Comments Regarding the Use of Domestic Enforcement

Most of the problems discussed above with respect to the Canadian and American environmental enforcement regimes are problems that arise or have the potential to arise within the domestic forum when environmental regulations are enforced, although a few bi-lateral problems were mentioned as well. Given that the AQA relies on domestic enforcement for the implementation of the domestic standards that are reiterated within the Agreement, it follows that these potential domestic disadvantages become bi-lateral problems in the context of air quality. That is to say, if the closed relationship between the enforcement agency and the pollution sources in Canada leads to accommodation of the pollution sources and continued noncompliance, the problem of that noncompliance

is no longer limited to the Canadian domestic environmental enforcement regime – it is now a flaw in the implementation of the AQA. As such, one can see that reliance on domestic enforcement in the implementation and enforcement of a bi-lateral environmental agreement is a defect of that agreement, because the supposedly new bi-lateral environmental enforcement regime then takes on all of the existing problems of the two domestic enforcement regimes. The problems in domestic enforcement within the two regimes may also result in misunderstandings and mistrust between the two countries regarding ability or desire to enforce environmental standards. This problem of misunderstanding will be discussed further below.

The examination of the difficulties associated with enforcement within the Canadian and American environmental enforcement regimes also raises questions about the equity of environmental/air quality enforcement in the two countries. Issues of equity are very difficult to address, as they involve value judgments which vary from person to person, depending on moral background and point of view. In addition, there are a variety of issues of fairness involved in the use of the Canadian and American air quality enforcement regimes in bi-lateral enforcement, and each question and answer regarding equity in leads to another question. As well, a true consideration of enforcement equity between the two countries would require an examination and comparison of the standards established for similar sources within the two countries, how often these similar sources have failed to be in compliance, and what enforcement actions were taken by the respective government enforcement agencies to encourage or compel the source to come into compliance. Such an examination is far beyond the scope of this paper and, as such, this discussion of equity is based on general observations of the Canadian and American air quality enforcement regimes.

As the consideration of the two enforcement regimes in Chapter 2 and the examination of their disadvantages above have demonstrated, Canada and the US have considerably different approaches to the enforcement of air quality regulations and standards. It has been suggested that the more cooperative Canadian approach to enforcement has the potential to allow for continued source noncompliance with the regulations. If a more empirical examination of air quality enforcement supports this

theoretical observation, one could indeed suggest that there exists an inequity in the enforcement of air quality standards between Canada and the US, and that Canadian sources are subject to less rigorous monitoring and enforcement than their American counterparts. Incidentally, Kathryn Harrison has examined the pulp and paper industry in Canada and the US and she maintains that enforcement in Canada *is* less rigorous than in the US. As well, she also finds that:

Canadian regulators have been more inclined to bend the rules when they perceive that the regulated firms are making good faith efforts, and to negotiate informal compliance schedules when firms fail to comply. In contrast, U.S. regulators tend to adopt a more rigid interpretation of federal standards, and to resort more frequently to prosecution in the face of noncompliance. The findings [of this study] thus constitute *prima facie* evidence that cooperative enforcement is less effective than the more prosecution-oriented approach, at least in North America.¹³⁹

It is likely that the same pattern of accommodation exists in the context of air quality enforcement in Canada. If such is true, the standards of the two countries, and of the AQA for that matter, are not equitably enforced among the sources in Canada and the US.

Such inequities, or indeed, even the perception of inequity, can lead to conflict between Canada and the US regarding the implementation of the AQA or other bi-lateral environmental agreements, in turn, resulting in misunderstanding and mistrust between the two countries with respect to enforcement of environmental regulations. Essentially, differences in the two enforcement approaches can lead to misunderstandings regarding ability to implement domestic and bi-lateral standards. Indeed, such questions regarding inequity in implementation have already arisen in the context of the AQA. In the 1996 Progress Report, it was reported that the US is concerned about the "...uniformity and accuracy of [Canadian] provincial reporting requirements."¹⁴⁰ In addition to concerns

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¹³⁹ Harrison *Id.* pp. 238-239.

¹⁴⁰ *Progress Report* p. 62.

about the decentralized nature of the Canadian enforcement regime, the US also demonstrates concern regarding “...the enforceability of Canadian [air quality] requirements.”¹⁴¹ As well, Canada has expressed dissatisfaction with US attempts to meet its obligations under the AQA. For example, in October of 1997, in announcing that it would not be meeting its annual SO₂ emissions cap under the Eastern Canada Acid Rain Program, Ontario expressed its discontent with current US emissions reductions.¹⁴² Although this mention of the US standards was meant to remove the focus from Ontario’s noncompliance and make it appear less egregious when compared to American emissions, the fact remains that there does exist dissatisfaction in Ontario, and in Canada in general, with respect to American emission reductions under the AQA. Canada is also dissatisfied with American assessment and mitigation under the AQA, as the US currently lacks legislation which provides for the assessment of new pollution sources, the potential damage they could cause to the Canadian environment, and mitigation and compensation in the event that such damages occur.¹⁴³ As Canada has such legislation, it feels that the US is not living up to the cooperative spirit of the AQA.

Hence whether or not inequities in enforcement exist, the perception of inequity is present in both Canada and the US, potentially threatening the implementation of the AQA, and the creation of future bi-lateral agreements between the two countries. As was suggested above, the inequities in enforcement between Canada and the US may or may not be genuine – a more empirical study of air quality enforcement is necessary; however, even if the inequities are merely based in misunderstanding of enforcement in the two countries, that misunderstanding can be very harmful to the implementation of the agreement. Essentially, misunderstanding of enforcement can lead to mistrust of the country’s ability to meet its obligations under the agreement, in turn leading to conflict and even dispute between the two countries. As was discussed earlier, the dispute resolution mechanisms included in the AQA are relatively weak – basically, if either country refuses to consult regarding the dispute or to submit the conflict to a dispute resolution forum, there is no way in which that country can be compelled to meet its

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¹⁴¹ *Id.*

¹⁴² See Chapter 2, note 45 and accompanying text.

obligations under the Agreement. Indeed, either country may even terminate the Agreement if it feels that the enforcement conflict is irresolvable. Hence, a misunderstanding or misinformed perception of enforcement in either country has the potential to destroy the entire AQA framework. As such, one can see the necessity for further research into air quality and environmental enforcement in Canada and the US so that misunderstandings, misinformed perceptions, and their threats to the successful implementation of the AQA and other bi-lateral environmental agreements may be avoided.

Misunderstanding and mistrust of domestic enforcement also has implications for the establishment and implementation of future bi-lateral environmental agreements. If, for example, Canada perceives that, despite its commitment to the AQA the US does not enforce its standards, Canada may be reluctant to enter into any future agreements with the US. Hence, inequity in enforcement, or the perception thereof, leads to a mistrust that threatens the future protection of the Canada-US regional environment. Thus, understanding the different domestic enforcement approaches and domestic implications of enforcement is important so that mistrust will be avoided and future protection of the environment is possible. As well, it is important to understand the different enforcement regimes and their domestic and bi-lateral implications so that both countries will be aware of what types of standards and enforcement mechanisms are acceptable and feasible in future agreements. For example, consider the limits on third party involvement in the air quality/environmental enforcement processes in Canada. If the US and Canada were attempting to negotiate a new agreement, for example on ground level ozone, the US should be aware of the limitations on third party involvement and realize that any proposal which involves great use of third parties for some enforcement purposes, will be unacceptable. This is not to say that the Canadian enforcement system should not be opened to third parties; however, there are limitations in the amount of progress that can be made in one agreement. In this situation, the US would be better to present an option that would require less drastic changes to the Canadian environmental enforcement regime and political system. Thus, future consideration and examination of

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¹⁴³ *Progress Report* p. 62.

the domestic enforcement regimes of Canada and the US, as well as the domestic and bi-lateral implications of their use, is necessary to ascertain success in the implementation of the AQA and other current bi-lateral environmental agreements, and in the creation of future agreements for the protection of the regional environment.

There is one final problem with the AQA reliance on domestic enforcement for implementation which must be considered here. It was mentioned above that the use of domestic enforcement in bi-lateral implementation could be considered efficient because it is designed to implement standards within the particular political system within which it was created; however, this efficiency is counterbalanced by an inefficiency which arises from the overlapping bi-lateral enforcement duties between Canada and the US.¹⁴⁴ That is to say, there is repetition in the enforcement activities which are performed within the Canadian and American environmental enforcement regimes – for example, both countries engage in monitoring to ascertain source compliance with the environmental regulations. Such inefficient overlap could be avoided if the Air Quality Committee, for example, were given bi-lateral monitoring and enforcement powers; however, the establishment of such a supra-national enforcement body infringes upon both countries' national sovereignty and, as such, is not likely to be accepted. The limitations of national sovereignty in bi-lateral enforcement will be considered in Chapter 4. Given such limitations, it is likely that the problem of inefficiency will persist, at least into the near future.

This examination of the implications of the AQA reliance on domestic enforcement in its implementation has demonstrated that such use of domestic enforcement regimes in the bi-lateral arena creates many and various problems for the implementation of the Agreement. It has been demonstrated that there are disadvantages involved in domestic enforcement in both the Canadian and American environmental enforcement regimes and that the domestic problems which arise in enforcement are also bi-lateral enforcement and implementation problems. As such, although the AQA gains

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¹⁴⁴ *Harvard Law Review* *Id.* p. 1565

the efficiency of implementation that can arise from the use of domestic enforcement, it also takes on all of the problems involved in domestic implementation and enforcement in Canada and the US. As well, in relying on two enforcement regimes whose duties overlap, the AQA establishes a bi-lateral implementation and enforcement regime which is relatively inefficient. In addition to inefficiency, the reliance on different environmental enforcement regimes in the implementation of the AQA can lead to inequity in enforcement, or at least to the perception of inequity, which threatens the successful implementation of the AQA and the establishment and implementation of future bi-lateral environmental agreements between Canada and the US. Thus, the AQA reliance on the Canadian and American enforcement regimes demonstrates a serious flaw in the framework of the agreement, which threatens the implementation of the Agreement and the protection of the Canada-US regional environment.

Conclusions

In this chapter, the diplomatic and informal development of the AQA has been considered, and the text of the Agreement has been analyzed. It has been demonstrated that, despite early praise of the Agreement and the framework for cooperation which it creates, the AQA is in fact a very weak bi-lateral agreement and does not provide strong enough mechanisms to assure the protection of the regional environment. It is little more than the reiteration of existing Canadian and American emissions standards, enforcement approaches, and bi-lateral dispute resolution mechanisms and, as such, does not provide a comprehensive approach to *regional* environmental problems. As it has been demonstrated that domestic standards and enforcement do not ascertain sufficient protection of the regional environment because of their focus on domestic interests and ecosystems, it follows that the AQA, in its reliance on these standards and enforcement approaches for its implementation, fails to move beyond the limitations of the Canadian and American domestic perspectives. The AQA reliance on domestic standards and enforcement perpetuates the perception of an environment divided by national boundaries. As acid rain and air pollution do not respect these national borders, it is inappropriate and unhelpful to develop solutions to the problems that do.

In this chapter, it was also demonstrated that the AQA reliance on domestic enforcement leads to a variety of problems which threaten the implementation of the Agreement and the establishment and implementation of future Canada-US environmental agreements, as well as the protection of the regional environment. Indeed, there are suggestions, both in public comments on the AQA¹⁴⁵ and by the Northeast Regional Air Quality Committee (NERAQC), as well as by the US and Canadian park services¹⁴⁶ that the current emissions standards of Canada and the US, and included in the AQA, are not sufficient to protect the more sensitive areas of Eastern Canada and the Northeastern United States. As such, in Chapter 4, a few of the reasons for this limited reliance on domestic environmental enforcement regimes will be considered. As well, bi-lateral enforcement alternatives will be examined and recommendations for the improvement of the AQA bi-lateral enforcement regime will be made. It is believed that these recommended alternatives will improve the implementation and enforcement of the AQA and, in turn, result in better protection of the regional Canada-US environment.

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¹⁴⁵ *Progress Report*, 1996, p. 65.

¹⁴⁶ See Parks Canada & US National Park Service *Id.* pp. 3-4.

Chapter 4

Bi-lateral Enforcement Alternatives

Introduction

In the previous chapter, it was determined that the use of the Canadian and American enforcement regimes for the implementation of the 1991 Canada-United States Air Quality Agreement (AQA) leads to some potentially significant problems, which threaten not only the success of the AQA, but also the establishment and execution of future bi-lateral environmental agreements between Canada and the US. As such, it is the purpose of this chapter to consider some alternative bi-lateral enforcement mechanisms which will improve enforcement and implementation of the Agreement. Essentially, the bi-lateral enforcement regime¹ must be altered to allow for some enforcement which is less tied to the will of the individual states – to a regime that is less reliant on self-enforcement² of the Agreement by the individual states.

Limitations on the Current Bi-lateral Enforcement Regime

Before the alternatives themselves are considered, it is necessary to understand some of the limitations on the type of enforcement – both in the implementation of agreement standards and in ascertaining state compliance with the agreement – which can be utilized in the bi-lateral sphere. Although there are a variety of limiting factors which exist, only two will be considered here – sovereignty and the importance of economic development. For the purposes of this analysis, these limitations will be deemed a part of the bi-lateral environmental relations framework,³ in which bi-lateral

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¹ See Chapter 3 for the introduction of the concept of a bi-lateral enforcement regime. Essentially bi-lateral enforcement refers to the mechanisms which are used to implement the agreement standards, as well as those which are used in the event that a party defects from its obligations under the agreement.

² The current AQA enforcement regime is considered to be self-enforcement because of its reliance on domestic enforcement for the implementation of the Agreement standards – the two countries have the responsibility to take enforcement actions within their borders to ascertain compliance with the Agreement and initiate negotiations between themselves if it is discovered that one or the other is failing to meet its obligations under the AQA. Also see consideration of self enforcement in Chapter 3, p. 122.

³ Throughout this discussion, this framework is also referred to as the bi-lateral environmental enforcement framework.

environmental agreements are made, implemented, and enforced. Sovereignty and economic development not only limit the type of enforcement mechanisms which can be included as part of a bi-lateral agreement, but they also constrain the perception of what enforcement in the bi-lateral arena is. The AQA is a good example – the reliance on the Canadian and American domestic enforcement regimes, as well as the inclusion of an opt-out clause in the Agreement, are the result of Canadian and American concerns regarding national sovereignty and domestic economic development. Let us first consider sovereignty, its limitations on the AQA, and potential constraints on alternative enforcement mechanisms.

The international⁴ arena is generally characterized by students of international relations to be in a state of anarchy,⁵ as, the states are individual actors upon which no supra-national legal authority may be imposed without their consent. They are autonomous entities – sovereign. This autonomy results in the need for cooperation to accomplish any global or regional objectives, especially on environmental issues. In fact, Andrew Samaan maintains that “...international coordination and cooperation is the best, if not the only means by which to achieve the objective of international environmental enforcement while maintaining harmony.”⁶ Hence, national sovereignty concerns result in the establishment of a cooperative bi-lateral environmental enforcement regime, which, as was demonstrated with respect to the Canadian enforcement approach in Chapter 3, often leads to accommodation of noncompliance. On the bi-lateral level, this would be accommodation of state noncompliance with the objectives of the bi-lateral agreement and, as has been stated previously, state noncompliance results in decreased protection for the regional environment.

Sovereignty also limits the actors which are allowed to participate in bi-lateral enforcement. Another international law and enforcement theorist suggests that “enforcement is exclusively a matter for individual state action under traditional

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⁴ Bi-lateral relations occur in the international arena, as they involve relations between states. As such, the terms are used somewhat interchangeably in this section.

⁵ “Assent to and Enforcement of International Environmental Agreements.” *Harvard Law Review*. Vol. 104, no. 7, 1 May 1991, p. 1553 (hereafter *Harvard Law Review*).

⁶ Andrew Watson Samaan. “Enforcement of International Environmental Treaties: An Analysis.” *Fordham Environmental Law Journal*. Vol. 5, 1993, p. 267.

international law, which is characterized by the absence of international executive and judicial authorities with general compulsory jurisdiction.⁷ As such, third parties are generally excluded from any form of bi-lateral environmental enforcement and, in turn, bi-lateral enforcement of state compliance with the terms of the agreement remains within the closed, cooperative relationship between the states. Again, this is very similar to the cooperative enforcement model discussed in Chapter 1 and much like the Canadian environmental enforcement regime considered in Chapters 2 and 3. As such, it is subject to many of the same criticisms to which the model and the Canadian regime are subject – essentially, the closed relationship can lead to accommodation of noncompliance, which, in turn, results in further degradation of the environment.

In addition, states are “...less likely to assent to proposed agreements that sacrifice a greater degree of sovereignty.”⁸ Thus, states would be less likely to approve or be a party to agreements which would provide for sanctions, for example, if a state withdrew. The stronger the enforcement mechanisms of the bi-lateral or multi-lateral agreement, the less likely it is to be accepted by the parties involved and, as such, agreements tend to be less strict in enforcement mechanisms which they employ. Canada and the US are no different from any other states entering into a bi-lateral or multi-lateral agreement, as they too have serious sovereignty considerations. Part of the reason that the AQA was established based on domestic standards and enforcement was fear of ceding too much power over internal affairs to the other state.⁹ Both Canada and the US in 1991 had what they considered to be strong emissions reduction programs and neither had the desire to establish standards that were more stringent – the acid-causing emission reduction had been addressed domestically and each country respected the other’s sovereign right to determine its own standards. According to Johnson and Beaulieu, domestic standards are generally used in bi-lateral agreements because it is easier to reconcile domestic

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⁷ Ibrahim F.I. Shihata. “Implementation, Enforcement, and Compliance with International Environmental Agreements – Practical Suggestions in Light of the World Bank’s Experience.” *The Georgetown International Environmental Law Review*. Vol. 9, 1996, p. 38.

⁸ *Harvard Law Review* p. 1553.

⁹ The other reasons involve the long fight to gain an agreement and a desire to draw to a close the decade of diplomatic relations with a tangible document. See Chapter 3.

enforcement standards with national sovereignty.¹⁰ Hence, the weak enforcement mechanisms contained in the AQA – that is, both the reliance on domestic enforcement and the inclusion of the opt-out clause – are the products of national sovereignty concerns. Canada and the US were unwilling to cede control over domestic environmental standard-setting and enforcement and, as such, the Agreement is the product of the limited framework within which it was created.

The other major constraint on the type of enforcement mechanisms that are included in the AQA, and in bi-lateral environmental agreements in general, is the concern for domestic economic development. In some ways, this limitation is a sub-part of the sovereignty limitation, as it is often for reasons of economic development and prosperity that countries do not wish to cede control over environmental standard-setting and enforcement. For example, a country's exploitation of the natural resources within its borders, although often harmful to the environment, is perceived as a sovereign right;¹¹ however, according to the *Trail Smelter* decision, this right must be balanced with an obligation not to engage in activities which will harm the citizens or environment of another state.¹² This balancing of economic values and social concerns occurs at both the domestic and bi-lateral levels in the quest for sustainable development. Unfortunately, short-term economic concerns often outweigh long-term environmental problems and, as such, the enforcement mechanisms included in bi-lateral environmental agreements are designed in such a way as not to greatly infringe upon either nation's economic development and prosperity. Basically, economic concerns limit the perspective of what standards can be established and what enforcement actions can be engaged in at the bi-lateral level, because those standards and enforcement mechanisms which have the potential to impact negatively on economic prosperity are deemed to be impositions on

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¹⁰ Pierre Marc Johnson & Andre Beaulieu. *The Environment and NAFTA*. Island Press: Washington, DC, 1996, p. 260. Although Johnson and Beaulieu write specifically about the North American Agreement on Environmental Cooperation (NAAEC), these concepts may be extrapolated and applied to bi-lateral situations.

¹¹ *Id.* pp. 189-190.

¹² Jeffrey L. Roeloffs. "United States-Canada Air Quality Agreement: A Framework for Addressing Transboundary Air Pollution Problems." *Cornell International Law Journal*. Vol. 26, 1993, p. 429, quoting *Trail Smelter* at 1965.

the nation's sovereign right to economic development. As was discussed above, if the mechanisms infringe upon sovereignty, they are fundamentally unacceptable.

In order to improve bi-lateral enforcement, negotiators of bi-lateral agreements, as well as students of bi-lateral environmental relations, must find a way to move beyond the boundaries and limitations of the current bi-lateral environmental relations framework; however, it must be noted that moving beyond the limitations of sovereignty and economic development requires incremental improvements of enforcement within the existing framework. Although drastic changes in bi-lateral enforcement are simply not possible, since they would require radical alterations of the current perspective of interactions between states in the bi-lateral arena, the perspective may be altered through the introduction of some moderate enforcement alternatives which challenge some of the limitations of the current framework. As such, it must be noted that those bi-lateral enforcement alternatives considered below are also limited within the framework which has been discussed here. This is to be expected, as the options are drawn from current examples of enforcement on the domestic, bi-lateral, and international stages; however, when used in concert, some of these alternatives have the potential to expand the current perspective and surpass the limitations of our current bi-lateral enforcement framework. Each alternative and its viability for implementation in the current bi-lateral enforcement framework will be considered individually. Following the examination of all of the alternatives, recommendations will be made regarding the establishment of a new AQA bi-lateral enforcement regime which relies on a combination of various enforcement options.

Alternative Bi-lateral Enforcement Approaches

The following discussion of alternatives to self-enforcement/domestic enforcement of bi-lateral standards is not meant to be an exhaustive list of all possible enforcement options – only those options which are relevant to the enforcement of the AQA are included. See Table 4.1 at the end of this chapter for a summary. Self-enforcement will not be considered as an alternative enforcement option per se, as it is the current bi-lateral enforcement approach and its merits and disadvantages were

discussed in detail in Chapter 3; however, its success in implementing the AQA will briefly be reviewed here. According to the AQA Progress Reports, this approach has worked reasonably well for the past seven years in the Canada-US air quality context; however, this success in implementation is attributed to the fact that the AQA emission standards *are* the domestic standards of the two countries. As was discussed in Chapter 3, this reliance on domestic standards allows for less friction with the domestic enforcement approaches, as the standards and enforcement are designed for the particular political system to which they apply. As such, the AQA is but a commitment to adhere to already established domestic regulations.

Self-enforcement has also been successful because both Canada and the US have been committed to serious enforcement of their domestic standards. Canada demonstrated its commitment with its Eastern Canada Acid Rain Program of the mid-1980s and the US with the passage of the 1990 Amendments to the US Clean Air Act (CAA); however, this commitment may decline in the face of budget cuts and economic hardship,¹³ which, in turn, would cause enforcement to decrease, along with the successful implementation of the Agreement. Recent events, like the budget cuts at Environment Canada and the Ontario Ministry of Environment, suggest that this commitment may wane. Since domestic enforcement cannot ascertain the continued protection of human health and sensitive ecosystems from acid rain if national commitment to emissions reduction declines in either Canada or the US, the following enforcement options are presented as possible alternatives, or complements, to domestic enforcement precisely so that current levels of protection may be maintained and future improvements in emission reductions may be sought.

It is important to note that the governments of both Canada and the US must take initial action to implement changes within their respective systems, which will allow for the use of each of the enforcement alternatives discussed below. One could perceive this reliance on state action as a fundamental defect of the enforcement options, since they are suppose to introduce alternatives which are not tied to the state or state action;

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¹³ See examples of budget cuts at Environment Canada and the Ontario Ministry of Environment, discussed in Chapter 2.

however, as the state is the primary actor in bi-lateral environmental enforcement, it must be expected that initial alterations in the enforcement framework will have to involve the state. On the other hand, as the reader will discover below, once the initial action to implement some of the enforcement options is taken by the state, no further state action is necessary and a reversal of the initial alteration to the system would be very difficult. As such, although it may be difficult to motivate the changes necessary for the implementation of any one of these alternatives within either the Canadian or American political systems, potential difficulty should not preclude consideration of the enforcement options, as their long-term benefits may outweigh the difficulties of implementing them through national governments.

Supra-National Enforcement Agencies

This option is one of the least supported alternatives for bi-lateral or multi-lateral enforcement of environmental agreements. In its purest form, it is the establishment of a non-governmental agency which monitors state compliance with agreements and, in the event of noncompliance, enforces the standards against the particular state which is failing to comply. Given the institution of sovereignty and its importance to states in the international arena, this option is unlikely to garner much support, as no government wants to give regulatory power over internal affairs to another power, whether it is a state or non-state actor – enforcement is likely to involve the imposition of some sort of sanctions or penalties for noncompliance, which, as discussed above, would infringe upon the sovereignty of the state. Environmental regulation and enforcement is a particularly sensitive area because often, particularly in the case of SO₂ emissions, it is closely related to the economy of the particular state.¹⁴ Given the importance of the domestic economy in the new global economy, control over the elements of production is held firmly by the domestic governments. This is not to say that all forms of supra-national authority in bi-lateral regulation are unacceptable – in fact, some international theorists insist that some centralization of authority is necessary for the success of bi-lateral and international agreements: “At minimum, there is a need for a central authority

that coordinates efforts and maintains a steady flow of information...”¹⁵ Samaan envisions that one of the tasks of this authority will be to ascertain compliance with the bi-lateral agreement;¹⁶ however, he also recognizes that “sovereignty is a stumbling block that must be mastered before enforcement can be achieved.”¹⁷

International and bi-lateral institutions which are involved in information exchange and the monitoring of compliance already exist – the IJC is a good example of such a bi-lateral organization, as it provides information on water and air quality to Canada and the US.¹⁸ Both Samaan and Alan Boyle suggest that the use of international agencies to monitor compliance may be very successful. The concept behind international monitoring is that if it is performed by an independent, non-state body, which is likely to publicize the results of its monitoring, the states party to the agreement for which the agency monitors will be shamed into compliance – that is, bad publicity for the state in a particular instance may affect its other international relations in a negative way; thus the state will comply. Intergovernmental Organizations (IGOs), according to Samaan can raise the “...political costs of nonconformity”¹⁹ and Boyle maintains that international institutions may be used for “...collective or community supervision.”²⁰ While these theories may hold true for multi-lateral agreements, their application to the bi-lateral Canada-US air quality context is weak, because enforcement by non-state actors as described above, relies on the assumption that there are more than two parties to the agreement which will be affected by and react to one state’s refusal to comply. Thus, one state’s noncompliance results in the virtual, if not actual, termination of the agreement. It is possible that in a bi-lateral situation publicity regarding noncompliance with the bi-lateral agreement will prompt other states, not party to the agreement, to act

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¹⁴ See discussion *supra* pp. 153-154.

¹⁵ Samaan. *Id.* p. 280.

¹⁶ *Id.* p. 281.

¹⁷ *Id.*

¹⁸ It should be noted, however, that the IJC is not entirely independent of Canada and the US, as much of its resources and personnel come from the governments of the two countries. See Chapter 3.

¹⁹ Samaan *Id.* p. 275, quoting Clive Archer, *International Organizations* 144 (Paul Wilkinson ed., 1983); see also *Harvard Law Review* p. 1565 for discussion of public embarrassment arising from noncompliance with a treaty or agreement.

²⁰ Alan E. Boyle “Saving the World? Implementation and Enforcement of International Environmental Law Through International Institutions.” *Journal of Environmental Law*. Vol. 3, no. 2, 1991, p. 230.

against the non-conforming state out of moral outrage; however, such action is less likely and carries less weight in the international community.

It has also been suggested that the involvement of international agencies and non-governmental organizations (NGOs) is beneficial, because when monitoring responsibilities are transferred to them, state resources are freed to be applied to other important issues, eliminating the inefficiencies of overlapping domestic enforcement.²¹ This is especially relevant to the Canada-US AQA situation, as there is distinct overlapping in the monitoring of SO₂ limits and the enforcement of SO₂ standards in the US and Canada. However, there are severe limits to transferring even simple monitoring responsibilities to an international agency. For example, the agency would require additional funding for the great task of monitoring all sources in Canada and the US and that funding would likely come from the Canadian and American governments. Hence, the monitoring would not be independent, as it would be tied to the purse strings and political will of the two countries. In addition, the agency would have to possess huge resources in order to be able to successfully monitor sources over such a large area.

Thus, although supra-national monitoring is a viable option, it is not independent of the nations which it is to monitor. As well, supra-national enforcement is not viable as a bi-lateral enforcement option, because it drastically imposes on the national sovereignty of Canada and the US. There are other possible reasons for which a supra-national enforcement authority would be undesirable – for example, it may be discovered that the supra-national body is no better able to address enforcement, equity, and other problems of bi-lateral enforcement than the current domestic enforcement mechanisms. Regardless, this supra-national enforcement option simply requires too radical a change in the perceptions of the American and Canadian governments to be acceptable at this time – it represents a giant leap where only small steps are feasible; however, if improvements in supra-national monitoring are made, gradually increasing the independence of the monitoring agencies, it may be possible to move toward the use of supra-national enforcement in the future.

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²¹ *Harvard Law Review* p. 1565.

An International Court of the Environment

This option is closely related to supra-national enforcement; however, it does not involve the monitoring of compliance or the imposition of sanctions, but rather *ex post facto* relief for individuals harmed by the negligent action, or inaction, of a pollution source. The International Court of Justice (ICJ) currently has the authority to hear cases regarding international environmental disputes; however, there are some problems with the use of the ICJ as an Environmental Court, one of which is that it only provides a forum for disputes between states.²²

States *alone* [sic] have direct access to the ICJ and not the individuals who are increasingly the victims of environmental destruction. The interests of a State may even be *contrary* [sic] to those of its citizens. States, therefore, very often refuse to support their injured individuals by means of *diplomatic protection* [sic].²³

The only courts which allow individuals and NGOs standing before them are human rights courts²⁴ – no similar forum exists for the consideration of environmental cases – and, as such, there is currently no forum for the consideration of the grievances of individuals in the bi-lateral or international arena. As well, the ICJ, and other existing forums for international disputes, generally do not “....necessarily possess sufficient expertise in environmental matters to enforce environmental commitments.”²⁵ Hence, even if the ICJ was opened to individuals, it is likely that the justices would not be able to well-address the issues in the cases, as they would not have the background in domestic and international environmental law which would be necessary. In turn, the rulings which came out of the court would be confusing and may not mitigate the environmental problems which the Court was called on to address.

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²² *Id.* p. 1562; Alfred Rest. “Need for an International Court for the Environment?” *Environmental Policy and Law*. Vol. 24, no. 4, 1994, p. 173.

²³ Rest *Id.* p. 174.

²⁴ Michael Bothe. “Compliance Control Beyond Diplomacy – the Role of Non-Governmental Actors.” *Environmental Policy and Law*. Vol. 27, no. 4, 1997, p. 294.

²⁵ *Harvard Law Review* p. 1562.

Thus, there appear to be good reasons for the development of an independent International Court for the Environment (ICE) before which individuals may have standing. It is assumed that the ICE would be comprised of justices who were experts in environmental law and that it would provide access to individuals who seek a forum for their international grievances. Rest also maintains that the ICE is necessary because of the difficulty in bringing international suits in national courts and the tendency of these national courts to apply the international law incorrectly.²⁶ He suggests the Permanent Court of Arbitration as an existing institution which may be used as a forum for the ICE until the Environmental Court becomes an independent entity;²⁷ however, despite this apparent necessity for the establishment of an ICE, there are significant problems involved in its establishment and use in Canada-US bi-lateral air quality enforcement.

First, a court is generally not an institution which is able to enforce – take for example the US Supreme Court, whose rulings must be enforced by the executive branch of the federal government – and, as such, the ICE would have to establish its own enforcement body to implement its rulings. This raises serious sovereignty concerns similar to those regarding the establishment of a supra-national enforcement body – neither the US nor Canada would be willing to give up sovereignty to an international or bi-lateral enforcement agency which could impose its will on either state. As such, the rulings of the ICE would not be enforceable unless the states agreed to enforce the decisions themselves. Indeed, it should be noted that in cases currently brought before the existing ICJ, a state must consent to be sued²⁸ and it is likely that the ICE would operate under similar procedures. Thus, if a citizen sought to sue another state in the ICE for noncompliance with an environmental agreement, the citizen would have to gain the consent of the state prior to filing suit. As well, in the event that the Court ruled for the citizen, he would have no way of ascertaining that the ruling against the state would be enforced. The situation might be different if the citizen sought to sue an individual pollution source in another state, that is, the citizen may not need the consent of the state to sue one of its pollution sources; however, the state may be reluctant to allow such a

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²⁶ See Rest *Id.* in general, especially p. 183.

²⁷ *Id.*

suit to proceed, because the Court would be reviewing and ruling on a domestically controlled activity within that state. As such, the state could claim that any attempt to control that activity by an external source would be a violation of its sovereignty. Indeed, the state would be especially protective of those sources which are involved in production and which contribute greatly to the economic prosperity of the particular country. Further research into the dynamics of private suits in the international arena is necessary before any definitive statements are made, but it is important to note that this type of litigation regarding environmental issues does not presently exist. Private and civil litigation will be discussed further in the examination of extra-territorial litigation below.

In addition, the ICE may provide an inconvenient forum for Canadian and American citizens. If the Court was located somewhere in Europe, for example, the costs of litigation and travel would be prohibitive to individual plaintiffs – not only would they have to pay for the costs of litigation, but they would also accrue heavy expenses for travel to the Court for the various pre-trial hearings and for the trial itself. As such, the difficulty and expense of bringing a suit in the ICE would discourage the citizen, who would not necessarily have such extensive resources, from filing suit – he would be wiser to seek redress in the court of the other nation, through some sort of *ex iuris* litigation.²⁹

Thus, the ICE is not a viable enforcement option for the Canada-US air quality case. When one analyzes the potential of the ICE closely, one realizes that in order to be effective in any way, the Court would have to be similar to the supra-national enforcement body discussed in the previous section and, as such, sovereignty concerns preclude serious consideration of the option. Both the supra-national and ICE enforcement options seek to inject domestic enforcement mechanisms into the international and bi-lateral arena; however, as domestic and bi-lateral enforcement environments differ markedly, it is unlikely that domestic mechanisms can be molded to fit the bi-lateral enforcement environment. “Although these institutions could improve enforcement, they will never adopt the form of domestic enforcement institutions unless

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²⁸ *Harvard Law Review* p. 1653.

the international legal system becomes the law of a world government, which seems unlikely to occur.”³⁰ Thus, as with the supra-national option the ICE simply requires to drastic a change in state perceptions to be feasible at this time.

Enforcement by Non-governmental Organizations

Again, as with the ICE option, the non-governmental organization (NGO) enforcement alternative is closely related to the concept of supra-national enforcement. In the current system it would be very difficult, if not impossible, for NGOs to independently take over enforcement of a bi-lateral agreement, as allowing NGOs to exercise enforcement powers would mean that states would have to cede a large portion of their sovereignty over environmental regulation and enforcement to a non-state actor – an event not likely to happen. In addition, environmental NGOs tend to be more environmentally conscious and give more weight to environmental concerns than to economic problems. As such, states would fear the economic consequences of handing over air quality regulation to NGOs.

As well, giving NGOs such a central role in enforcement assumes that the groups are of one mind on environmental and enforcement issues, when in fact, the philosophies of the hundreds of environmental NGOs which operate in Canada and the US, and in the world for that matter, are very different. Some, like the Sierra Club, are more conservative in their approaches to environmental problems, working with and within governments to assure environmental protection. Others, like Greenpeace and Earth First!, are far more extremist, relying on radical tactics and separation from the government and government enforcement agencies. As such, one may assume that the bi-lateral enforcement regimes established by each of these groups would also differ greatly.

In addition, the NGOs would be faced with the same problems of funding the monitoring and enforcement actions as would the international agencies,

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²⁹ For further discussion regarding the inconvenience of forum, see discussion of *forum non conveniens* in the examination of civil *ex iuris* suits *infra* at note 88.

³⁰ Mary Ellen O’Connell. “Enforcement and the Success of International Environmental Law.” *Indiana Journal of Global Legal Studies*. Vol. 3, no. 1, Fall 1995, p. 48.

intergovernmental agencies, and IGOs mentioned in the discussion of supra-national enforcement bodies. While it is true that the larger NGOs have extensive budgets, primarily arising from the contributions of their members, such enforcement responsibilities would surely drain most of the NGOs resources. Indeed, the larger NGOs are involved in many and various environmental protection activities, and it is unlikely that they would be willing to decrease their involvement in other environmental protection pursuits to devote most their operating budget to enforcement activities involving only one environmental issue. In addition to lacking the resources to enforce, NGOs would also lack the expertise and equipment needed to monitor. Such expertise could be gained by involving former monitoring and enforcement officials from different national governments; however, the NGOs would then risk repeating the enforcement mistakes which were made in the domestic environmental enforcement regimes. Thus, the best roles for NGOs in enforcement lie in bringing about international awareness of issues, providing information on the state of the environment,³¹ and providing help and resources for citizens filing suit against government agencies or individual polluters.³² The NGOs themselves may also have standing to sue and, as such, may play an important role in the next option to be discussed – extra-territorial litigation.

Extra-territorial Litigation

Extra-territorial litigation (ETL), also known as *ex iuris* litigation, involves the initiation of actions against entities³³ in one country by a citizen or a group of citizens from another country. These *ex iuris* suits have the potential to improve the current bi-lateral enforcement regime through the introduction of third parties into the bi-lateral environmental enforcement process. Such involvement of third parties could introduce new perspectives into the enforcement process, increasing the objectivity and fairness of environmental enforcement and broadening the overall conception of the bi-lateral

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³¹ Bothe *Id.* p. 296.

³² *Id.* p. 293; see Bothe's article in general for an excellent discussion of NGOs role in international enforcement actions.

³³ These entities can include pollution sources or, in some cases, the government itself. See discussion below.

environmental enforcement regime between the US and Canada. The third parties may increase objectivity by ascertaining that other viewpoints, besides those of government and industry, are considered in the enforcement process.

There are two types of ETL which have the potential for use as bi-lateral enforcement alternatives – statutory litigation and common law civil litigation. Statutory litigation, as its name suggests, involves the initiation of suits under specific statutes, like the US Clean Air Act (CAA) or the Canadian Environmental Protection Act (CEPA). These suits can either involve a petition for an injunction to force the government-operated environmental enforcement body to comply with a non-discretionary duty, or the prosecution of a pollution source for violation of some part of the statute. Since non-discretionary duties are not commonly found in Canadian environmental legislation, *ex iuris* suits regarding the enforcement of non-discretionary duties are limited to the American legal system, in the context of US-Canada air quality. On the other hand, cases regarding source violation of specific regulations may be brought in both the Canadian and American courts.

Common law civil litigation does not directly involve specific environmental statutes, but rather relies on tort law – cases of negligence, nuisance, trespass, etc.³⁴ These cases generally involve actions against a particular source taken by an individual or group of citizens who have incurred harm³⁵ due to the action or inaction of that source. As such, the use of common law ETL as a bi-lateral enforcement tool is limited, as the litigation does not directly involve the enforcement of a particular statute. Enforcement in terms of common law civil litigation occurs in a more indirect manner through the pressuring of the source to improve its emissions standards in order to avoid costly private litigation. As well, in the event that the plaintiffs in a tort case are successful, the source of the pollution which caused the harm may be subject to large restitutive and punitive fines.

Ex iuris litigation, in the environmental context, is generally initiated in the courts of the country in which the pollution originated. Some may perceive this use of the

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³⁴ Michael I. Jeffrey. "Transboundary Pollution and Cross-Border Remedies." *Canada-United States Law Journal* Vol. 18, 1992, p. 181.

domestic courts as a defect in the ETL enforcement option, as the enforcement action must occur within the limited framework of the state – in essence ETL could be viewed as a mere extension of the current reliance on domestic enforcement regimes. However, while the enforcement does occur within the confines of the particular state, the interests of the foreign plaintiff introduce a non-domestic element to the enforcement proceedings, making the court aware of the implications of enforcement actions outside of the nation's borders. Hence, the ETL enforcement process cannot be perceived as solely domestic – it improves upon the existing domestic enforcement approach. This is not to say that there exist no barriers to the establishment of a bi-lateral ETL enforcement regime – on the contrary, there are differences in the American and Canadian legal systems which will have to be addressed prior to any extensive use of ETL. The differences in interpretation of legal principles by the Canadian and American courts will be considered below.

Statutory Litigation

New York v. Thomas³⁶

Before examining the legal principles involved in statutory litigation, let us consider *New York v. Thomas* and *Her Majesty the Queen in Right of the Province of Ontario v. US EPA*,³⁷ as examples of statutory litigation which may help clarify some of the principles for the reader. It was mentioned earlier in this paper³⁸ that both the US Clean Air Act (CAA) and the Canadian Environmental Protection Act (CEPA) contain provisions which address the issue of transboundary air pollution. Both Section 115 of the CAA and Part V of CEPA give to their respective federal governments power to act in particular ways to reduce emissions in the event that harm is being caused to the citizens of another country by the transport of emissions across the nation's borders. In order for either Section 115 or Part V to be triggered, some form of reciprocity must

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³⁵ Harm generally refers to physical and psychological harm, as well as property damage.

³⁶ 802 F.2d 1443 (D.C. Cir. 1986); *rev'g* 613 F. Supp. 1472 (D.D.C. 1985), *cert. denied* 107 S.Ct. 3196 (1987)

³⁷ 912 F.2d 1525 (D.C. Cir. 1990) (hereafter *Ontario v. EPA*)

³⁸ See Chapter 2.

exist; that is, the country which is being harmed by the emissions must have a similar provision to take action in the event that it is discovered that emissions from sources within its borders are harming citizens in another state.³⁹ As both Canada and the US have similar legislation regarding action in the event of transboundary air pollution, one can say that the reciprocity does indeed exist.⁴⁰ *New York v. Thomas* involved the triggering of Section 115 of the US CAA.⁴¹ The case not only demonstrates some of the principles of statutory ETL, but it also is a product of the frustration, of both Canadians and Americans, with the Reagan Administration's inaction on the acid rain issue in the 1980s.

In January of 1981, Douglas Costle, then Administrator of the EPA, drafted and sent letters to former Secretary of State Edmund Muskie and Senator George Mitchell of Maine, stating his concern regarding the transport of US acid-causing emissions across the Canada-US border.⁴² Costle based his concern on the 1978 report by the IJC which maintained that US and Canadian emissions sources "...contribute to the problem [of transboundary air pollution] not only in the country where they are located but also in the neighboring country."⁴³ In his letters, Costle concluded that US sources emitting SO₂ were contributing to acid deposition in Eastern Canada which was harming lakes and forest ecosystems.⁴⁴ Given this evidence, he suggested that the EPA should take action under Section 115 of the CAA to curb US emissions;⁴⁵ however, before Costle could take any action, he was replaced as EPA Administrator by Anne Gorsuch (later Anne Gorsuch-Burford), who was appointed by incoming President Ronald Reagan. As mentioned in Chapter 3, Reagan and his appointees to the EPA were less friendly to the

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³⁹ See Appendix B for the text of Section 115 and Part V.

⁴⁰ In fact, Canada amended its Clean Air Act in 1980 to include this international air pollution provision. See G. Bruce Doern & Thomas Conway. *The Greening of Canada: Federal Institutions and Decisions*. Toronto, Ontario: University of Toronto Press, 1994, p. 154. Also recall that the Canadian Clean Air Act was subsumed under CEPA in 1988.

⁴¹ No similar cases exist involving Part V of CEPA.

⁴² All information regarding the history of *New York v. Thomas* is attributed to Carol Garland. "Acid Rain over the United States and Canada." *Environmental Affairs*. Vol. 16, 1988, pp. 18-19, and Joel Gallob. "Birth of the North American Transboundary Environmental Plaintiff." *Harvard Environmental Law Review*. Vol. 15, 1991, pp. 128-129 unless otherwise noted.

⁴³ Garland *Id.* p. 18, quoting from letter from Costle to Muskie, January 13, 1981.

⁴⁴ Gallob *Id.* p. 128.

⁴⁵ *Id.*

environment and to the acid rain issue than President Carter and his EPA had been. Gorsuch-Burford and her successors, William Ruckleshaus and Lee Thomas refused to take any further action under Section 115 regarding transboundary air pollution. Assuming that Costle's letters to Muskie and Mitchell were findings of significant pollution under Section 115, the Administrator of the EPA would be required to notify the states in which the egregious sources operated of the transboundary pollution problem.⁴⁶ The states, in turn, would be required to re-draft their state implementation plans (SIPs) to address the problem and then submit their new SIPs to the EPA for approval.⁴⁷ Gorsuch and her successors essentially ignored Costle's findings and never sought action from the source states, prompting other affected states and citizens to take legal action on behalf of the interests of Canada and the Northeastern US in *New York v. Thomas*. Canada was not directly involved in the suit, although Ontario did become involved in a later suit which grew out of the *Thomas* decision;⁴⁸ however, given the information flow and close relationship between the New England states and Eastern Canada, one may assume that Canada and its provinces did express its dissatisfaction with the inaction of the EPA and may even have encouraged some of the states and environmental groups to join the suit.⁴⁹

The case was brought by six states, four environmental organizations, and four individuals.⁵⁰ The plaintiffs sought to force the EPA Administrator to fulfill what they saw as non-discretionary duties under Section 115,⁵¹ which, they maintained, had been triggered by Costle's issuance of findings in his letters to Muskie and Mitchell.⁵² The District of Columbia District Court found for the plaintiffs⁵³ – the court agreed that Costle's letters expressing the findings of the IJC had triggered Section 115 and that the

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⁴⁶ See 42 USCS §7415(b)

⁴⁷ *Id.*; also see Appendix B; for discussion of SIPs, see Chapter 2, note 126 and accompanying text.

⁴⁸ See discussion of *Ontario v. EPA* below.

⁴⁹ See Chapter 3, p. 113.

⁵⁰ Garland *Id.* p. 19; Gallob *Id.* p. 129 suggests that there were nine states involved in the suit. See also Chapter 3, note 66 and accompanying text.

⁵¹ *Id.*

⁵² Gallob *Id.* p. 129; Garland *Id.* p. 19; Gallob suggests that the case turned on the letter to Mitchell – he fails even to mention the letter to Muskie. Garland, on the other hand, mentions only the letter to Muskie.

⁵³ Again, all information regarding the case and the appeal are attributed to Gallob *Id.* pp. 129-130; Garland *Id.* pp. 19-22 unless otherwise noted.

current Administrator had the obligation to take action – the next step under Section 115 was to determine whether Canada had a reciprocal section regarding transboundary air pollution causing harm in the US. As was mentioned above, Part V of CEPA does provide that reciprocity and, as such, it was expected that the long-awaited action on emissions reduction would now begin. Indeed, Administrator Thomas did find that reciprocity between the two nations regarding transboundary air pollution does exist;⁵⁴ however, the EPA, meanwhile, appealed the case to the DC Appellate court, which reversed the District court’s decision, claiming that Costle’s letters did not constitute findings under Section 115, because there had been no comment and rule-making procedures prior to the issuance of the findings in the letters to Muskie and Mitchell. Thus, instead of focusing on the merits of the case, the court chose to look to a procedural element in the Administrative Procedures Act (APA). Indeed, there is a good argument that the APA rule-making duty did not apply to the circumstances of Section 115 for a variety of reasons;⁵⁵ however, a detailed analysis of the opinion will not be included here, as such an analysis is beyond the scope of this discussion. It is important to note, though, that in *dicta* the district court did determine that a mandatory duty does exist under Section 115 if legitimate findings are issued, and that this part of its decision was not overturned by the appellate court:

...the district court focused on the word “shall” with regard to the Administrator’s duty to notify and concluded that a mandatory duty existed. The word “shall” when used in a statute has been held to require a non-discretionary duty to act by the Supreme Court and the lower courts.⁵⁶

As such, had the court found for the states, citizens, and environmental groups, Thomas would have been compelled to take action and notify the states of their obligation to alter their SIPs. This is significant for possible future cases, as given the nature of the research provisions contained in the AQA, it is possible that a new report regarding the

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⁵⁴ Garland *Id.* p. 19, citing *Thomas* at 1446.

⁵⁵ See Garland *Id.* pp. 20-22 for an excellent analysis of the inapplicability of the APA to Section 115.

implications of transboundary air pollution could be released. If the Administrator of the EPA considers the findings of significant transboundary air pollution, he may determine that action is indeed warranted under Section 115; however, if, for some reason, the Administrator refuses to act, there is legal precedent in *Thomas* that the duty to act on those findings is non-discretionary. While *New York v. Thomas* was a victory for the inaction of the EPA, the decision turned on very specific grounds of the APA – something which could be avoided in future cases.

The precedent is also significant because it demonstrates the action which may be taken by citizens and environmental groups – the third parties – to enforce a non-discretionary duty regarding transboundary pollution issues. Indeed, because the province of Ontario became involved in a case that resulted from *New York v. Thomas*, one might suggest that foreign stakeholders may seek redress under the laws of the US in US Courts. After *Thomas*, the EPA had the option to engage in the rule-making which was necessary for further action under Section 115, and various environmental groups, states, and Ontario asked the EPA to do so. When the EPA refused, Ontario filed suit, seeking to force the EPA to “...publish the endangerment and reciprocity findings, thus initiating the section 115 process.”⁵⁷ In *Ontario v. EPA*, the district court decided that the EPA’s decision not to seek notice and comment to trigger the rule-making necessary to proceed under Section 115 was a discretionary interpretation of 115 on the part of the Agency – findings and rule-making should not be separated.⁵⁸ As Rosso suggests, the case limits the usefulness of Section 115;⁵⁹ however, the important point for the discussion here is that Ontario was granted standing to sue a US executive agency under a specific US statute, which has significant implications for future action by Canada under US laws. While the law may seek to protect the citizens of the US, the existence of the AQA and its incorporation of domestic standards may provide a basis standing for

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⁵⁶ Stuart N. Keith “The EPA’S Discretion to Regulate Acid Rain.” *Cleveland State Law Review*. Vol. 36, 1988, p. 145, referring to *New York v. Thomas* and *Train v. Natural Resources Defense Council*, 421 US 60 (1975).

⁵⁷ Shawn M. Rosso. “Acid Rain: The Use of Diplomacy, Policy and the Courts to Solve a Transboundary Pollution Problem.” *Journal of Natural Resources and Environmental Law*. Vol. 8, 1992-1993, p. 433, citing *Ontario v. EPA*.

⁵⁸ *Id.* p. 433.

⁵⁹ *Id.*

Canadian citizens, and perhaps even provinces, to sue in the event that the EPA does not fulfill a non-discretionary duty – that is, because Canada has an interest in the implementation of the AQA standards, and the standards contained in the AQA are domestic standards, it follows that Canada has an interest in the enforcement of domestic standards and therefore would have interest in a case which sought to enforce those standards. Much depends upon the courts' interpretation of standing – an issue which will be discussed in the next section.

Principles of Extra-Territorial Statutory Litigation

The Canadian and US courts differ on the interpretation of three primary legal principles – jurisdiction, standing, and choice of law and – although the differences are slight, they could potentially hinder the expansion of the use of ETL as a bi-lateral enforcement mechanism. Since these principles primarily involve procedure, it should be noted that, although the differences in their interpretation are analyzed in the statutory litigation section, the analysis also applies to common law civil litigation.

Jurisdiction⁶⁰

Jurisdiction involves the court's determination of where the case must be heard. At issue is the interpretation of the local action rule, which "...provides that an action in tort for damage to real property must be brought where the property is located, on the theory that an investigation of title may be necessary."⁶¹ The US courts tend to be liberal in their interpretation of the rule, maintaining that even if damage to property, health, or life occurred in another jurisdiction, the case maybe heard by the US courts.⁶² On the other hand, the Canadian courts are much stricter in their interpretation of the rule, establishing greater barriers for foreign plaintiffs.⁶³ As such, it would be easier for Canadian plaintiffs to bring a case regarding transborder air pollution in US courts than it would be for American plaintiffs to seek remedies in the Canadian courts.

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⁶⁰ All information on jurisdiction is attributed to Gallob *Id.* pp. 96-97 unless otherwise noted.

⁶¹ Gallob *Id.* p. 96, citing J. Friedenthal, M. Kane, & A. Miller, Civil Procedure sect. 2.16 (1985).

⁶² *Id.*

In addition, Canadian and American courts use different jurisdictional tests in cases in which the defendant is *ex iuris* and the harm is local. The US test maintains that if the conduct has consequences within its borders, the US may impose liability regardless of citizenship. In Canada, on the other hand, "...the wrong must be actionable both where the harm occurred and in the forum jurisdiction."⁶⁴ Again, the American approach is more liberal and more likely to allow the transboundary suit to proceed.

Thus, one can see some inequalities in the potential for the Canadian and American courts to allow ETL on jurisdictional grounds; however, according to Michael Jeffrey, the differences are not as significant as may be suggested by the preceding analysis. He maintains that under the common law principles entrenched in the Canadian Charter of Rights, all individuals, regardless of their defining characteristics, including race, gender, and national origin, are entitled to equal protection and, as a result, foreign citizens have an equal right to sue under the law.⁶⁵ It should be noted that the equal protection clause included in the Fourteenth Amendment to the US Constitution applies only to the citizens of the United States, and, as such, a reciprocal equal protection for Canadian citizens is not guaranteed by the US Constitution. As well, despite the ideals of the common law and of the Constitution, the courts' every day procedures, including jurisdictional tests, as well as bars to standing which will be discussed below, may establish significant limits to the ability of foreign citizens to bring suits under statutes in Canada and the US.

Standing

Standing involves the courts' interpretation of the plaintiff's interest in the case which that plaintiff seeks to bring before the court. In both Canada and the US, the courts grant standing to plaintiffs who have personal and direct interest in the case and who will be directly affected by the outcome;⁶⁶ however, a recent ruling by the US

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⁶³ *Id.* pp. 96-97.

⁶⁴ Gallob *Id.* p. 97.

⁶⁵ Jeffrey *Id.* p. 178.

⁶⁶ Gallob *Id.* p. 99.

Supreme Court in *Defenders of Wildlife v. Lujan*⁶⁷ suggests that US courts may use stricter criteria for determining standing than do their Canadian counterparts.⁶⁸ The decision suggests that standing requires that the harm to the plaintiff must be direct and tangible – Justice Scalia maintains that the plaintiffs must be threatened with imminent harm.⁶⁹ In Canada, standing is also based upon the plaintiff's personal interest in the case, but the Canadian courts apply a broader test, as they consider both benefits and injuries to the plaintiff.⁷⁰ The Canadian approach to standing is based on a three-part test in *Finlay v. Canada*:⁷¹ a) can the plaintiff demonstrate personal interest in the case; b) if there exists no personal interest, can the court recognize a public interest; c) if the Court can exercise discretion and recognize public interest, should the discretion be used in favor of the respondent.⁷² Some suggest that the Canadian courts are more liberal in their interpretation of standing, as they consider both the potential and actual injuries *and* benefits to the plaintiff⁷³ and, as such, it may be easier for a foreign plaintiff in a case of transborder air pollution to gain standing in Canadian courts than in American courts; however, recall that the Canadian courts have been reluctant to extend standing to third parties in environmental degradation cases.⁷⁴ It should also be noted that Canadian courts only hear cases of source violation of regulations, *not* cases of agency failure to perform a non-discretionary duty and, as such, standing is limited in that sense – plaintiffs do not have standing to sue the government as they do in the US. As well, the US has more possible forums for the initiation of litigation – state courts, federal courts, and the US Supreme Court – providing more opportunities for the plaintiffs to bring suit, even if they are denied standing in one forum.⁷⁵

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⁶⁷ 112 S.Ct. 2130 (1992)

⁶⁸ See discussion of this case by Tony Ed. Monzingo. "I Think the I Shall Never See, Standing for A Tree." *Arizona Journal of International and Comparative Law*. Vol. 10, no. 2, 1993, generally.

⁶⁹ *Id.* pp. 442, citing *Lujan* at 2230.

⁷⁰ *Id.*

⁷¹ 2 S.C.R. 607 (1986)

⁷² Gallob *Id.* p. 99.

⁷³ Gallob *Id.* p. 99.

⁷⁴ Nemetz *Id.* p. 199; See Chapter 2, note 202 and accompanying text.

⁷⁵ *Id.* pp. 135-141.

Choice of Law

The final difference between the US and Canadian legal systems with respect to statutory ETL is the choice of law applied by the courts. Choice of law refers to the law which is applied by the court to the specific *ex iuris* case before it and involves both procedural and substantive issues.⁷⁶ This can be significant, as the laws of one nation with respect to air pollution may be stricter than those of another, leading to potentially different outcomes of the case.⁷⁷ However, both the US and Canadian courts tend to rely on the *lex fori* – the law of the forum in which the case is heard – for both substantive and procedural issues.⁷⁸ Thus, if a case was brought by a Canadian plaintiff in the courts of the state of New York, the court would use the procedural law of the state of New York in determining how to proceed with the case, and would apply the relevant state law regarding the pollution issue before it, when making its final determination. The primary difference regarding choice of law may be perceived in the reasoning of the courts in their determination to use the *lex fori* – the Canadian courts preference for the *lex fori* is textual, while the US preference is public policy related;⁷⁹ however, an examination of that reasoning is beyond the scope of this paper.⁸⁰ It is simply important to note the differences, however slight, in the choice of law approaches of the American and Canadian courts, as they could potentially affect an *ex iuris* suit brought in either country.

Harmonization of these principles – jurisdiction, standing, and choice of law – was proposed by the American and Canadian Bar Associations in the 1979 Draft Treaty on a Regime of Equal Access in Cases of Transfrontier Pollution;⁸¹ however, neither the US nor the Canadian government chose to accept, or even seriously consider the Draft

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⁷⁶ *Id.* p. 100.

⁷⁷ This is a substantive issue.

⁷⁸ Gallob *Id.* pp. 102, 103, 106.

⁷⁹ US public policy refers to the desire to avoid bad results under foreign law - Gallob *Id.* p.103; it is believed that Canadian textual preference, refers to the interpretation of the texts of precedent opinions.

⁸⁰ See Gallob *Id.* pp. 100-107 for an excellent discussion of choice of law and the reasoning behind Canadian and US court decisions regarding substantive and procedural choice of law issues.

Treaty.⁸² It is possible that the lack of support for the Treaty arose from concerns regarding national sovereignty, as harmonization would require an alteration of domestic principles to allow foreign access to domestic enforcement tools – the same fear of loss of control of domestic enforcement and, in turn, production capability that is present in the consideration of supra-national enforcement bodies is present here. However, simply harmonizing already very similar principles will not impose greatly on the national sovereignty of either nation, nor will the involvement of foreign stakeholders in the domestic/bi-lateral enforcement process. The court system is still controlled by the domestic government, its perspective as to the interests which it considers is merely broadened to include those interests of foreign stakeholders. As such, the Draft Treaty should be re-examined and its suggestions should be seriously considered by both Canada and the US, to allow for the greater use of ETL in bi-lateral enforcement. Indeed, recent developments in the tri-lateral environmental agreement between Canada, the US, and Mexico – the North American Agreement on Environmental Cooperation (NAAEC) – have demonstrated increasing interest in the use of *ex iuris* litigation as a bi-lateral or multi-lateral enforcement instrument.⁸³

Common Law Civil Actions

Recall that these are basically cases of tort actions – negligence, nuisance, trespass, etc. – which are brought without the help of a specific statute.⁸⁴ That is to say that a citizen bringing an action would not base his claim in the prohibitions of a statute – for example, a statute or regulation regarding appropriate emissions level – but instead, attempt to show harm and require the agent of that harm to take responsibility for imposing injury upon him. As was mentioned above, common law civil ETL is more of an indirect enforcement tool, as it does not involve the enforcement of a particular statute. Instead, its value derives from the deterrent effect that the suits have on polluters

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⁸¹ *Id.* p. 96; hereafter Draft Treaty

⁸² *Id.*

⁸³ See Richard Vaznaugh, "Extraterritorial Jurisdiction – Environmental Muscle for the North American Free Trade Agreement," *Hastings International and Comparative Law Review*, Vol. 17, 1993, in general for a discussion of *ex iuris* suits and the NAAEC.

and potential polluters.⁸⁵

Principles of Extra-territorial Common Law Civil Litigation

As was mentioned above, the principles of jurisdiction, standing, and choice of law also apply to common law civil litigation. As such, a court faced with a negligence suit filed against a pollution source by a citizen *ex iuris* must make the same determinations of whether it has jurisdiction over the case, whether the plaintiff has standing before the court, and in the event that it will hear the case, what procedural law it will apply. It should be noted that substantive law is generally not at stake in common law civil cases, as the suit is not based upon the violation of a statute per se, but the harm to the individual or group which is bringing the case.

There are two other potential barriers to the successful use of common law ETL, in addition to those involved with the principles discussed above. First, it is often very difficult, especially in cases of transboundary air pollution, to prove causality. In this era of high stacks and long-range transport of SO₂ emissions, it is difficult to pin the harm caused by the emissions to a particular source in a particular area, as the pollution disperses quickly and travels long distances;⁸⁶ however, in certain instances, and with improving tracking technology, such problems with causality may begin to fade. Indeed, Garland suggests that:

Scientists can now use a technique best described as "finger-printing" to trace chemical elements found in deposition back to the sources from which they were emitted. Scientists analyze direct measurements of pollutants in rainfall and thus chart the path of acid rain in order to determine its geographic origin.⁸⁷

As such, one should not totally discount common law litigation as an enforcement tool simply because of potential causality problems.

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⁸⁴ See note 34 *supra* and accompanying text.

⁸⁵ See discussion p. 164 *supra*.

⁸⁶ See Introduction, note 12 and accompanying text.

⁸⁷ Garland *Id.* pp. 5-6, citing Rahn & Lowenthal, *Elemental Tracers of Distant Regional Pollution Aerosols* 223 *Science* 132-39 (Jan. 13, 1984) & *New Data Traces Most Northeast Acid Rain To Midwest Sources*, Inside EPA Weekly Report, Aug. 15, 1986, at 1, 10.

The second barrier, which pertains mostly to the courts in the US,⁸⁸ is the concept of *forum non conveniens* (FNC). FNC essentially involves the court's discretion to decline jurisdiction when the convenience of the parties and ends of justice are better served if the action is brought and tried in another jurisdiction.⁸⁹ FNC is a good institution, which prevents the excessive burdening of the defendant that would result from trying the case in a jurisdiction which is inconvenient for the defense. For example, the jurisdiction may be distant from the place of residence or operation of the defendant, and defending against allegations in that forum would require a disproportionate expenditure of time, effort, and resources for the defense. However, despite the benefits of FNC, there are problems with it being applied arbitrarily by the courts.⁹⁰ In addition, the US Supreme Court has ruled that in cases of *ex iuris* litigation, the court may give less weight to the foreign plaintiff's choice of forum.⁹¹ In essence, this means that if a Canadian citizen wanted to bring suit against an American company in American courts, if the company sought a different jurisdiction, the court could give more weight to the company/defendant's choice of forum; however, if the US has a treaty which grants citizens of a particular country access to US courts, FNC is applied less vigorously to actions brought by the citizens of that country. Thus, while the institution of FNC is theoretically a hurdle to *ex iuris* litigation, in the "real world" it may not be as significant a problem. As such, *ex iuris* common law civil litigation has the potential to be a good supplement to other forms of bi-lateral enforcement and its potential will improve when other differences between Canada and the US regarding jurisdiction, standing, and choice of law, are resolved.

General Comments Regarding the Viability of ETL

An official at the IJC maintains that ETL creates more problems than benefits in bi-lateral enforcement and suggests that litigation should be avoided because the process

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⁸⁸ The author was unable to find a similar discussion of *forum non conveniens* for Canada.

⁸⁹ Molly M. White. "Home Field Advantage: The Exploitation of Federal Forum Non Conveniens By United States Corporations and Its Effects On International Environmental Litigation." *Loyola of Los Angeles Law Review*. Vol. 25, January 1993, p. 493.

⁹⁰ *Id.* p. 511.

of discovery involved limits the communication of important enforcement information between Canada and the US.⁹² While this is an excellent point, the chilling effect on communication and cooperation which may result from litigation is not as significant as he may suggest. Communication of important monitoring and enforcement information between Canada and the US will continue despite third party citizen suits. One may use an analogy to the US enforcement system – communication between the EPA and the industries which it regulates does not deteriorate simply because a third party has chosen to sue the EPA or a particular pollution source. Similarly, Canada and the US would continue information exchange despite the existence of third party suits against either country or against the sources within their boundaries.⁹³

ETL is generally used by foreign citizens to enforce the laws of a foreign country within that country's borders; however, the AQA may provide the basis for a new type of ETL, as it is written in the language of non-discretionary duties. For example, in Article IV, regarding specific air quality objectives, the text states that "each Party *shall* [emphasis added] establish specific objectives..."⁹⁴ and the use of "shall" suggests a non-discretionary duty. In fact, the US Supreme Court has held that the use of "shall" in American legislation does indeed indicate that the duty stated is non-discretionary.⁹⁵ As such, a citizen may be able to sue under the AQA to force a government to enforce its own standards. For example, Canada is presently displeased with what it perceives as an American failure to meet its obligations under Article V of the AQA, which maintains that the two countries must notify each other of new sources that may affect transboundary air pollution.⁹⁶ If the AQA could be used in the same manner that the US domestic legislation is used, Canada could sue the US in the US courts for failing to perform a non-discretionary duty; however, there are a variety of uncertainties which

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⁹¹ *Id.* p. 493; also see *Piper Aircraft Co. v. Reno*, 454 US 235 (1981).

⁹² Confidential interview, 3 December 1997.

⁹³ In addition, the close proximity of Canada and the US, as well as the close relationship between Americans and Canadians, not to mention the permeability of the border to information, would prevent any significant halt of the information flow between the two countries.

⁹⁴ AQA Article IV, Sect. 1.

⁹⁵ Keith *Id.* p. 145, referring to *New York v. Thomas* and *Train v. Natural Resources Defense Council*, 421 US 60 (1975). See Chapter 2, note 118 and accompanying text.

⁹⁶ See *Canada-United States Air Quality Agreement Progress Report 1996*. p. 62.

prevent such a suit from occurring. For example, the US courts may interpret treaty texts in a different manner than domestic legislation and, in turn, decide that the country's duties under such treaties and agreements *are* discretionary. More research into these potential suits is necessary before any definitive statement is made about their viability.

As well, at present, such a great step forward in the involvement of third parties in bi-lateral environmental enforcement is in the distant future, but the potential is there. At this time, one can only speculate as to how the governments and courts of each country would respond to such a case. It is likely, given the dynamics of the current legal systems in the two countries, that the US courts would be more open to the filing of such a suit, as the courts are used to addressing cases of non-discretionary duties, whereas the Canadian courts are not accustomed to such cases. However, there is also the potential for limitations of the interpretation of the extent of legal obligations under an agreement like the AQA. As well, Canada and the US may not perceive their duties under the AQA as non-discretionary for national sovereignty reasons. An examination of the international and domestic law involved in the development of such a bi-lateral case is beyond the scope of this paper; however, it will be interesting to note developments in this area in the future.

Despite the problems in the disparity of interpretation of legal principles in the respective courts of Canada and the US, ETL, both statutory and common law, remains a viable option for improvement to the current bi-lateral environmental enforcement regime employed in the implementation of the AQA. Essentially, in order to improve the impact of ETL, the principles involved in environmental litigation must be harmonized in the US and Canadian courts and, as such, there should be a re-examination of the 1979 Draft Treaty and its recommendations. In addition, in the event that the harmonization is accepted, the general population must be educated on the principles and implications of the Treaty.⁹⁷ If the public is unaware of its ability to be involved in enforcement through litigation, the use of ETL as an enforcement tool will remain minimal and its potential will not be realized. Some may claim that this harmonization will infringe upon the sovereignty of Canada and the US; however, as discussed above, the interpretation of the

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⁹⁷ Gallob *Id.* p. 111.

principles is very similar and the harmonization will require minimal changes on both sides of the border.

It may be argued that ETL is as philosophically limited as is the current regime of domestic enforcement, because litigation occurs within the limited framework and perception of the individual states; however, litigation also allows for the involvement of citizens and environmental groups, which may bring different perspectives into the enforcement process. By introducing these different and sometimes radical perspectives, the boundaries of the current bi-lateral enforcement regime may be challenged. Despite its limitations, the benefits which may be realized from the use of ETL in bi-lateral enforcement, specifically through the introduction of third parties into the enforcement process, are great and demand the consideration of ETL as a bi-lateral enforcement tool.

A Bi-lateral Emissions Trading Program

In Chapter 2, the merits of the US emissions trading program were discussed and it was determined that the trading program appears to be a relative success in helping reduce SO₂ emissions of major sources in the US. Perhaps extending that program across the border to create a regional or bi-lateral trading program would help to reduce overall SO₂ and other acid-causing emissions in North America. As well, such a program would also be helpful to the sources that are subject to emissions regulations. However, recall that a successful emissions trading program must be accompanied by a strong supervisory/monitoring body, which is willing to enforce vigorously in the case of noncompliance. In the US, the EPA monitors emissions through continuous emissions monitors (CEMs) and tallies a source's allowances with its actual emissions for the year to ascertain whether the source's emissions have exceeded its permissible level or are greater than the number of allowances that it holds. Thus, the successful implementation of a bi-lateral emissions trading program would require some sort of bi-lateral monitoring and enforcement body, which could be supra-national or intergovernmental. The governments may be less willing to implement a program which relies on a supra-national body, primarily because they would fear the imposition on their national sovereignty – they would utilize the same arguments involved in the rejection of the

general supra-national enforcement body which were discussed above. As such, some sort of intergovernmental cooperation would be necessary for the development of the bi-lateral trading program. Perhaps the governments could monitor the emissions and sources within their borders and then jointly approve cross border trades of emissions; however, then Canada, which has fewer resources to apply to monitoring, would be at a disadvantage. Much of the details of such a program would have to be worked out by the two governments. It is likely that the market portion of the program would run smoothly – it would be the monitoring of emissions and of transborder trades that would be more difficult and require slightly more flexibility in national sovereignty.

One other aspect of the emissions trading program to consider is the necessity for strict emissions caps for SO₂ and other acidifying emissions. As the goal of the program is to encourage sources to decrease their emissions below their permissible level, each source's emissions cap should be reduced after the source has reduced its emissions for a period of time, for example five years. In turn, the overall national or regional emissions levels would be reduced. If the overall level is not reduced, the aggregate amount of pollution will remain the same, defeating the purpose of the program. Such limits and permits would have to be agreed upon by both the US and Canadian governments – a task which would not be simple. In addition, industry may be less welcoming of the program when they realize that the tradable permits and the profit which they accrue from them will decrease over time.

Despite these problems, a bi-lateral emissions trading program should be considered. More research on the implications of such a program for US-Canada relations, as well as on domestic regulation, are needed before any decisions are made; however, the program, in combination with other enforcement mechanisms, like ETL and perhaps domestic enforcement, would significantly help reduce acid-causing emissions in North America. As well, a bi-lateral emissions trading program provides a method of balancing environmental and economic concerns. Because the sources are allowed some latitude in the methods which they employ for emissions reduction, they are able to decrease their emissions in a manner that is most profitable to them. Thus, all of the stakeholders win – the sources continue to profit, the air quality is improved and the

environment protected. The program, although possibly difficult to implement at first, is a step in the right direction for the balancing of economic and environmental concerns and for the improvement of the definition of sustainable development.

Regional Agreements

While regional agreements do not have any specific enforcement value with respect to the AQA, they are important nonetheless within the overall enforcement process. Regional agreements can provide the basic framework of cooperation at the local level which is needed for the implementation of larger, bi-lateral agreements. The Northeast Regional Air Quality Committee (NERAQC), which is the product of a regional agreement between the states of the Northeastern US and provinces of Atlantic Canada, was created to "...preserve and enhance air quality and the air quality related values of protected and other areas of the Northeast United States and Atlantic Canada."⁹⁸ NERAQC is primarily involved in studying and monitoring air quality in the Northeastern US and Eastern Canada – it does not engage in any type of enforcement activity; however, the lack of enforcement mechanisms in the regional agreement does not make it any less valuable. NERAQC's value, as well as the value of other potential regional agreements, lies in the monitoring information that the regions provide, as well as the cooperative base which they afford for other, broader agreements. Without the cooperation of the provinces, states, and regions, any larger enforcement approach will be very difficult to implement – recall how important the provinces are in the Canadian enforcement approach and how in the US, each state develops its own SIP.⁹⁹ If we are to expand the horizons of the current bi-lateral enforcement perspectives and frameworks, we must not ignore the progress made by the localities and regions. As we have seen with the transborder litigation regarding Section 115 in the 1980s, states and provinces are often the first to voice concern about environmental issues, including transboundary air pollution. Much can be learned from their individual experiences and from the

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⁹⁸ *Northeast Regional Air Quality Committee Background Report. Project No. 11205.* 23 December 1996, p. 1.

⁹⁹ See Chapter 2.

information and data which they have gathered. This is not to say that the states and provinces are always champions for the environment – often times, the state or province is more concerned with the exploitation of the resources within its borders for the improvement of its economic situation than with environmental protection. As well, those states which are the primary sources of acid-causing emissions are generally not involved in the regional environmental agreements. Despite this lack of involvement of source states and provinces, affected regions can provide important information regarding emissions and monitoring of acid-causing emissions.

Thus, while regional agreements do not provide an alternative enforcement mechanism, it is important to continue to foster these types of agreements so that bi-lateral enforcement can be successful. States, provinces, and regions have the potential to play important supplemental roles in a bi-lateral enforcement program through their provision of information and their establishment of avenues for cooperation and information exchange between Canada and the US. In addition, the involvement of affected regions ascertains that the voice of the environment and of victims of acid rain is heard in the enforcement process. Essentially, cooperation and information exchange between all actors involved in the acid rain/transboundary air pollution problem, is vital to the success of any monitoring and enforcement program. The networks which the regional agreements establish for this information exchange are important and should not be ignored when considering a broader bi-lateral enforcement approach. Cooperation and enforcement of air quality regulations should be encouraged at all levels from the smallest locality to the bi-lateral stage.

Recommendations

As mentioned at the beginning of this chapter, despite their potential for improvement, each of the alternative enforcement options discussed above is somewhat restricted by the boundaries of the existing bi-lateral environmental enforcement framework – sovereignty is the primary limitation; however, this should not preclude consideration of some of the options as viable alternatives to the current self-enforcement approach that is utilized in the AQA. It must be understood that immediate action to

improve bi-lateral enforcement is constrained within these boundaries of the current framework – drastic changes in the framework are not possible, because they would require radical alterations of perceptions that are rooted in tradition and in the fundamental values of people within states. Hence, incremental improvements to the bi-lateral enforcement framework must be made through the gradual implementation of alternatives, which, although they are constrained within the same framework, push its boundaries slightly and challenge the current perspective of enforcement in the bi-lateral arena.

As such, any recommendations for improvement in bi-lateral enforcement must begin with the current self-enforcement/domestic enforcement approach. As it is the basis of the current bi-lateral enforcement regime, it should remain in place, but improvements to it should be made. As well, it should be supplemented with a combination of some of the enforcement alternatives discussed above, which will broaden the perspective of enforcement in that they will introduce new, non-state actors into the bi-lateral enforcement process. Hence, prior to the implementation of any enforcement alternatives or supplements, Canada and the US should take steps to improve the accuracy and efficiency of their domestic monitoring and enforcement procedures. These improvements could eliminate some of the problems which arise in domestic enforcement in both countries and which affect bi-lateral enforcement and implementation of the AQA. Then, domestic enforcement should be supplemented with a combination of extra-territorial litigation and a bi-lateral emissions trading program. As well, although regional agreements are not an enforcement alternative per se, they should continue to be encouraged to provide the local, cooperative base for these broader, bi-lateral enforcement mechanisms.

ETL will introduce third parties into the bi-lateral enforcement regime, opening the currently closed relationship between states. It is hoped that this third party involvement would reduce the accommodation of state noncompliance with the AQA, as well as foster a better understanding of the cross-border nature of the air quality problem and its possible solutions. Although the wide use of ETL in the Canada-US context requires some harmonization of the interpretation of procedural legal principles by the

Canadian and American courts, the option would be an excellent supplement to current reliance on domestic enforcement. As was discussed in detail above, the interpretation of the principles in the courts of the two countries is very similar and, as such, a harmonization will not greatly impose on the national sovereignty of either Canada or the US. Indeed, the overall benefits to the regional environment will outweigh any short-term concerns.

The bi-lateral emissions trading program, although also a viable option and promising supplement, requires greater change in the perspective of bi-lateral enforcement and perhaps a larger imposition on the sovereignty of the two countries. Canada and the US may perhaps first consider the implementation of such a program in a particular region, for example, in the Midwestern US –Southern Ontario region. This regional program would demonstrate the potential success, as well as the potential problems, of implementing a cross-border emissions trading program. A bi-lateral emissions trading program would have the benefit of combining the enforcement forces of Canada and the US to solve the regional air quality problem; that is, it would reduce the overlap of enforcement responsibilities in the implementation of the AQA and would free resources in the two countries to be used for monitoring and other enforcement activities. As well, the program may also compel the two countries to harmonize their emissions standards – if the sources in the two countries are to trade emissions allowances, they must be held to the same, or very similar emissions standards. In turn, bi-lateral enforcement will become more equitable and the regional environment will be better protected.

This proposed bi-lateral environmental enforcement regime will involve most, if not all, of the parties interested in or affected by air quality – the federal governments of Canada and the US, the states, provinces, regions, citizens, environmental groups, and the emission sources themselves. As such, it will broaden the current perspective of bi-lateral enforcement as an activity in which only states may participate and, in doing so, will strengthen the implementation and enforcement of the AQA. Indeed, if one examines the new bi-lateral enforcement regime with respect to the enforcement models presented in Chapter 1, one will discover that the regime falls almost directly in the

middle of the continuum, as it is a balance of cooperative and adversarial enforcement mechanisms. See Figure 4.1. It is hoped that the proposed regime will also set a precedent for improvement to bi-lateral environmental enforcement in general, upon which future progress in bi-lateral enforcement may be made, which leads to the better protection of the environment. Some final comments on enforcement, both in the domestic and bi-lateral spheres, will be included in the Summary and Conclusion which follows this chapter.

Figure 4.1 Enforcement Continuum

Table 4.1
Enforcement Alternatives¹

Enforcement Alternative	Primary Advantages	Primary Disadvantages	Limiting Philosophical/Political Frameworks	Viability as Enforcement Alternative
Domestic Enforcement	◆ addresses enforce. problems specific to country ◆ fits within political structure of country	◆ ignores regional affects of enforcement or lack of enforce. ◆ biased by domestic concerns	◆ perception of the current state entity ◆ domestic perception of bi-lateral/intn'l arena	◆ not viable alone; must be supplemented by other enforce. options
Supra-National Entity (SNE)	◆ can diminish domestic bias in enforcement	◆ countries unlikely to give enforcement power over domestic affairs to non-state entity	◆ requires primary state action ◆ sovereignty	◆ not viable within current framework

¹ This table is not meant to be a comprehensive list of enforcement alternatives, but rather provides a quick précis of the issues that are discussed within Chapter 4.

<i>Enforcement Alternative</i>	<i>Primary Advantages</i>	<i>Primary Disadvantages</i>	<i>Limiting Philosophical/ Political Frameworks</i>	<i>Viability as Enforcement Alternative</i>
International Court for the Environment (ICE)	♦ allows individuals to sue in intn'l arena ♦ counters problem incorrect application of intn'l law by domestic courts	♦ countries unlikely to give enforcement power over domestic affairs to non-state entity ♦ states must consent to be sued ♦ cannot enforce rulings	♦ requires primary state action ♦ sovereignty	♦ not viable within current framework
Enforcement by Non-governmental Organizations (NGOs)	♦ can diminish bias in domestic enforcement	♦ countries unlikely to give enforcement power over domestic affairs to non-state entity	♦ requires primary state action ♦ sovereignty	♦ not viable within current framework
Extra-territorial Litigation (ETL)	♦ allows new perspectives to be brought to enforce, through involvement of third parties	♦ legal procedures and principles differ slightly between Canada & US	♦ requires primary state action ♦ domestic legal systems ♦ sovereignty	♦ viable, but must be used in combination with other enforcement options

<i>Enforcement Alternative</i>	<i>Primary Advantages</i>	<i>Primary Disadvantages</i>	<i>Limiting Philosophical/ Political Frameworks</i>	<i>Viability as Enforcement Alternative</i>
Bi-lateral Emissions Trading Program	♦ voluntary emission reduction by sources – less expenditure of resources	♦ requires strong monitoring and enforcement body for secondary enforcement ♦ requires continued action by state to reduce permissible limits	♦ requires primary state action ♦ sovereignty ♦ economic/market framework	♦ viable, but must be used in combination with other enforcement options
Regional/ State-Provincial Agreements	♦ open information channels between Can. and US ♦ assure local participation in enforce.	♦ do not provide for enforcement per se	♦ requires primary state action ♦ perception of state entities	♦ not viable as an alternative, but necessary for the success of other alternatives

Summary and Conclusions

The preceding analysis of enforcement within the Canada-US air quality context has demonstrated that the reliance on domestic enforcement regimes for the implementation of bi-lateral environmental agreements does not assure successful implementation of the agreements or ascertain sufficient protection of the regional environment. The effectiveness of domestic enforcement is limited by the political systems within which the domestic enforcement regimes are developed. The political systems, particularly the differences in the political institutions, political culture, and government structure in each system, lead to differences in the enforcement regimes, which can result in inequality in the enforcement of bi-lateral standards. In turn, this inequality, or perception thereof, can lead to conflict between the two countries and result in the demise of the bi-lateral agreement. Thus, the use of the self-enforcement/domestic enforcement approach for the implementation of bi-lateral environmental agreements cannot assure significant protection of the regional environment and, as such, must be supplemented with other forms of bi-lateral enforcement. This determination was made through an analysis of both domestic and bi-lateral enforcement regimes in the Canada-US air quality context.

Analytical Development

The analysis of the Canada-US air quality issue began with a general discussion of enforcement theory. In Chapter 1, various concepts regarding regulation and enforcement were introduced, which were incorporated into a new theoretical framework. This framework – the enforcement continuum – was established specifically to provide a basis for the analysis of domestic and bi-lateral enforcement in the case of Canada-US air quality/Air Quality Agreement (AQA) issues. The advantages and disadvantages of each of the models were briefly discussed and provided the basis for

later analysis of effective enforcement regimes in Canada and the US, and at the bi-lateral level.¹

In Chapter 2, Canadian and American legislation and enforcement procedures regarding air quality were considered and a picture of the Canadian and American enforcement regimes was developed through an examination of the actors, tactics, and instruments involved in enforcement in each country. As well, the regimes were compared to the cooperative and adversarial models of enforcement which were presented in Chapter 1. It was determined that while the Canadian enforcement regime falls close to the cooperative model, it has certain attributes, namely the occasional use of sanctions and coercive tactics, that distinguish it from the cooperative model and, as such, it falls slightly short of the cooperative end of the enforcement continuum. The American enforcement regime is far more adversarial in its characteristics than the Canadian approach; however, it too falls short of the adversarial model, due to its incorporation of cooperative instruments and programs like the emissions trading program. Also included in the chapter is an examination of the origins of the differences in the Canadian and American approaches to air quality enforcement. It is determined that differences in the political systems in Canada and the US – in the political institutions, political culture, and government structure – affect the development of the enforcement regimes in the two countries.

The analysis then turned to the examination of the 1991 AQA and its enforcement mechanisms – Chapter 3 contained both a historical and textual analysis of the AQA. Through this examination, it was determined that the AQA, although touted as a great improvement in Canada-US air quality relations, is in fact little more than a reiteration of existing domestic standards and enforcement mechanisms, as well as previously established methods of dispute resolution. The Agreement relies on the domestic air quality enforcement regimes of Canada and the US for its implementation and enforcement, essentially establishing a bi-lateral *self-enforcement* regime, which is an ultra-cooperative form of enforcement.² The deficiencies of the agreement in terms of

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¹ See discussion below regarding themes.

² See Fig. 3.1 in Chapter 3.

self-enforcement, the reliance on domestic enforcement regimes for implementation and enforcement, and the dispute resolution mechanisms were then analyzed, and it was determined that the AQA's enforcement regime is weak at best. The implications of these weaknesses for the future of the AQA and of Canada-US environmental relations in general were also considered and the need for the consideration of other forms of bi-lateral enforcement mechanisms was introduced.

Chapter 4 began with an examination of the restrictions that are placed on bi-lateral enforcement regimes in the framework of international relations, and national sovereignty was targeted as the primary limiting factor in the development of a strong bi-lateral environmental enforcement program; however, it was suggested that these limitations may be overcome through incremental changes which may be introduced through bi-lateral enforcement alternatives. Various enforcement alternatives were examined, although some were considered nonviable options as they would require significant changes in the current bi-lateral environmental enforcement regime and the current perception of national sovereignty. A new bi-lateral enforcement regime, which involves the combination of domestic enforcement with some of the viable enforcement options which were examined in the chapter as presented. It was determined that domestic enforcement should be supplemented with third party involvement in bi-lateral enforcement through extra-territorial litigation (ETL) and that a bi-lateral emissions trading program should be implemented to allow for the market forces to help in the curbing of transboundary air pollution. As well, the importance of state and provincial involvement in enforcement through regional and state-provincial agreements was stressed. These supplemental enforcement mechanisms would introduce new perspectives into the bi-lateral enforcement regime, making enforcement not only the responsibility of government, but of other interested parties as well. In addition, the supplements would gradually broaden the current perspective of national sovereignty and diminish its power as a limiting factor on bi-lateral enforcement in the future. As such, it was determined that the AQA bi-lateral enforcement regime can be improved by the introduction of new enforcement mechanisms, which will provide for better implementation of the agreement and better protection of the regional environment.

Themes

Throughout the paper and the analysis of the Canada-US air quality issue, there are certain themes and recurrent ideas that are important to highlight. One of the most important concepts introduced and utilized in the analysis is third party involvement in enforcement, which was first introduced in Chapter 1 as an element of more adversarial enforcement regimes. Although the general benefits of third party participation in enforcement were considered only briefly at the end of Chapter 1, the concept was further explored in Chapter 2 in the discussion of the US environmental/air quality enforcement regime and in the consideration of the institutional and structural origins of third party involvement in enforcement. The specific advantages of citizen participation in enforcement were examined in the discussion of the implications of the use of domestic enforcement regimes in bi-lateral enforcement, included in Chapter 3. There, the benefits of third party enforcement were highlighted through a comparison of the problems and implications of the individual Canadian and American enforcement regimes. One of the Canadian regime's primary weaknesses was determined to be the minimal involvement of citizens and environmental groups in enforcement of environmental regulations, as the exclusion of third parties from enforcement activities generally perpetuates the closed relationship between enforcement officials and pollution sources, which, in turn, allows for the accommodation of source noncompliance. In the bi-lateral realm, the absence of third party involvement leads to a similar closed relationship between states, which can result in accommodation of state noncompliance with its obligations under bi-lateral environmental agreements. As such, the recommendation for strengthening bi-lateral enforcement in the Canada-US air quality context includes a provision for third party involvement in enforcement through ETL.

Involvement of citizens and environmental groups in enforcement, both domestic and bi-lateral, is vital to the success of implementation and enforcement of environmental regulations, because third parties are able to play a role in keeping both the pollution sources and government enforcement agencies accountable for their action *and* their inaction. Involvement also gives those who are directly affected by the

pollution and by the enforcement, or lack thereof, a voice in the enforcement process. Unless these voices are heard, the effects of pollution, and indeed enforcement, are vague and distant – neither the pollution sources nor the enforcement agency perceives the actual affects on individuals and local environments, because, particularly in the case of long-range transport of air pollutants, the sources and enforcement agencies are usually geographically distant from the actual areas affected by the pollution. This is true at both the domestic and bi-lateral levels. As well, as mentioned above and in Chapter 4, third parties bring new perspectives to enforcement which broaden the perception of traditional bi-lateral enforcement and help move it past the boundaries of the current bi-lateral environmental enforcement and international relations frameworks. Through third party involvement in enforcement, the entire concept of enforcement will be expanded to allow for better protection of the environment.

This discussion of third party involvement in enforcement introduces two other major themes within the overall analysis of the Canada-US air quality issue – the link between domestic and bi-lateral enforcement and the importance of improving the existing system to ascertain protection of the environment. The link between domestic and bi-lateral enforcement may be perceived in the analytical structure of the paper itself – beginning with the discussion of the domestic enforcement regimes and proceeding to the analysis of the defects of the AQA enforcement regime and their link to the reliance on domestic enforcement for bi-lateral implementation. Throughout the paper, but especially in Chapter 3, one can see the close connection between the bi-lateral and domestic regimes. Although in most cases of transboundary pollution, the domestic standards and enforcement are closely related to the bi-lateral problem and its solution, the connection between domestic and bi-lateral is especially strong in the case of long-range transport of air pollutants because of the nature of the problem – emissions from the sources of one country affect the environment in another.³ As such, in Chapter 3, the consideration of the implications of the domestic enforcement regimes, both domestically and bi-laterally, is important not only to the understanding of the bi-lateral enforcement of the AQA, but also for the potential understanding of the implementation

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³ See discussion of acid rain in the Introduction.

of other bi-lateral environmental agreements. A comprehension of the connection between domestic standards and enforcement and the bi-lateral enforcement regime is vital, because the grasp of this knowledge will allow for the improvement of current agreements and improvement in the establishment of frameworks for future agreements.

The need to improve current enforcement approaches is a theme which may also be perceived throughout the overall analysis, as it is closely related to the connection between domestic and bi-lateral, as well as to third party involvement in the enforcement process. This theme is introduced indirectly through the discussion of the advantages and disadvantages of the model enforcement regimes in Chapter 1, and it is developed further through the examination of the problems and implications of the bi-lateral use of the Canadian and American enforcement regimes included in Chapter 3. Finally, in Chapter 4, the improvements are considered directly in the examination of enforcement alternatives. Behind this theme is an attempt to reconcile the limitations of the current bi-lateral environmental enforcement framework with the desire to strive for an ideal of domestic and bi-lateral environmental enforcement – in the context of Canada-US air quality, this ideal is the implementation of standards and the use of enforcement mechanisms which will lead to a reduction of SO₂ and other acid-causing emissions to such a point that they no longer threaten the health of Americans, Canadians, or the North American environment. Reconciliation of the real and ideal is attempted in Chapter 4, where the limitations of the current system are recognized, but enforcement alternatives are introduced to gradually diminish those limitations on enforcement. Third party involvement in enforcement, both domestically and bi-laterally, as well as the involvement of state-provincial regions and of market forces, are perceived as important steps in improving the current bi-lateral enforcement regime. Thus, the recommendations for improvement to the bi-lateral enforcement regime link the three themes of third party involvement, the connection between domestic and bi-lateral, and the improvement of existing enforcement systems.

Limitations

It should be noted that there are certain limitations to the conclusions drawn from the analysis of the Canada-US air quality issue and to the applications of the general thesis of this paper to other bi-lateral and multi-lateral cases. Most importantly, the analysis included in the preceding chapters applies specifically to the Canada-US air quality context and, as has been noted in the analysis, air quality as an environmental issue and within the context of Canada-US relations is unique. The long-range transport of air pollutants is slightly more complicated than other transborder environmental problems, because air pollutants tend to disperse quickly in the atmosphere and are carried long distances. This makes the tracing of certain pollutants to specific sources difficult and, in turn, complicates enforcement of domestic and bi-lateral air quality regulations. As well, the Canada-US relationship is unlike that of most other bordering nations, as the two countries share such a long, highly permeable border, as well as very similar cultures. This closeness in geographical location and culture allows for a cooperation and informal information exchange which may not be possible in other regions. As such, the problems and solutions discussed are, in a way, limited to this specific context of air quality in Canada-US relations.

In addition, this analysis examines the bi-lateral relationship between two democracies. Bi-lateral and domestic enforcement of environmental regulations in the context of a relationship between two dictatorial or totalitarian states, or one democracy and one dictatorship would be different. For example, the involvement of third parties in the enforcement processes within or between two totalitarian states would be significantly limited, if it existed at all, making the recommendation of increasing third party involvement less viable in that particular situation. As such, the application of this analysis is limited to relations between relatively democratic states which allow for some form of citizen involvement and government accountability to its citizens. This is not to say that the conclusion regarding the necessity of third party involvement in enforcement is only true in democratic societies; on the contrary, the objectivity and new perspectives which third party enforcement brings to the enforcement process is necessary in *all*

environmental enforcement regimes. The problem with involvement in a totalitarian regime or dictatorship is that the political structure would have to be altered significantly to allow for input by third parties – other options for the improvement of bi-lateral enforcement may be more viable.

These limitations in no way diminish the importance of the conclusions drawn from the analysis of the Canada-US air quality issue, but are included to inform the reader of the constraints of the framework in which this paper was developed. The overall conclusion that a cooperative self-enforcement regime employed at the bi-lateral level is insufficient to protect the regional environment, may be applied not only to the Canada-US environmental relations context, but to other bi-lateral and multi-lateral environmental enforcement situations. It has been demonstrated that although this reliance on self-enforcement is endemic to agreements established in the current international relations framework, these limitations may be overcome by the introduction of a new bi-lateral enforcement regime which incorporates regions, third parties and market forces. In the context of the AQA and Canada-US air quality relations, this improvement of bi-lateral enforcement will strengthen the AQA, leading to the improvement of air quality in the regional environment. As well, understanding the domestic enforcement regimes and their relationship to bi-lateral enforcement of environmental agreements will lead to improvement in the enforcement of current environmental agreements between Canada and the US, and result in the establishment of stronger environmental agreements in the future, which better protect the regional Canada-US environment. In turn, if this analysis is applied to environmental issues in other regions, and similar improvements in the enforcement of bi-lateral and multi-lateral agreements are made, environmental protection in the regions, and ultimately on a global scale, will be enhanced. Thus, bi-lateral and multi-lateral environmental agreements will become more than simple self-enforcing commitments to environmental protection – they will be tools that assure environmental protection through the involvement of state and sub-state governments, industry, affected regions, environmental groups and individual citizens.

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Appendix A The 1991 Canada-United States Air Quality Agreement

The Government of Canada and the Government of the United States of America, hereinafter referred to as 'the parties'.

Convinced that transboundary air pollution can cause significant harm to natural resources of vital environmental, cultural and economic importance, and to human health in both countries;

Desiring that emissions of air pollutants from sources within their countries not result in significant transboundary air pollution;

Convinced that transboundary air pollution can effectively be reduced through cooperative or coordinated action providing for controlling emissions of air pollution and the improved air quality that has resulted from such efforts in both countries;

Recalling the efforts they have made to control air pollution and the improved air quality that has resulted from such efforts in both countries;

Intending to address air-related issues of a global nature, such as climate change and stratospheric ozone depletion, in other fora;

Reaffirming Principle 21 of the Stockholm Declaration, which provides that States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdictions;

Noting their tradition of environmental cooperation as reflected in the Boundary Waters Treaty of 1909, the Trail Smelter Arbitration of 1941, the Great Lakes Water Quality Agreement of 1978, as amended, the Memorandum of Intent Concerning Transboundary Air Pollution of 1980, the 1986 Joint Report of the Special Envoys on Acid Rain, as well as the ECE Convention on Long-Range Transboundary Air Pollution of 1979;

Convinced that a healthy environment is essential to assure the well-being of present and future generations in Canada and the United States, as well as of the global community;

Have agreed as follows:

Article I

Definitions

For the purposes of this Agreement:

1. Air pollution means the introduction by man, directly or indirectly, of substances into the air resulting in deleterious effects of such a nature as to endanger human health, harm living resources and ecosystems and material property and impair or interfere with amenities and other legitimate uses of the environment, and air pollutants shall be construed accordingly;
2. Transboundary air pollution means air pollution whose physical origin is situated wholly or in part within the area under the jurisdiction of one Party and which has adverse effects, other than effects of a global nature, in the area under the jurisdiction of the other Party;
3. Boundary Waters Treaty means the Treaty Relating to Boundary Waters and Questions Arising along the Boundary between Canada and the United States, signed at Washington on January 11, 1909;
4. International Joint Commission means the International Joint Commission established by the Boundary Waters Treaty.

Article II

Purpose

The purpose of the Parties is to establish, by this Agreement, a practical and effective instrument to address shared concerns regarding transboundary air pollution.

Article III

General Air Quality Objective

1. The general objective of the Parties is to control transboundary air pollution between the two countries.
2. To this end, the Parties shall:
  - a) in accordance with Article IV, establish specific objectives for emissions limitations reductions of air pollutants and adopt the necessary programs and other measures to implement such specific objectives.

- b) in accordance with Article V, undertake environmental impact assessment, prior notification, and, as appropriate, mitigation measures;
- c) carry out coordinated or cooperative scientific and technical activities, and economic research, in accordance with Article VI, and exchange information, in accordance with Article VII;
- d) establish institutional arrangements, in accordance with Articles VIII and IX; and
- e) review and assess progress, consult, address issues of concern, and settle disputes, in accordance with Articles X, XI, XII and XIII.

Article IV

Specific Air Quality Objectives

1. Each Party shall establish specific objectives, which it undertakes to achieve, for emissions limitations or reductions of such air pollutants as the Parties agree to address. Such specific objectives will be set forth in annexes to this Agreement.
2. Each Party's specific objectives for emissions limitations or reductions of sulphur dioxide and nitrogen oxides, which will reduce transboundary flows of these acidic deposition precursors, are set forth in Annex 1. Specific objectives for such other air pollutants as the Parties agree to address should take into account, as appropriate, the activities undertaken pursuant to Article VI.
3. Each Party shall adopt the programs and other measures necessary to implement its specific objectives set forth in any annexes.
4. If either Party has concerns about the programs or other measures of the other Party referred to in paragraph 3, it may request consultations in accordance with Article XI.

Article V

Assessment, Notification, and Mitigation

1. Each Party shall, as appropriate and as required by its laws, regulations and policies, assess those proposed actions, activities and projects within the area under its jurisdiction that, if carried out, would be likely to cause significant transboundary air pollution, including consideration of appropriate mitigation measures.
2. Each Party shall notify the other Party concerning a proposed action, activity or project subject to assessment under paragraph 1 as early as

practicable in advance of a decision concerning such action, activity or project and shall consult with the other Party at its request in accordance with Article XI.

3. In addition, each Party shall, at the request of the other Party, consult in accordance with Article XI concerning any continuing actions, activities or projects that may be causing significant transboundary air pollution, as well as concerning changes to its laws, regulations or policies that, if carried out, would be likely to affect significantly transboundary air pollution.

4. Consultations pursuant to paragraphs 2 and 3 concerning actions, activities or projects that would be likely to cause or may be causing significant transboundary air pollution.

5. Each Party shall, as appropriate, take measures to avoid or mitigate the potential risk posed by actions, activities or projects that would be likely to cause or may be causing significant transboundary air pollution.

6. If either Party becomes aware of an air pollution problem that is of joint concern and requires an immediate response, it shall notify and consult the other Party forthwith.

Article VI

Scientific and Technical Activities and Economic Research

1. The Parties shall carry out scientific and technical activities, and economic research, as set forth in Annex 2, in order to improve their understanding of transboundary air pollution concerns and to increase their capability to control such pollution.

2. In implementing this Article, the Parties may seek the advice of the International Joint Commission regarding the conduct of monitoring activities.

Article VII

Exchange of Information

1. The Parties agree to exchange, on a regular basis and through the Air Quality Committee established under Article VIII, information on:

- (a) monitoring;
- (b) emissions;

- (c) technologies, measures and mechanisms for controlling emissions;
  - (d) atmospheric processes; and
  - (e) effects of air pollutants,
- as provided in Annex 2.

2. Notwithstanding any other provisions of this Agreement, the Air Quality Committee and the International Joint Commission shall not release, without the consent of the owner, any information identified to them as proprietary information under the laws of the place where such information has been acquired.

Article VIII

The Air Quality Committee

1. The Parties agree to establish and maintain a bilateral Air Quality Committee to assist in the implementation of this Agreement. The Committee shall be composed of an equal number of members representing each Party. It may be supported by subcommittees, as appropriate.
2. The Committees responsibilities shall include:
  - a) reviewing progress made in the implementation of this Agreement, including its general and specific objectives;
  - b) preparing and submitting to the Parties a progress report within a year after entry into force of this Agreement and at least every two years thereafter;
  - c) referring each progress report to the International Joint Commission for action in accordance with Article IX of this Agreement; and
  - d) releasing each progress report to the public after its submission to the Parties.
3. The Committee shall meet at least once a year and additionally at the request of either Party.

Article IX

Responsibilities of the International Joint Commission

2. The International Joint Commission is hereby given, by a Reference pursuant to Article IX of the Boundary Waters Treaty, the following responsibilities for the sole purpose of assisting the Parties in the implementation of this Agreement.

a) to invite comments, including through public hearings as appropriate, on each progress report prepared by the Air Quality Committee pursuant to Article VIII;

b) to submit to the Parties a synthesis of the views presented pursuant to sub-paragraph (a), as well as the record of such views if either Party so requests; and

c) to release the synthesis of views to the public after its submission to the Parties.

2. In addition, the Parties shall consider such other joint references to the International Joint Commission as may be appropriate for the effective implementation of this Agreement.

Article X

Review and Assessment

1. Following the receipt of each progress report submitted to them by the Air Quality Committee in accordance with Article VIII and the views presented to the International Joint Commission on that report in accordance with Article IX, the Parties shall consult on the contents of the progress report, including any recommendations therein.

2. The Parties shall conduct a comprehensive review and assessment of this Agreement, and its implementation, during the fifth year after its entry into force and every five years thereafter, unless otherwise agreed.

3. Following the consultations referred to in paragraph 1, as well as the review and assessment referred to in paragraph 2, the Parties shall consider such action as may be appropriate, including:

(a) the modification of this Agreement;

(b) The modification of existing policies, programs or measures.

Article XI

Consultations

The Parties shall consult, at the request of either Party, on any matter within the scope of this Agreement. Such consultations shall commence as soon as practicable, but in any event not later than thirty days from the date of receipt of the request for consultations, unless otherwise agreed by the Parties.

Article XII

Referrals

With respect to cases other than those subject to Article XIII, if, after consultations in accordance with Article XI, an issue remains concerning a proposed or continuing action, activity, or project that is causing or would be likely to cause significant transboundary air pollution, the Parties shall refer the matter to an appropriate third party in accordance with agreed terms of reference.

Article XIII

Settlement of Disputes

1. If, after consultations in accordance with Article X(, a dispute remains between the Parties over the interpretation or the implementation of this Agreement, they shall seek to resolve such dispute by negotiations between them. Such negotiations shall commence as soon as practicable, but in any event not later than ninety days from the date of receipt of the request for negotiation, unless otherwise agreed by the Parties.
2. If a dispute is not resolved through negotiation, the Parties shall consider whether to submit that dispute to the International Joint Commission in accordance with either Article IX or Article X of the Boundary Waters Treaty. If, after such consideration, the Parties do not elect either of those options, they shall, at the request of either Party, submit the dispute to another agreed form of dispute resolution.

Article XIV

Implementation

1. The obligations undertaken under this Agreement shall be subject to the availability of appropriated funds in accordance with the respective constitutional procedures of the Parties.
2. The Parties shall seek:
  - a) the appropriation of funds required to implement this Agreement;
  - b) the enactment of any additional legislation that may be necessary to implement this Agreement;
  - c) the cooperation of Provincial and State Governments as necessary to implement this Agreement.

3. In implementing this Agreement, the Parties shall, as appropriate, consult with Provincial or State Governments, interested organizations, and the public.

Article XV

Existing Rights and Obligations

Nothing in this Agreement shall be deemed to diminish the rights and obligations of the Parties in other international agreements between them, including those contained in the Boundary Waters Treaty and the Great Lakes Water Quality Agreement of 1978, as amended.

Article XVI

Entry into Force, Amendment Termination

1. This Agreement, including Annexes 1 and 2, shall enter into force upon signature by the Parties.
2. This Agreement may be amended at any time by agreement of the Parties in writing.
3. Either Party may terminate this Agreement upon one year's written notice to the other Party, in which case any annexes will also terminate.
4. Annexes constitute an integral part of this Agreement, except that, if an annex so provides, either Party may terminate such annex in accordance with the terms of that annex.

ANNEX 1

SPECIFIC OBJECTIVES CONCERNING SULPHUR DIOXIDE AND NITROGEN OXIDES

1. Sulphur Dioxide

A. For the United States:¹

1. Reduction of annual sulphur dioxide emissions by approximately 10 million tons² from 1980 levels in accordance with Title IV of the Clean

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¹ Applies only to reductions in emissions in the forty-eight contiguous States and the District of Columbia.

² 1 ton = 0.91 tonnes (metric tons).

Air Act³ i.e., reduction of annual sulphur dioxide emissions to approximately 10 million tons below 1980 levels by 2000 (with the exception of sources repowering with qualifying clean coal technology in accordance with section 409 of the Clean Air Act, and sources receiving bonus allowances in accordance with section 405 (a)(2) and (3) of the Clean Air Act).

2. Achievement of a permanent national emission cap of 8,95 million tons of sulphur dioxide per year for electric utilities by 2010, to the extent required by the Title IV of the Clean Air Act.

3. Promulgation of new or revised standards or such other action under the Clean Air Act as the Administrator of the U.S. Environmental Protection Agency (EPA) deems appropriate, to the extent required by section 406 of the Clean Air Act

Amendments of 1990 (P.L. 101-549), aimed at limiting sulphur dioxide emissions from industrial sources in the event that the Administrator of EPA determines that annual sulphur dioxide emissions from industrial sources may reasonable be expected to exceed 5.6 million tons.

B. For Canada:

1. Reduction of sulphur dioxide emissions in the seven easternmost Provinces to 2.3 million tonnes per year by 1994 and the achievement of a cap on sulphur dioxide emissions in the seven easternmost Provinces at 2.3 million tonnes per year from 1995 through December 31, 1999.

2. Achievement of a permanent national emissions cap of 3.2 million tonnes per year by 2000.

2. Nitrogen Oxides

A. For the United States:⁴

With a view to a reduction of total annual emissions of nitrogen oxides by approximately 2 million tons from 1980 emission levels by 2000:

1. Stationary Sources

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³ All references to the Clean Air Act refer to the Act as amended November 15, 1990.

⁴ Applies only to reductions in emissions in the forty-eight contiguous States and the District of Columbia.

Implementation of the following nitrogen oxides control program for electric utility boilers to the extent required by Title IV of the Clean Air Act:

(a) By January 1, 1995, tangentially fired boilers must meet an allowable emission rate of 0.45 lb/mmBtu and dry bottom wall-fired boilers must meet an allowable emission rate of 0.50 lb/mmBtu (unless the Administrator of EPA determines that these rates cannot be achieved using low NO_x burner technology).

(b) By January 1, 1997, EPA must set allowable emission limitations for:

- wet bottom wall-fired boilers;
- cyclones;
- units applying cell burner technology; and
- all other types of utility boilers.

2. Mobile Sources

Implementation of the following mobile source nitrogen oxides control program to the extent required by Title II of the Clean Air Act:

(a) Light Duty Trucks (LDT) (up to 6000 lbs gross vehicle weight rating (GVWR)) and Light Duty Vehicles (LDV) - standards for model years after 1993:

	5 yrs/50,000 miles(useful life)	10 yrs/100,000 miles
LDTs (0 to 3750 lbs) Loaded Vehicle Weight (LVW)) and LDVs)	0.4 grams per mile (gpm)	0.6 gpm
Diesel LDTs (0 to 3750 lbs LVW) and LDVs (before 2004)	1.0 gpm	1.25 gpm
LDTs (3751 to 5750 lbs LVW)	0.7 gpm ⁵	0.97 gpm

In model year 1994, 40% of each manufacturer's sales volume must meet the above standards. In 1995, the percentage shall increase to 80% and, after 1995, to 100%.

⁵ This standard does not apply to diesel-fuelled LDTs (3751 to 5750 lbs LVW).

(b) Light Duty Trucks more than 6000 lbs GVWR (after model year 1995):

	Gasoline 5 yrs/50,000 miles	Gasoline and Diesel 11 yrs/120,000 miles
LDTs (3751 to 5750 lbs Test Weight (TW))	0.7 gpm	0.98 gpm
LDTs (over 5750 lbs TW)	1.1 gpm	1.53 gpm

In model year 1996, 50% of each manufacturer's sales volume must meet the above standards. Thereafter, 100% of each manufacturer's sales volume must meet the standard.

(c) Heavy Duty Trucks (HDT) of more than 8500 lbs GVWR (after model year 1990):

	Gasoline and Diesel Engines
HDT (effective model year 1991)	5.0 grams per brake horsepower-hour ⁶ (gbhp-hr)
HDT (model year 1998 and later)	4.0 gbhp-hr

Useful life:⁶

Gasoline Engine	8 years/110,000 miles
Diesel engines	
light heavy-duty:	8 yrs/110,000 miles
medium heavy-duty:	8 yrs/185,000 miles
heavy heavy-duty	8 yrs/290,000 miles

B. For Canada:

1. Stationary Sources

(a) As an interim requirement, reduction, by 2000, of annual national emissions of nitrogen oxides from stationary sources by 100,000 tonnes below the year 2000 forecast level of 970,000 tonnes.

(b) By January 1, 1995, development of further annual national emission reduction requirements from stationary sources to be achieved by 2000 and/or 2005.

⁶ As set forth in EPA regulations in effect as of the entry into force of this Agreement.

2. Mobile Sources

(a) Implementation of a more stringent mobile source nitrogen oxides control program for gasoline powered vehicles with standards no less stringent than the following:

Light Duty Vehicles (up to 6000 lbs GVWR)

(By model year 1996 for passenger cars)

(By model year 1996 for light duty trucks⁷):

	5 yrs/80,000 Kilometres (useful life)
Cars and Light Duty Trucks (0 to 3750 lbs LAW)	0.4 gpm
Light Duty Trucks (3751 to 5750 lbs LVW)	0.7 gpm

Medium Duty Vehicles (6001 to 8500lbs GVWR)

(By model year 1997)

	5 yrs/80,000 kilometres (useful life)
0 to 3750 lbs LVW	0.4 gpm
3751 to 5750 lbs LVW	0.7 gpm
Over 5750 lbs LVW	1.1 gpm

Heavy Duty Vehicles (over 8500 lbs GVWR)

(By model year 1998)

	8 yrs/110,000 miles (useful life)
Over 8500 lbs GVWR	4.0 gbp-hr

(b) Implementation of a more stringent mobile source nitrogen oxides control program for diesel powered vehicles and engines with standards, to the extent possible, no less stringent than the standards for the respective duty classes of gasoline powered vehicles and engines.

3. Compliance Monitoring

A. Utility Units

⁷ The Government of Canada will propose this effective date; the final effective date is subject to the procedures and outcome of the regulation development process.

1. For the United States:

Requirement that, by January 1, 1995, each new electric utility unit and each electric utility unit greater than 25 Mwe existing on the date of enactment of the Clean Air Act Amendments of 1990 (November 15, 1990) emitting sulphur dioxide or nitrogen oxides install and operate continuous emission monitoring systems or alternative systems approved by the Administrator of EPA, to the extent required by section 412 of the Clean Air Act.

2. For Canada:

Requirement that, by January 1, 1995, Canada estimate sulphur dioxide and nitrogen oxides emissions from each new electric utility unit and each existing electric utility unit greater than 25 Mwe using a method of comparable effectiveness to continuous emission monitoring, as well as investigate the feasibility of using and implement, where appropriate, continuous emission monitoring systems.

3. For Both Parties:

The Parties shall consult, as appropriate, concerning the implementation of the above.

B. Other Major Stationary Sources

Requirement that the Parties work towards utilizing comparably effective methods of emission estimation for sulphur dioxide and nitrogen oxides emissions from all major industrial boilers and process sources, including smelters.

4. Prevention of Air Quality Deterioration and Visibility Protection

Recognizing the importance of preventing significant air quality deterioration and protecting visibility, particularly for international parks, national, state, and provincial parks, and designated wilderness areas:

A. For the United States:

Requirement that the United States maintain means for preventing significant air quality deterioration and protecting visibility, to the extent required by Part C of Title I of the Clean Air Act, with respect to sources that could cause significant transboundary air pollution.

B. For Canada:

Requirement that Canada, by January 1, 1995, develop and implement means affording levels of prevention of significant air quality deterioration and protection of visibility comparable to those in paragraph A above, with respect to sources that could cause significant transboundary air pollution.

C. For Both Parties

The Parties shall consult, as appropriate, concerning the implementation of the above.

ANNEX 2

SCIENTIFIC AND TECHNICAL ACTIVITIES AND ECONOMIC RESEARCH

1. For the purpose of determining and reporting on air pollutant concentrations and deposition, the Parties agree to co-ordinate their air pollutant monitoring activities through:

- a) co-ordination of existing networks;
- b) additions to monitoring tasks of existing networks of those air pollutants that the Parties agree should be monitored for the purposes of this Agreement;
- c) addition of stations or networks where no existing monitoring facility can perform a necessary function for purposes of this Agreement.
- d) the use of compatible data management procedures, formats, and methods; and
- e) the exchange of monitoring data.

2. For the purpose of determining and reporting air emission levels, historical trends, and projections with respect to the achievement of the general and specific objectives set forth in this Agreement, the Parties agree to co-ordinate their activities through:

- a) identification of such air emissions information that the Parties agree should be exchanged for the purposes of this Agreement;
- b) the use of measurement and estimation procedures of comparable effectiveness;
- c) the use of compatible data management procedures, formats, and methods; and
- d) the exchange of air emission information.

3. The Parties agree to cooperate and exchange information with respect to:

a) their monitoring of the effects of changes in air pollutant concentrations and deposition with respect to changes in various effects categories, e.g. aquatic ecosystems, visibility, and forests;

b) their determination of any effects of atmospheric pollution on human health and ecosystems, e.g. research on health effects of acid aerosols, research on the long-term effects of low concentrations of air pollutants on ecosystems, possibly in a critical loads framework;

c) their development and refinement of atmospheric models for purposes of determining source receptor relationships and transboundary transport and deposition of air pollutants;

d) their development and demonstration of technologies and measures for controlling emissions of air pollutants, in particular acidic deposition precursors, subject to their respective laws, regulations and policies;

e) their analysis of market-based mechanisms, including emissions trading; and

f) any other scientific and technical activities or economic research that the Parties may agree upon for purposes of supporting the general and specific objectives of this Agreement.

4. The Parties further agree to consult on approaches to, and share information and results of research on, methods to mitigate the impacts of acidic deposition, including the environmental effects and economic aspects of such methods.

***Appendix B Transboundary Air Pollution Clauses in the United States
Clean Air Act and the Canadian Environmental Protection Act***

US Clean Air Act Section 115

INTERNATIONAL AIR POLLUTION

Sec. 115.(a) Whenever the Administrator, upon receipt of reports, surveys or studies from any duly constituted international agency has reason to believe that any air pollutant or pollutants emitted in the United States cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare in a foreign country or whenever the Secretary of State requests him to do so with respect to such pollution which the Secretary of States alleges is of such a nature, the Administrator shall give formal notification thereof to the Governor of the State in which such emissions originate.

(b) The notice of the Administrator shall be deemed to be a finding under section 110(a)(2)(H)(ii) which requires a plan revision with respect to so much of the applicable implementation plan as is inadequate to prevent or eliminated the endangerment referred to in subsection (a). Any foreign country so affected by such emission of pollutant or pollutants shall be invited to appear at any public hearing associated with any revision of the appropriate portion of the applicable implementation plan.

(c) This section shall apply only to a foreign country which the Administrator determines has given the United States essentially the same rights with respect to the prevention or control of air pollution occurring in that country as is given that country by this section.

(d) Recommendations issued following any abatement conference conducted prior to the enactment of the Clean Air Act Amendments of 1977 shall remain in effect with respect to any pollutant for which no national ambient air quality standards has been established under section 109 of this Act unless the Administrator, after consultation with all agencies which were party to the conference, rescinds any such recommendation on grounds of obsolescence.

[42 U.S.C. 7415]

Canadian Environmental Protection Act Part V

INTERNATIONAL AIR POLLUTION

61(1) Recommendation of regulations respecting international pollution

61. (1) Subject to subsection (2), where the Ministers have reason to believe that an air contaminant emitted into the air, either alone or in combination with any other air contaminant, by a source or by sources of a particular class or classes in Canada

(a) creates or may reasonably be anticipated to create air pollution in a country other than Canada, or

(b) results in or is likely to result in the violation of an international agreement entered into by the Government of Canada in relation to the control or abatement of pollution,

the Minister shall recommend to the Governor in Council regulations with respect to the source or sources for the purpose of controlling or preventing the air pollution or correcting or preventing the violation.

61(2) Consultation with provincial governments

(2) The Minister shall not make a recommendation under subsection (1) with respect to a source or sources, other than a federal work or undertaking as defined in section 52, unless

(a) the Minister has endeavoured, through consultation with the government of each province in which the source or sources are situated, to determine whether the air pollution referred to in paragraph (1)(a) can be controlled or prevented or the violation referred to in paragraph (1)(b) can be corrected or prevented by any steps that the government of the province may cause to be taken under its laws;

(b) where the Minister determines under paragraph (a) that the air pollution can be controlled or prevented or the violation can be corrected or prevented, the Minister endeavours to bring about this result, but is unsuccessful;

(c) notification of any notice of objection made under subsection 62(2) has been forwarded to the government of each province referred to in paragraph (a); and

(d) the Ministers have taken into account any comments or notice of objection made under subsection 62(2).

62(1) Publication of proposed regulations

62. (1) Where the Minister proposes to recommend regulations to the Governor in Council under subsection 61(1), the Minister shall

(a) publish a copy of the proposed regulations in the Canada Gazette; and

(b) notify the government of any country that would be affected by or benefit from the regulations.

62(2) Comments or notice of objection

(2) Within sixty days after the publication of any proposed regulations under paragraph (1)(a), any person or the government of any country that would be affected by or benefit from the proposed regulations may file with the Minister

(a) comments in writing; or

(b) a notice of objection requesting the establishment of a board of review under section 89 and stating the reasons for the objection.

63(1) Regulations

63. (1) Subject to subsection (2), the Governor in Council may make

(a) regulations recommended by the Minister on the basis referred to in paragraph 61(1)(a) if the Governor in Council is satisfied that the country referred to in that paragraph has granted Canada substantially the same rights with respect to the prevention or control of air pollution as are granted to that country under this Part;

(b) regulations recommended by the Minister on the basis referred to in paragraph 61(1)(b); and

(c) regulations for carrying out the purposes and provisions of this Part.

63(2) Non-application of regulations

(2) Except with respect to Her Majesty in right of Canada, the provisions of a regulation made under paragraph (1)(a) or (b) do not apply in any province in respect of which there is in force an order, made under subsection (3), declaring that the provisions do not apply.

63(3) Declaration of equivalent provisions

(3) Where the Minister and the government of a province agree in writing that there are in force by or under the laws of the province

(a) provisions that are equivalent to the provisions of a regulation made under subsection (1), and

(b) provisions that are similar to sections 108 to 110 for the investigation of alleged offences under provincial environmental legislation,

the Governor in Council may, on the recommendation of the Minister, make an order declaring that the provisions of the regulation do not apply in the province.

63(4) Publication of agreement

(4) The Minister shall make public any agreement referred to in subsection (3).

63(5) Termination of agreement

(5) An agreement referred to in subsection (3) may be terminated by either party giving to the other at least six months notice of termination.

63(6) Revocation of order

(6) The Governor in Council may, on the recommendation of the Minister, revoke an order made under subsection (3) where the agreement referred to in that subsection is terminated.

63(7) Report to Parliament

(7) The Minister shall include in the annual report required by section 138 a report on the administration of subsections (2) to (6).

64 Prohibition

64. No person shall operate a source of an air contaminant in contravention of any regulation made under section 63.

65 Plans and specifications

65. Where a person carries on or proposes to carry on a work, undertaking or activity that results or may result in the emission of an air contaminant into the air, the person shall, at the request of the Minister for the purposes of section 61 and within such reasonable time as the Minister may specify, provide the Minister with plans, specifications, studies, procedures, schedules, analyses, samples or other information relating to the work, undertaking or activity and with analyses, samples, evaluations, studies or other information relating to the air contaminant.

IMAGE EVALUATION TEST TARGET (QA-3)

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