

**TESTING THE WATERS:  
THE CHILLING OF ENVIRONMENTAL REGULATION IN  
AN ERA OF TRADE LIBERALIZATION**

by

Erik Brant Felker  
B.A. Honours, Concordia University, 2000

RESEARCH PROJECT  
SUBMITTED IN PARTIAL FULFILLMENT OF  
THE REQUIREMENTS FOR THE DEGREE OF  
MASTER OF ARTS

In the Department  
of  
Political Science

© Erik Brant Felker 2004  
Simon Fraser University  
February 2004

All rights reserved. This work may not be  
reproduced in whole or in part, by photocopy  
or other means, without permission of the author

# Approval

**Name:** Erik Brant Felker

**Degree:** Master of Arts, Political Science

**Title of Research Project:** Testing the Waters: The Chilling of Environmental Regulation in an Era of Trade Liberalization

**Examining Committee:**

**Chair:** Tsuyoshi Kawasaki, Associate Professor

---

Daniel Cohn  
Assistant Professor  
Senior Supervisor

---

Michael Howlett, Professor  
Supervisor

---

Mark Sproule-Jones  
External Examiner  
Chair of Urban Studies  
McMaster University

**Date Approved:** February 2, 2004

# SIMON FRASER UNIVERSITY



## Partial Copyright Licence

The author, whose copyright is declared on the title page of this work, has granted to Simon Fraser University the right to lend this thesis, project or extended essay to users of the Simon Fraser University Library, and to make partial or single copies only for such users or in response to a request from the library of any other university, or other educational institution, on its own behalf or for one of its users.

The author has further agreed that permission for multiple copying of this work for scholarly purposes may be granted by either the author or the Dean of Graduate Studies.

It is understood that copying or publication of this work for financial gain shall not be allowed without the author's written permission.

The original Partial Copyright Licence attesting to these terms, and signed by this author, may be found in the original bound copy of this work, retained in the Simon Fraser University Archive.

Bennett Library  
Simon Fraser University  
Burnaby, BC, Canada

# Abstract

This project seeks to examine the link between trade liberalization and environmental policymaking in Canada. Theories of trade liberalization, economic globalization, and environmental politics, as well as the effect these might have on present and future environmental policy-making are studied, with a particular focus on the concept of 'regulatory chill'. Specifically, the following two hypotheses will be tested:

1. The government's receptiveness to making regulations based on environmental agreements has been lessened or 'chilled' since the implementation of the NAFTA.
2. The nature of recommendations made to governments through agencies mandated to make such proposals has changed, so as to take account of the official preference for trade liberalization since the implementation of the NAFTA,

This is accomplished by analysing the recommendations made by the International Joint Commission in its biennial reports on the Great Lakes Water Quality Agreement and the Government of Canada's responses to these recommendations. In that this project is based solely on data collected from the reports of a single agency and governmental responses to said reports, and furthermore, in that there are some ambiguities and unanswered questions left by the data, this project is unable to either absolutely refute or demonstrate the existence of regulatory chill in Canadian environmental policy-making. This project does, however, provide enough evidence so as to raise scepticism regarding the regulatory chill hypotheses.

## **Dedication**

This is dedicated to all who have helped me along the way. Many thanks to Meghan, my parents (Dave and Pat), grandparents (Brant Sr. and Bertha), and my sister and brother-in-law (Sheila and Duane).

## **Acknowledgements**

I would like to thank Dr. Daniel Cohn for all the time and effort he put into this project. I would also like to thank Dr. Michael Howlett, Dr. Yoshi Kawasaki, and Dr. Mark Sproule-Jones.

# Table of Contents

<b>Approval</b> .....	<b>ii</b>
<b>Abstract</b> .....	<b>iii</b>
<b>Dedication</b> .....	<b>iv</b>
<b>Acknowledgements</b> .....	<b>v</b>
<b>Table of Contents</b> .....	<b>vi</b>
<b>List of Tables</b> .....	<b>viii</b>
<b>List of Abbreviations and Acronyms</b> .....	<b>ix</b>
<b>Chapter 1 Introduction</b> .....	<b>1</b>
<b>Chapter 2 Trade and the Environment: Linkages, Conflicts and Compromise</b> .....	<b>6</b>
2.1 Trade and Environmental Politics .....	7
Free Trade Perspective: Efficiency, Eliminating Green Protectionism, and Polluter Pays Principle.....	9
Environmentalist Perspective: Precautionary Principle, Race to the Bottom, and Regulatory Chill.....	12
2.2 Trade Agreements and the Environment in Canada: Some Recent Examples .....	15
2.3 NAFTA and Regulatory Chill .....	20
Testing Regulatory Chill .....	21
<b>Chapter 3 Methodology</b> .....	<b>25</b>
3.2 The Great Lakes Water Quality Agreement and the International Joint Commission.....	26
The International Joint Commission .....	30
3.3 Outline of the research .....	31
3.4 Limits to the Research.....	32
3.5 Research Questions .....	34
<b>Chapter 4 Test</b> .....	<b>39</b>
4.1 Research Questions .....	39

Research Question 1 .....	39
Research Question 2 .....	40
Research Question 3 .....	43
Research question 4.....	44
4.2 Analysis of Findings.....	47
Research question 1 .....	47
Research question 2 .....	49
Research question 3 .....	51
Research question 4.....	52
<b>Chapter 5 Conclusion .....</b>	<b>63</b>
5.1 The Case for Regulatory Chill .....	63
5.2 Significance of the Findings.....	65
5.3 Strengths and Weaknesses of the Methods Used .....	65
5.4 Future Research.....	66
Conclusion.....	68
<b>Bibliography .....</b>	<b>69</b>



# List of Tables and Figures

Table 2-1 Trade and the Environment .....15

Table 2-2 Cases Filed and Results .....20

Table 3-1 Criteria for Case Choice .....29

Table 3-2 Research Questions and Tests .....38

Figure 4-1.....55

Figure 4-2.....56

Figure 4-3.....57

Figure 4-4 .....58

Figure 4-5.....59

Figure 4-6.....60

Figure 4-7.....61

Figure 4-8 .....62

## **List of Abbreviations and Acronyms**

CUFSTA	Canada-U.S. Free Trade Agreement
ENGO	Environmental Non Governmental Organization
GLWQA	The Great Lakes Water Quality Agreement
IEA	International Environmental Agreement
IJC	International Joint Commission
MEA	Multilateral Environmental Agreement
NAFTA	North American Free Trade Agreement
NGO	Non Governmental Organization
WTO	World Trade Organization

# Chapter 1

## Introduction

“The rate of change is outstripping the ability of scientific disciplines and our current capabilities to assess and advise. It is frustrating the attempts of political and economic institutions, which evolved in a different, more fragmented world, to adapt and cope. It deeply worries many people who are seeking ways to place those concerns on the political agendas. We have been careful to base our recommendations on the realities of present institution, on what can and must be accomplished today. But to keep options open for future generations, the present generation must begin now, and begin together, nationally and internationally.” (Brundtland Commission: Our Common Future.)

In an increasingly globalized world, multilateral agreements have become an important factor in international politics. Given the high level of interdependence amongst nations, the need for policy coordination has become more and more apparent. The rise of supranational structures and agreements such as the North America Free Trade Agreement (henceforward NAFTA) are quickly changing the dynamics in both the national and local political arenas. As well, the development of bilateral and multilateral environmental agreements have taken a more centralized role in world politics as states develop the understanding that trans-boundary solutions are required for transnational problems to be resolved. With the recent adoption of trade agreements in Canada, promoting and accelerating the country towards a more liberalized system, those enforcing environmental agreements potentially face more obstacles in advocating for regulation at a time when trade and non-trade barriers are being dismantled.

Canada, which has traditionally made a commitment to formulating and implementing environmental policies, is now facing new challenges with the adoption of the NAFTA (and its Canada-US Free Trade Agreement precursor). Since NAFTA's arrival, there have been some prominent and well publicized cases of Canadian environmental legislation being successfully trumped by corporations making recourse to the trade tribunal created as a part of the NAFTA regime (and by corporations threatening such action).<sup>1</sup> Such action raises some concern about the relationship between trade and environmental agreements in Canada.

My research seeks to examine the link between trade liberalization and environmental policymaking in Canada. The following project has been developed with the intention of exploring the various theories of trade liberalization, economic globalization, and environmental politics, and the effect these might have on present and future environmental policy-making, with a particular focus on the concept of 'regulatory chill'.<sup>2</sup>

Chapter two will cover some of the major literature dedicated to the relationship between trade and the environment in Canada. The most significant debate found in this literature is whether free trade is helping or hurting environmental protection. The literature review will examine such concepts as 'polluter pays principle', 'sustainable development'

---

<sup>1</sup> American company Ethyl Corporation successfully overturned a 1997 Canadian import ban of known toxin MMT. American company S.D. Meyers successfully sued Canada under NAFTA chapter 11 for banning the import of PCB. This ban was consistent with Article 4.9 of the 1989 Basel Convention of the Control of Transboundary Movements of Hazardous Wastes and Their Disposal.

<sup>2</sup> For more on the definition of economic globalization, see Keohane and Nye, *Power and Interdependence: World Politics in Transition* (Boston: Little Brown, 1977).

‘precautionary principle’, ‘race to the bottom’ and of course ‘regulatory chill’, the testing for which is the purpose of this project. Although the scope of this research is limited and will not draw any general conclusions about the effectiveness of future environmental policies and agreements, it should illustrate the difficulties, if any, government faces when trying to comply with both trade and environmental agreements. The research will illustrate these difficulties by looking at the biennial recommendations made by the International Joint Commission (the IJC) with regard to the Great Lakes Water Quality Agreement (GLWQA) and the responses made to these recommendations by the Government of Canada.

Chapter three will introduce the case being used for the project, and develop the methodology which will be applied. Although the dataset is small, covering biennial reports by the IJC over a twenty-year period, this chapter will provide new empirical evidence to help assess the regulatory chill issue. This study hopefully adds to the growing literature surrounding the ‘trade leads to a decline in environmental standards’ debate by providing a fair test of some of the claims made in this debate using systematically collected data, drawn from the ordinary work of a binational agency and one of the governments that is party to its operation. It thereby brings the debate down from the theoretically abstract level to that of day-to-day work of public policy makers and actual consequences for citizens.

Specifically, the following two hypotheses will be tested:

- 1. The federal government's receptiveness to making regulations based on environmental agreements has been lessened or 'chilled' since the implementation of the NAFTA.*
- 2. The nature of recommendations made to governments through agencies mandated to make such proposals has changed, so as to take account of the official preference for trade liberalization since the implementation of the NAFTA.*

In doing such an analysis, chapter four will examine both the recommendations released by the IJC through biennial reports, as well as government responses to the reports. The strength and volume of the recommendations and responses will be examined over a twenty-year time period to determine if the introduction of trade agreements lead to a decline in environmental standards. Specifically, the reports will be examined for any patterns that might have changed, such as a weaker or lower volume of recommendations made, or fewer number recommendations adopted, since the implementation of the NAFTA.

Chapter five will analyze the tests and offer some direction for future research. In that this project is based solely on data collected from the reports of a single agency and governmental responses to said reports, and furthermore, in that there are some ambiguities and unanswered questions left by the data, this project is unable to either absolutely refute or demonstrate the existence of regulatory chill in Canadian

environmental policy-making. The project does, however, provide enough evidence so as to raise skepticism regarding the regulatory chill hypotheses.

## **Chapter 2**

# **Trade and the Environment: Linkages, Conflicts and Compromise**

There has been a significant debate in recent years regarding the link between trade liberalization<sup>3</sup> and environmental policy-making. The debate has developed into the somewhat over-generalized, yet distinctly clear factions of “free-traders” and “environmentalists”.<sup>4</sup> The division of these two approaches at face value, presents opposing belief-systems as to the appropriate means to achieve the goals of a successful economy and a clean environment. Whereas the free-trader would assert that trade liberalization leads to higher environmental standards, the environmentalist might be skeptical of this process and suggest that it might lead policy-makers to refrain from enacting stricter environmental regulations. The following chapter will provide a review of the literature surrounding trade liberalization and environmental policy-making, with a critical evaluation of key theoretical arguments such as ‘race to the bottom’, ‘polluter pays principle’, and ‘regulatory chill’. This chapter will also present a brief overview of both the international trade liberalization agreements that Canada has entered into, that are relevant to this project, as well as some of the more prominent individual cases where

---

<sup>3</sup> For the purpose of clarity, trade liberalization will be defined as the lowering of trade barriers, deregulation, privatization and opening doors to foreign investment. Economic globalization refers to the prominence of multi-national corporations in economic activity and the increasing interdependence amongst nations.



these agreements have led to outcomes that environmentalists would describe as negative. The third part of this chapter re-examines the concept of regulatory chill and sets up the research objective: testing for regulatory chill in Canadian environmental policy-making using the Great Lakes Water Quality Agreement as a case study.

## 2.1 Trade and Environmental Politics

The global effort to protect the environment entered the centre of the political arena in the 1970s with the “limits to growth” debate<sup>5</sup> and the United Nations Conference on the Human Environment held in Stockholm in 1972. In 1987, the World Commission on Environment and Development sponsored Brundtland Commission released *Our Common Future*, which urged that the concept of “sustainable development” be ingrained in future policy-making. Sustainable development was defined in the report as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”<sup>6</sup>

The widespread push for the integration of sustainable development practices into policy-making in Canada is reflected during the 1990s by the emergence of Sustainable

---

<sup>4</sup> For more on the free-trader/environmentalist dichotomy, see for example D. Esty, *Greening the GATT: Trade Environment and the Future* (Washington: Institute for International Economics, 1994) p3; or J. Audley, *Green Politics and Global Trade* (Georgetown University Press, 1997).

<sup>5</sup> *The Limits to Growth* book created much debate with its findings in 1972 with the argument that the world would not be able to continue sustainability with the current rate of growth and consumption. D. Meadows et al., *The Limits to Growth*. (New York: Universe Books, 1972).

<sup>6</sup> World Commission on Environment and Development. *Our Common Future* (Oxford: Oxford University Press, 1987)p43.

Development Strategies as a required planning tool for all federal departments.<sup>7</sup> This inclusion into mainstream departmental policy-making has reinforced the centrality of the sustainable development philosophy of environmental enhancement, effective development assistance and strengthened social accountability<sup>8</sup> within the public psyche. Sustainable development strategies have not been completely successful to this point at finding a balance between environmental protection and effective development because a central question remains unanswered: how can environmental protection be harmoniously integrated into all future policy-making given the reality of steadily increasing trade liberalization?

One of the most difficult challenges policy-makers face is to adjust to the narrowing role of government and the “institutional realignment” that is occurring.<sup>9</sup> As one author states, “nations have chosen an ‘open’ border for trade. They have not however ‘chosen an open environment.’”<sup>10</sup> The reaction has been mixed. Authors such as Bhagwati and Graham suggest that the market will be a positive force for the environment. Others, such as Esty and Deere, see a complicated issue which needs further exploration. These authors state that “free trade can be negative without adequate strategies to control pollution and

---

<sup>7</sup> Sustainable Development Strategies were included in the amended *Auditor General Act of 1995*. The amendment required federal departments to table sustainable development strategies by December 1997. For more on this see Department of Foreign Affairs and International Trade, *Agenda-2003: A Sustainable Development Strategy* (Ottawa: Department of Foreign Affairs and International Trade, 2001).

<sup>8</sup> J Kirton, *Sustainable Development as a Focus for Canadian Foreign Policy*. (Ottawa: NRTEE, 1994).

<sup>9</sup> M. Chertow and D. Esty, *Thinking Ecologically: The Next Generation of Environmental Policy* (Yale University Press, 1997) p 2.

<sup>10</sup> S Charnovitz and E Dowdeswell, “Globalization, Trade and the Environment” In *Thinking Ecologically: The Next Generation of Environmental Policy*, ed. M Chertow and D. Esty (Yale University Press 1997)p91.

manage resources”.<sup>11</sup> On the other hand, they also note that, “[free trade] could be positive, creating cleaner more efficient use of natural resources...and a transfer of pollution control devices.”<sup>12</sup>

### **Free Trade Perspective: Efficiency, Eliminating Green Protectionism, and Polluter Pays Principle**

Bhagwati claims that trade liberalization is beneficial to the environment. He states that, “It is incorrect to assume that the growth of per capita income necessarily, or even overwhelmingly, damages the environment, for several reasons. Increased income per capita, aside from directly reducing poverty by creating jobs, will reduce poverty indirectly as well by enabling the state to raise revenues to pay for ‘basic needs’ programs. Similarly, it would help pay for pollution control and remedial clean-up.”<sup>13</sup>

Edward Graham also supports a classic free trade argument by suggesting that “greater affluence will lead to greater demand for wilderness and habitat preservation.”<sup>14</sup> This is based on the application of rational economic assumptions to free trade such as that it encourages the efficient use of the world’s scarce resources, promotes wealth

---

<sup>11</sup> D. Esty and C. Deere, *Greening the Americas: NAFTA’s Lessons for Hemispheric Trade* (London: MIT press, 2002) p14.

<sup>12</sup> Ibid.

<sup>13</sup> J.Bhagwati, “Trade and the Environment: The False Conflict?” In *Trade and the Environment: Law, Economics and Policy*, ed. Durwood Zaelke, et al. (1993); Hunter, Salzman and Zaelke, *International Environmental Law and Policy* (NY:Foundation 1998).

<sup>14</sup> E. Graham, “Globalization, Foreign Direct Investment and the Environment” In *Fighting the Wrong Enemy: Antiglobal Activists and Multinational Enterprises* (Institute for International Economics, 2000) p162.

maximization through economic growth, which would increase the capacity for environmental protection, and increases sharing of knowledge and technologies.<sup>15</sup>

Grossman and Krueger, in their examination of whether wealth leads to higher environmental standards,<sup>16</sup> claim that pollution increases, then decreases, with a higher per-capita income when examining sulfur dioxide particles.<sup>17</sup> This work has been a widely popular argument supporting the positive effects of trade on the environment. However, as Copeland has argued, “similar relationships are not observed for all pollutants. Carbon emissions and municipal waste per capita tend to rise with per-capita income”<sup>18</sup> Furthermore, many problems with measurement definitions has made it

---

<sup>15</sup> Charnovitz and Dowdeswell argue that Economic and Environmental policies can be ‘mutually reinforcing’, and that Environmental advances are easiest to achieve when a strong economy makes resources available for investment in pollution prevention and control. Environmental advances are hardest to obtain when poverty forces people into short-term decision-making.” S. Charnovitz and E. Dowdeswell. “Globalization, Trade and the Environment” In *Thinking Ecologically: The Next Generation of Environmental Policy*, ed. M. Chertow and D. Esty (Yale University Press, 1997).

<sup>16</sup> Grossman and Krueger introduce the Kuznets curve This is an inverted-U relationship which shows that environmental conditions tend to deteriorate in the early stages of industrialization and then improve as nations hit middle-income levels, at a per capita. For more on the Kuznets curve see, Gene M. Grossman and Alan B. Krueger, "Environmental Impacts of a North American Free Trade Agreement" In *The Mexico-US Free Trade Agreement*, ed. Peter M. Garber (Cambridge: MIT Press, 1997), pp. 13-56; Gene M. Grossman and Alan B. Krueger, "Economic Growth and the Environment." *Quarterly Journal of Economics*. (CX:2, 1995) pp. 353-77; and Brian Copeland, *Economics and the Environment: The Recent Canadian Experience and Prospects for the Future* (Ottawa: Industry Canada Research Publications Program)1998.

<sup>17</sup> G. Grossman and A. Krueger, “Economic Growth and the Environment” *Quarterly Journal of Economics* (CX:2 pp 353-77 1995).

<sup>18</sup> Brian Copeland, *Economics and the Environment: The Recent Canadian Experience and Prospects for the Future* (Ottawa: Industry Canada Research Publications Program, 1998) p18.

difficult to directly test the 'wealth leads to higher environmental standards' theory at this point.<sup>19</sup>

Cole suggests that: "whilst pointing to the potential environmental benefits of free trade, free traders also stress their fears of a growth of 'green' protectionism designed to prevent environmentally harmful goods from entering a country and which can also be used as leverage to encourage other nations to comply with environmental agreements."<sup>20</sup>

Furthermore, "The trade community worries, first, that protectionists will use contrived environmental standards to disguise barriers to trade and, second, that poorly crafted environmental programs with minimal ecological or public health benefits will impose unjustifiable burdens on the free flow of commerce."<sup>21</sup>

There is also a growing body of literature that does accept that the increase of trade might lead to environmental damage, but that protectionist measures are not the solution.<sup>22</sup> One of the most prominently proposed solutions lays in polluters internalizing the costs of the environmental damage caused by their activities; such as river pollution and toxins

---

<sup>19</sup> In fact, recent studies on the Kuznets Curve have concluded that the correlation between increased growth and wealth lead to a better environment have been disproven in the cases of carbon emissions, and water quality, where it has been shown that growth tends to worsen pollution without any sign of increase. For more on the Kuznets curve debate see D. Esty, "Bridging the Trade-Environment Divide" *Journal of Economic Perspectives* (Volume 15, Number 3-Summer, 2001) p117-119; and Brian Copeland, *Economics and the Environment: The Recent Canadian Experience and Prospects for the Future* (Ottawa: Industry Canada Research Publications Program, 1998).

<sup>20</sup> Matthew Cole, *Trade Liberalization, Economic Growth and the Environment* (London: New Horizons in Environmental Economics Series, 2000) p21.

<sup>21</sup> Ibid.

<sup>22</sup> See Thomas J. Schoenbaum, "International Trade and Protection of the Environment: The Continuing Search for Reconciliation" *The American Journal of International Law* (Vol. 91, No. 2. Apr., 1997) pp. 268-313, and Jennifer Schultz, "The GATT/WTO Committee on Trade and the Environment--Toward

released in the air. Without properly accounting externalities the emergence of subsequent health costs, and ecosystem degradation could appear.<sup>23</sup> Recently, the polluter pays principle has become a more prominent tool of accountability in Canada. Its legitimacy has been re-enforced by the courts as the legal system comes to be more involved in enforcing the process of market failure.<sup>24</sup>

**Environmental Perspective:  
Precautionary Principle, Race to the Bottom, and Regulatory Chill**

There is a large amount of literature suggesting that the market cannot save the environment from further degradation. In fact, many believe the opposite; the increase of trade and production will necessarily increase the amount of environmental damage.<sup>25</sup>

Environmentalists suggest that a precautionary principle be implemented to account for potentially damaging -- but not scientifically proven -- environmental dangers. Jones comments that, "the main source of the risk is that we simply do not know what the long-term environmental consequences of today's economic behaviour will be. In effect, a

---

Environmental Reform" *The American Journal of International Law* (Vol. 89, No. 2, Apr., 1995) pp. 423-439.

<sup>23</sup> For more on the actual institutional factors affecting the economics vs. environment tradeoffs potentially impacting free trade issues see Dietz, Ostrom, Dolsak, Stern and Stonich *The Drama of the Commons* National Research Council, 2002

<sup>24</sup> The recent *Imperial Oil Ltd vs Quebec* (Oct. 30, 2003) upheld a decision under Quebec's Environmental Polluter Pays Principle, that would require Imperial Oil to endure the costs of clean-up for a contaminated site that was being redeveloped. This case could have serious implications for future land contaminated sites in which the accountability of clean-up could legally shift to that of the polluter. For more on this case, see *Imperial Oil v. Quebec (Minister of Environment)* 2003 SCC 58 (February 14 and October 30, 2003)10/31/2003 found at <http://www.elaw.org/resources/text.asp?ID=2192>

<sup>25</sup> See footnote 5.

‘precautionary approach’ is required to account for the possibility that our current perception about future environmental conditions may turn out to be wrong”.<sup>26</sup>

Revesz describes one potential effect of trade liberalization on environmental policy as “a race from the desirable levels of environmental quality that states would pursue if they did not face competition for industry to the increasingly undesirable levels that they choose in the face of such competition”.<sup>27</sup> The validity of this so-called ‘race to the bottom’ effect has stirred much debate in the recent years.<sup>28</sup> However, similar to the measurement problems that occurred with the wealth/environment correlation, the race to the bottom effect has not been convincingly quantified.<sup>29</sup> In fact, Vogel suggests a “race to the top” is actually occurring.

Trade liberalization can just as easily be achieved by forcing nations with lower standards to raise them as by forcing nations with higher standards to lower them. While both have in fact occurred, the former has been more common than the latter. To the extent that trade liberalization has affected the level of consumer and environmental protection, it has more often strengthened than weakened it.<sup>30</sup>

---

<sup>26</sup> Tom Jones, “Globalisation and Environment: Preliminary Perspectives” In *Globalisation and Environment* (OECD Proceedings: Main Issues 13., 1997).

<sup>27</sup> Richard Revesz, “Rehabilitating Interstate Competition”, In *International Environmental Law and Policy* ed. Hunter, Salzman and Zaelke. (New York: Foundation Press, 1998).

<sup>28</sup> Vogel suggests that in fact there is a race to the top in environmental regulation. For more on this, see David Vogel, *Trading Up: Consumer and Environmental Regulation in a Global Economy* (London: Harvard University Press, 1995).

<sup>29</sup> There has been a number of studies done on the ‘race to the bottom’ debate. The common conclusion is that the theory has thus far – proved unquantifiable. For more information on the ‘race to the bottom’ measurement debate, see Eric Neumayer, *Greening Trade and Investment: Environmental Protection Without Protectionism* (London: Earthscan Publications, 2001); Daniel Esty, “Bridging the Trade-Environment Divide” *Journal of Economic Perspectives* (Volume 15, Number 3-Summer 2001).

<sup>30</sup> David Vogel, *Trading Up: Consumer and Environmental Regulation in a Global Economy* (London: Harvard University Press 1995)p5.

Another result of trade liberalization could be the ‘chilling’ of new environmental policies. Esty and Geradin recognize the potential for new environmental policies to be struck down by international trade agreements as protectionist trade barriers.<sup>31</sup> The ‘regulatory chill’, ‘regulatory drag’, or ‘stuck in the mud’ hypothesis suggests that a “country refrains from enacting stricter environmental standards in response to fears of losing a competitive edge.”<sup>32</sup> However, testing this hypothesis has been problematic. Mabey and McNally state that the fact there is little statistical evidence of this ‘chilling effect’ is unsurprising, because evidence is needed of what has not happened.<sup>33</sup> However, it is entirely possible, as will be examined, that regulatory chill can potentially be observed as trade liberalization becomes more and more of an economic reality. Fear of capital flight, coupled with investor protection provisions of the NAFTA, which will be explored in detail later, could plausibly cause a new constraint on environmental policy-making that could result in regulatory chill. To conclude this section, Table 2.1 summarizes this brief review of the literature on the relationship between trade liberalization and environmental policy-making.

---

<sup>31</sup> Daniel Esty and Damien Geradin, “Market Access, Competitiveness, and Harmonization: Environmental Protection in Regional Trade Agreements”, In *International Environmental Law and Policy* ed. Hunter, Salzman and Zaelke (New York: Foundation Press, 1998).

<sup>32</sup> For regulatory chill, see Eric Neumayer, *Greening Trade and Investment: Environmental Protection Without Protectionism* (London: Earthscan Publications, 2001) and Daniel Esty and Damien Geradin, “Market Access, Competitiveness, and Harmonization: Environmental Protection in Regional Trade Agreements”, In *International Environmental Law and Policy* ed. Hunter, Salzman and Zaelke (New York: Foundation Press, 1998); for ‘Stuck in the Mud’, see Zarsky, Lyuba, “Stuck in the Mud? Nation-States, Globalisation and Environment” *Nautilus Institute for Security and Sustainable Development* (32).

<sup>33</sup> Mabey and McNally “Foreign Direct Investment and the Environment: From Pollution Havens to Sustainable Development” (*WWF-UK* November, 1999)p38.



Table 2-1 Trade and the Environment

## **Trade and the Environment: Different Perspectives**

### Free-Trade Perspective

- Trade liberalization will increase the wealth of a nation
- Increased wealth will lead to greater ability to conquer environmental pollution
- Global interdependence will increase technology sharing which will create new innovative approaches to addressing environmental problems
- Polluter Pays principle, if properly implemented, will resolve market discrepancies that favour less environmentally friendly means of production

### Response to the Environmentalist Perspective:

- Nations can hide behind environmental measures as veiled protectionist measures
- Government intervention which cause a trade barrier will create a competitive disadvantage and a lose-lose situation with industry and consumers

### Environmentalist Perspective

- Regulation is required to reduce the amount of pollution that is being created by massive increase in global population and production
- Precautionary Principle- it is better to be on the side of caution in regards to environmental protection. Definite scientific evidence should not be the indicator of protection-technology might not be advanced enough to identify environmental problems
- Development should meet the needs of the present without compromising the ability of future generations to meet their own needs (sustainable development)

### Response to the Free Trade Perspective:

- Increased production equals increased pollution and environmental damage
- Trade liberalization will cause a 'race to the bottom' of environmental standards-Free trade will create a 'regulatory chill' of environmental policy-making

## **2.2 Trade Agreements and the Environment in Canada: Some Recent Examples**

In the early 1990's, Canada, at US insistence, began negotiating the expansion of the *Canada US Free Trade Agreement* (CUSFTA) to include Mexico. Similar to the CUSFTA, the NAFTA discussions were aimed at the elimination of barriers to trade,

the promotion of fair competition and protection for investors. The provisions for investor protection extended the benefits of trade liberalization available to private companies into many new policy realms. Rather than having to rely on their home government to take their grievances forward to the dispute settlement tribunal created under NAFTA, Chapter 11 empowers private foreign investors to directly challenge government actions through the tribunal.<sup>34</sup> The reasons for including such a chapter according to NAFTA negotiators, were: “(1) establishment of a secure investment environment by clearly defined rules for the fair treatment of foreign investments; (2) removal of current investment barriers by eliminating or reducing restrictions; and (3) creation of an effective means for dispute resolution between investors and member governments.”<sup>35</sup>

At the same time that NAFTA was brought into force, Canada was accelerating its commitment to the liberalization of trade as a key participant in the creation of the World Trade Organization (WTO). 1995's WTO was the result of years of talks amongst countries committed to strengthening its GATT predecessor. It reinforced an institutional framework for global trade liberalization, a means to oversee and facilitate trade agreements and negotiations, as well as the settlement of trade disputes amongst nations.<sup>36</sup>

---

<sup>34</sup> Chapter 11 of NAFTA was seen by many as being a major change in the power structure of the global economic system. What was once only a country-to-country dispute mechanism was now open for companies to use against a state. For more on the implication of Chapter 11 on the political system see R. Jones, “NAFTA Chapter 11 Investor-to-State Dispute Resolution: A Shield to Be Embraced or a Sword to Be Feared?” *Brigham Young University Law Review* (Vol. 2002 Issue 2, p527)pp33.

<sup>35</sup> David Price, “Investor Protections in NAFTA are One Manifestation of a Broad, Backdoor Effort to Restore the Primacy of Property Against Society's Broader Claims”, *The Nation*, (Oct. 15, 2001). See also J. Strazzeri, “A Lucas Analysis of Regulatory Expropriations Under NAFTA Chapter Eleven” *Georgetown International Environmental Law Review* (Summer2002, Vol. 14 Issue 4) p837, 23p.

<sup>36</sup> For more on Canada's role in the WTO, see Department on Foreign Affairs and International Trade, found at <http://www.dfait-maeci.gc.ca/tna-nac/wto-en.asp>.

During the negotiation of NAFTA, much attention was focused on the impact it might have on environmental protection and future environmental regulation. Most specifically, environmentalists feared the introduction of new investor protection mechanisms would leave current environmental policies vulnerable to being challenged as protectionist measures that negatively affected trade. Coupled with the GATT ruling on the Dolphin-Tuna case,<sup>37</sup> environmentalists were concerned with the potential impact that the new regional trade regime might have on existing regulations and future regulatory ability. In particular, Chapter 11, which allowed a mechanism for companies to seek compensation from member states through an independent and secretive tribunal, was a contested addition to the previous CUSFTA.<sup>38</sup> Under the pressure of environmental and labour groups NAFTA was eventually complemented by side-agreements establishing commissions to deal with each specific area.<sup>39</sup>

The environmental side deal, The North American Agreement of Environmental Cooperation (NAAEC), led to the creation of the Commission for Environmental

---

<sup>37</sup> In 1991 the US banned imports of tuna from Mexico, Ecuador and Panama, claiming that these countries violated the US catch-rate rule (a regulation aimed at protect dolphins, which can be inadvertent victims of the tuna fishery). Mexico successfully challenged this decision under the GATT, arguing that its trade rights had been violated. For more on the Tuna/Dolphin case, see WTO website at <http://www.wto.org/>.

<sup>38</sup> Chapter 11 includes Article 1110, Protection from direct or indirect expropriation; Article 1102, National Treatment obligations; Article 1102, Most favoured nation obligations; Article 1106, Prohibition of performance requirements; and Article 1105, Obligations for minimum international standards of treatment. These articles are meant to restrict the types of measures that can be imposed on investment. The broad interpretation of these articles have led to some controversial findings by the dispute settlement tribunal. Namely, the broad interpretation of articles 1102 and 1103 have led to environmental commitments by a host country being challenged under NAFTA. For more see 'NAFTA's Chapter 11 and the Environment, JPAC of the Commission for Environmental Cooperation. March 2003.

<sup>39</sup> The Clinton administration was pressured by environmental and labour lobbyists to go further and include stringent environmental and labour commitments in the new trade agreement. See Jagdish Bhagwati, "Beyond NAFTA: Clinton's Trading Choices" *Foreign Policy* (Summer93 Issue 91, p155,8p).

Cooperation (CEC). This organization has been given the mandate to investigate and review problems that may arise from the trade agreement, especially concerning the protection of existing national environmental regulations. Although the CEC has made a few investigations into potential conflicts of trade and the environment,<sup>40</sup> it has been criticized as doing very little to protect the implementation of progressive and effective national environmental regulations.<sup>41</sup> However, some argue that although little has been done thus far by the CEC, it has considerable potential as an institution.<sup>42</sup> Time will tell as to whether the CEC will be successful in its mandate of establishing an institution that seeks to find a common ground between trade liberalization and environmental regulation.

In Canada, trade liberalization and environmental regulation have clashed a number of times since the implementation of NAFTA. Most notably, in November of 2000, an American corporation won a twenty million dollar ruling for lost costs over Canada's refusal to export hazardous waste; a refusal Canada was committed to impose as a signatory to the 1989 *Basel Convention on the Transboundary Movement of Hazardous*

---

<sup>40</sup> CEC has recently held a public meeting on effects of trade on the environment 'NAFTA Effects' is a 'backward-looking approach to identifying the impacts of trade on environmental quality and policy—and Emerging Trends, which comprises a forward-looking (or ex ante) tool intended to highlight key environmental challenges to the years 2010 to 2020. Online: [http://www.cec.org/programs\\_projects/trade\\_envIRON\\_econ/project/index](http://www.cec.org/programs_projects/trade_envIRON_econ/project/index).

<sup>41</sup> John Kirton, "Canada-US Trade and the Environment: Regimes, Regulatory Refugees, Races, Restraints and Results." (UofT Working Paper, 2001); Mumme and Duncan, "The Commission for Environmental Cooperation and Environmental Management in the Americas" *Journal of Interamerican Studies & World Affairs* (00221937, Winter97/98, Vol. 39, Issue 4).

<sup>42</sup> For more on the CEC see John Kirton, "Canada-US Trade and the Environment: Regimes, Regulatory Refugees, Races, Restraints and Results" (U of T Working Paper, 2001); S. Charnovitz, "The NAFTA Environmental Side Agreement: Implications for Environmental Cooperation, Trade Policy, and American Treaty-making." *Temple International and Comparative Law Journal* (18, 2: 257-314).

*Wastes* (The Basel Convention). In compliance with the Basel Convention, Canada had banned the export of PCB waste, a highly toxic persistent carcinogenic compound, from 1995-1997. The American based corporation SD Myers successfully sought damages under Chapter 11 claiming that Canada had breached its obligations in respect to National Treatment, and Minimum Standard of Treatment.<sup>43</sup> Thus the company was able to successfully trump an international environmental agreement by using a trade agreement.

The Basel Convention has so far been the only international environmental agreement to be challenged through NAFTA, but domestic environmental regulations have been challenged a number of times since the signing of the agreement. Table 2.2 lists cases of companies using Chapter 11 to challenge environmental regulations. It is appropriate to note that Canada has not been the only country to have its environmental regulations so challenged. Both the US and Mexico have also been involved in similar cases.

---

<sup>43</sup> Environment News Service: *Canada Fights NAFTA's PCB Ruling in Court* found at <http://ens.lycos.com>.

**Table 2-2 Cases Filed and Results**

NAFTA CHAPTER 11 CASES FILED	RESULTS
SD Myers Inc. v Government of Canada SD Myers, a US company, filed a claim that Canada’s ban on the export of PCB wastes breached Chapter 11 obligations.	Tribunal decided in favour of SD Myers
Ethyl Corporation v. Government of Canada Ethyl Corp., a US company, claimed that a Canadian ban on MMT, a gasoline additive breached Chapter 11 obligations	Settled outside of tribunal Canada withdraws ban
Sunbelt Water, Inc. v. Government of Canada Sunbelt, a US company, gave Canada notice of intent to file a Chapter 11 claim regarding Canada’s ban of exporting water.	Notice of Intent received by the Government of Canada
Methanex Corp. v. United States of America Methanex Corp., a Canadian company claimed that the California ban on gasoline additive MTBE violated Chapter 11 obligations.	Tribunal has partially decided in favour of Methanex
Metaclad Corp. v. United Mexican States Metaclad Corp., a US company, charged Mexico breached its obligations under Chapter 11 by denying the company a municipal license to operate its hazardous waste treatment facility and landfill site. <sup>44</sup>	Tribunal decided in favour of Metaclad

### 2.3 NAFTA and Regulatory Chill

Since Chapter 11 has been introduced with NAFTA, a number of cases of companies suing governments over regulations have occurred. Upon closer examination, some of the resulting judgments have supported companies’ claims that actions once seen as legitimate environmental regulation, are in fact protectionist measures.<sup>45</sup> This same dispute settlement process has also been used to nullify responsibilities that the federal government of Canada assumed were part of its obligations under existing multilateral

<sup>44</sup> For more information on these and other NAFTA Chapter 11 files, see the Department of Foreign Affairs and International Trade found online at <http://www.dfait-maeci.gc.ca>.

<sup>45</sup> See for example the Metaclad vs US tribunal.

environmental agreements.<sup>46</sup> Not only do these outcomes suggest that the current environmental regulations and agreements are vulnerable to being trumped by a trade agreement, but that the potential of future environmental policy-making is at risk of similar outcomes.<sup>47</sup>

### **Testing Regulatory Chill**

The objective of the rest of this paper is to test the environmental argument: that the implementation of NAFTA has led to regulatory chill in the area of Canadian environmental policy. As previously noted, regulatory chill is the idea that potential penalties under trade agreements such as NAFTA, and the intensified economic competition that such trade liberalizing treaties seek to promote, will cause countries to accept lower standards of environmental protection than they might otherwise choose to adopt and also be more hesitant to enact new rules.<sup>48</sup> Esty and Geradin suggest that although there are difficulties in producing empirical evidence regarding regulatory chill, “some authors surmise that competitive concerns can still impact environmental decision-making”.<sup>49</sup> The difficulties in proving ‘regulatory chill’ empirically - for it would require testing government non-action - requires that such a concept be developed using

---

<sup>46</sup> See *SD Meyers vs Canada*.

<sup>47</sup> Grinspun and Kreklewich argue that free trade agreements (FTAs) such as NAFTA, “serve as ‘conditioning frameworks’ to promote and consolidate neoliberal restructuring.”<sup>47</sup> They further suggest that: “both the negotiation and the implementation of an FTA modify the conditions under which economic and social decision making is conducted domestically.” Grinspun and Kreklewich “Consolidating Neoliberal Reforms: ‘Free Trade’ as a Conditioning Framework” *Studies in Political Economy* (43, Spring 1994).

<sup>48</sup> Nordstrom and Vaughan, *Trade and Environment: Special Studies 4* (Geneva: World Trade Organization, 1999); Esty and Geradin, “Environmental Protection and International Competitiveness” *Journal of World Trade* (1998 32(5)); Mabey and McNally, “Foreign Direct Investment and the Environment: From Pollution Haven to Sustainable Development” *WWF* (UK: Surrey, UK, 1995).

anecdotal evidence.<sup>50</sup> The analysis of non-action is not however a new concept in the study of policy-making, nor is there a lack of methodologies for its conduct. Bachrach and Baratz's important work on non-decision in *Two Faces of Power* suggest that circumstantial evidence, when it occurs in a pattern predicted by a theory is in fact scientific proof.<sup>51</sup> Circumstantial evidence pointing to the existence of regulatory chill has been presented in a few works, most notably Neumayer's examination of energy policy.<sup>52</sup> Although the literature on regulatory chill suggests that it might not be directly testable; that is, it is difficult to show something that did not occur might have otherwise occurred, following the lead of the above noted work, observation of potential regulatory chill can and will be sought through circumstantial evidence.<sup>53</sup>

Although the scope of this research is limited and will not draw any general conclusions about the effectiveness of future environmental policies and agreements, it should illustrate the difficulties, if any, that the Canadian government faces when trying to comply with both trade and environmental agreements.

This will be examined by proposing the following hypotheses:

---

<sup>49</sup> Esty and Geradin, "Environmental Protection and International Competitiveness" *Journal of World Trade* (1998 32(5)).

<sup>50</sup> Mabey and McNally "Foreign Direct Investment and the Environment: From Pollution Haven to Sustainable Development" *WWF* (UK: Surrey, UK).

<sup>51</sup> Bachrach and Baratz "Two Faces of Power" *The American Political Science Review* (Vol. 56, No.4 Dec., 1962) pp947-952.

<sup>52</sup> E. Neumayer, "Do Countries fail to Raise Environmental Standards? An Evaluation of Policy Options Addressing 'Regulatory Chill'" *Journal of Sustainable Development* (2001 4(3)). For more examples of testing regulatory chill, see Organisation for Economic Co-operation and Development *Environmental Issues in Policy-Based Competition for Investment: A Literature Review* (OECD, April 04/02) found online at [http://www.oilis.oecd.org/oilis/2001doc.nsf/LinkTo/env-epoc-gsp\(2001\)11-final](http://www.oilis.oecd.org/oilis/2001doc.nsf/LinkTo/env-epoc-gsp(2001)11-final).

<sup>53</sup> See E. Neumayer, *Greening Trade and Investment* (London: Earthscan, 2000).



- i. *The federal government's receptiveness to making regulations based on environmental agreements has been lessened or 'chilled' since the implementation of the NAFTA.*
- ii. *The nature of recommendations made to governments through agencies mandated to make such proposals has changed, so as to take account of the official preference for trade liberalization since the implementation of the NAFTA.*

The first hypothesis suggests that there is in fact a change in the government's policy-making decisions concerning certain environmental agreements since the implementation of the NAFTA. As previously mentioned, this has been suggested to exist in a number of discussions on resources and environmental taxes.<sup>54</sup> In Canada, similar observations could be made regarding environmental agreements since NAFTA.<sup>55</sup> The literature, however, is on the most part purely speculative for it is both difficult to measure regulatory chill, and not much time has past since the implementation of NAFTA to conduct a thorough test.

The second hypothesis goes even further to suggest that not only is it expected that the government's receptivness towards environmental protection has declined by the preference for trade liberalization, but so has the institutional structures that are mandated

---

<sup>54</sup> E. Neumayer, *Greening Trade and Investment* (London: Earthscan, 2000); E. Neumayer, "Do Countries fail to Raise Environmental Standards? An Evaluation of Policy Options Addressing 'Regulatory Chill'" *Journal of Sustainable Development* (2001 4(3)); Esty and Geradin, "Environmental Protection and International Competitiveness" *Journal of World Trade* (1998 32(5)).

<sup>55</sup> One example is the Ethyl Corporation out of court settlement with Canada and the lift of the ban MMT (see figure 2.2)

to make recommendations to the government. This hypothesis furthers the concept of ‘regulatory chill’ to intergovernmental actors that may have to change policy-making suggestions to accommodate the government’s ability to accept the recommendations. This would also suggest that the preference for trade liberalization through frameworks such as NAFTA not only affects the government structure, but those of intergovernmental organizations and institutions as well.

My research, which will be discussed in detail in the following chapter, looks at a binational environmental agreement that is concerned with the protection of the Great Lakes. The choice of case was largely based on the vast amount of area and jurisdiction the *Great Lakes Water Quality Agreement* (GLWQA) covers.<sup>56</sup> Environmental protection is a complex matter nationally, in regards to federal-provincial jurisdictions and inter-provincial relations. As well, the Great Lakes cover two countries, which necessitates transboundary compliance. Finally, the Great Lakes themselves are important in different ways to various interests, thereby involving different provincial and federal ministries. For example, transportation, fishing, and industry are dependent on the Great Lakes, as well as wildlife preservation, recreation, and providing drinking water to 10 percent of the combined populations of Canada and the US.<sup>57</sup>

---

<sup>56</sup> For more on the extent of multiple uses of the Great Lakes, see Mark Sproule-Jones, *Restoring the Great Lakes* (Canada: UBC Press, 2002).

<sup>57</sup> Government of Canada, *State of the Great Lakes* (Ottawa, 2000).

## **Chapter 3**

### **Methodology**

The following chapter outlines the methods used to test the case of regulatory chill of environmental regulations since the implementation of NAFTA in Canada. The choice of case, methodology, and research questions will be developed in this section. As well, this chapter will also discuss the limits to what can be discovered through doing a study.

#### **3.1 Methods and Research Hypotheses**

Finding an environmental agreement that extends through different eras of economic policy in Canada turned out to be a difficult task. Most international or transnational environmental agreements have developed in the last 10-15 years. Consequently, very little analysis has been done on the effects that trade liberalization might have on these agreements. Some of the more interesting and current multilateral environmental agreements such as the Kyoto Protocol on climate change and the Montreal Protocol on PCB reduction leave little time to analyze changes in Canadian environmental policy-making and implementation.<sup>58</sup>

The criteria for choosing an adequate agreement to use as a study had to be multifold. Most important was the length of time for which the environmental agreement has existed. In order to test the regulatory chill argument, an agreement must have been in force before Canada and the United States signed their 1989 free-trade agreement, and preferably, much longer. A second criteria for choosing a case was that the agreement had to cover an issue which required a significant degree of governmental regulation. The need for government regulation could create a potential conflict with the paradigm of free trade, as well as the fear of competitive disadvantage and capital flight. A third criteria was that the agreement had to deal with a transboundary issue between Canada and the US. Since this paper is concerned with testing for the existence of regulatory chill in environmental policy derived from international treaty obligations since the coming into force of NAFTA, choosing a binational agreement between the two trading partners was most appropriate. Finally, given the limited resources available for this project, a fourth criteria was that the environmental agreement had to have a large amount of pre-existing accessible information, with an organization mandated to oversee the agreement.

### **3.2 The Great Lakes Water Quality Agreement and the International Joint Commission**

The *Canada-US Great Lakes Water Quality Agreement* (GLWQA) met all of the requirements for testing for the existence of regulatory chill in Canadian environmental policy-making since the signing of the NAFTA. The GLWQA was signed by the parties

---

<sup>58</sup> At time of research, the Kyoto Protocol had only recently been ratified and yet to be internationally implemented.

in 1972 at a time when the Great Lakes were facing a major environmental crisis.<sup>59</sup> A massive decrease in fish population coupled with algae blooms and toxic levels of phosphorus led to the lakes being deemed uninhabitable.<sup>60</sup> The sewage released into the Great Lakes and the heavy flow of ships caused the closure of beaches and a threat to the future of the basin's ecosystem.<sup>61</sup>

The agreement, signed by Trudeau and Nixon in 1972, committed the parties to "restore and maintain the chemical, physical, and biological integrity of the waters of the Great Lakes Basin Ecosystem".<sup>62</sup> The main focus of the 1972 agreement was to reduce the over-enrichment of phosphorus in the lakes. The International Joint Commission (IJC), an organization established by the 1909 *Boundary Waters Treaty*, was given responsibility for overseeing the party's commitments to the agreement.<sup>63</sup> In 1978, the GLWQA was amended to include a commitment from the parties to eliminate persistent toxic substances from the basin.<sup>64</sup> The amendment also required the IJC to publish biennial reports as to the progress made by the parties in achieving the various

---

<sup>59</sup> The powers of the IJC are limited to the boundary waters only, except in so far as the 1978 GLWQA amendments provide an ecosystem approach which enables implementing agencies to extend recommendations to cover watersheds plus Lake Michigan.

<sup>60</sup> "Large dead zones were a feature of ... lake [Erie] in the 1960s and early 1970s when heavy loading of phosphorous and other polluting nutrients created a cycle of plants and decaying material that used up oxygen supplies" from J. Bartlett "Lake Erie: Is Clearer Cleaner?" *Erie Times-News* (09/29/03) For more on the pollution of Lake Erie, see J. Hubschman "Lake Erie: Pollution Abatement, Then What?" *Science*, (New Series, Vol. 171, No. 3971, Feb. 12, 1971) pp. 536-540

<sup>61</sup> For more on the state of the Great Lakes leading up to the GLWQA see EPA/Environment Canada, *Rising to the Challenge: Celebrating 25<sup>th</sup> Anniversary of the Great Lakes Water Quality Agreement* found at Environment Canada website <http://www.on.ec.gc.ca/water/greatlakes/data/celebrate-glwqa/intro.html>

<sup>62</sup> Great Lakes Water Quality Agreement

<sup>63</sup> Article II Great Lakes Water Quality Agreement of 1978

<sup>64</sup> The Love Canal tragedy reached public attention preceding this amendment. However, the impetus for the GLWQA came from IJC committee recommendations in the 1960's, not from the Love Canal. For more on the Love Canal disaster, see Eckardt C. Beck "The Love Canal Tragedy" *EPA Journal* (1979). found at EPA website: <http://www.epa.gov/history/topics/lovecanal/01.htm>.

commitments laid out in the agreement. These reports are also required to make non-binding recommendations to the parties as to how they might achieve the various goals of the agreement.<sup>65</sup> The IJC uses information collected from public forums, as well as from the Great Lakes Water Quality Board and the Great Lakes Science Advisory Board in the preparation of its biennial reports. The first report was released in 1982. In 1987 the GLWQA was again amended to establish the parties commitment to implement Remedial Action Plans and Lakewide Management Plans to deal with specific problem areas of pollution in the Great Lakes, as well as extending the agreement to address air quality issues.<sup>66</sup>

The GLWQA met the criteria for its length of implementation. From 1982 until 2002, the IJC has released 11 biennial reports (ten of which will be used in this project) examining what has been done and what still needs to be done for the parties to comply with the terms of the agreement. This time period covers 20 years in which there have been government regime changes and shifts in economic policies. Since the GLWQA is concerned with the protection and preservation of the Great Lakes, the call for regulation of daily business matters (such as the use of persistent toxins in industry, lower transportation flow, and restrictions on fishing activities) has serious implications for the liberalization of trade between the two countries.

---

<sup>65</sup> Article VII of the Great Lakes Water Quality Agreement 1978

<sup>66</sup> Revised Great Lakes Water Quality Agreement of 1978, as amended by Protocol signed November 18, 1987.

The GLWQA also met the second third and fourth criteria for case selection. As the Great Lakes fall between Canada and the US, it is an ideal binational agreement for it addresses the largest freshwater area in the world. The area also contains eight states and one province, while being home to a population of over 35 million people.<sup>67</sup> It is important to note that this research is not disputing whether satisfactory progress has been made to restoring the Great Lakes, nor is this concerned with the effectiveness of the IJC or government programmes in relation to Great Lakes cleanup. This research is using the GLWQA as a case in which to test 'regulatory chill'.<sup>68</sup>

**Table 3-1 Criteria for Case Choice**

<b>Criteria</b>	<b>Great Lakes Water Quality Agreement</b>
<b>1. Length of the agreement</b>	<b>Came into force 1972</b>
<b>2. Scope of the agreement</b>	<b>Covers multiple jurisdictions and agencies</b>
<b>3. Transboundary agreement (Canada-US)</b>	<b>Binational Agreement between Canada and the United States</b>
<b>4. Accessibility of Information</b>	<b>Large amount of accessible information through government agencies, non-governmental organizations, state and provincial governments, universities and science and research organizations</b>

<sup>67</sup> IJC First Biennial Report under the Great Lakes Water Quality Agreement of 1978 p1.

<sup>68</sup> For more on a critical review of the GLWQA, see Michael Donahue, "The Case for Good Government: Why a Comprehensive Review of the Great Lakes Water Quality Agreement is Needed." *Toledo Journal of Great Lakes Law, Science and Policy* (Vol. 2 No. 1, Fall 1999), Mark Sproule-Jones. *Restoring the Great Lakes* (UBC: UBC Press, 2002)

## The International Joint Commission

The International Joint Commission is a binational organization that has significant powers to resolve disputes between Canada and the US. Established by the Boundary Waters Treaty of 1909, the IJC was mandated to ensure that neither country would take unilateral actions that could injure the other nation, and a prohibition of transboundary water pollution.<sup>69</sup> The IJC structure is based on an independent model of dispute resolution, comprising of three commissioners from each country that pursue an arms length, objective approach to dealing with bilateral disputes. Other than overseeing the implementation of the GLWQA, the IJC is further entrusted with the process of approval of projects affecting boundary or transboundary waters and may regulate the operation of these projects.<sup>70</sup> The IJC has been viewed as an interesting example of a binational organization that is able to maintain neutrality given the asymmetrical interdependencies that exist between the two nations. Keohane and Nye state that “the IJC has developed a tradition of rarely dividing by nationality, a tradition well suited to the transnational pattern of cleavages on many boundary water issues.”<sup>71</sup> Since its inception, the IJC has been a central force in both the development and maintenance of the GLWQA along with its 1978 amendment and 1987 protocol.<sup>72</sup> As well, the IJC has conducted research on the

---

<sup>69</sup> Article IV of the Boundary Waters Treaty of 1909 from Bruce Doern and Thomas Conway, *The Greening of Canada: Federal Institutions and Decisions*.(Toronto: University of Toronto Press 1995) p134.

<sup>70</sup> For a full list of the roles of the International Joint Commission see the IJC website at [www.ijc.org](http://www.ijc.org).

<sup>71</sup> Robert O. Keohane and Joseph S. Nye, Jr. “Introduction: The Complex Politics of Canadian-American Interdependence” *International Organization* (Vol. 28, No. 4, “Canada and the United States: Transnational and Transgovernmental Relations” Autumn, 1974), pp. 595-607.

<sup>72</sup> The IJC can largely deal with matters only if both national governments refer an issue to it.



selling of bulk water<sup>73</sup> as well as identified Areas of Concern for Remedial Action Plans.<sup>74</sup>

### **3.3 Outline of the research**

The scope of the research will be based primarily on a) the recommendations contained in the biennial IJC reports in key areas of the GLWQA, and b) the government's response to these recommendations. By examining the recommendations and responses to the recommendations over a twenty-year period, the aim will be to analyze the information based on the hypotheses of 'regulatory chill' of environmental regulation.

The project will therefore exam the recommendations released by the IJC over three main time periods:

1. 1982-1986 The pre free trade era
2. 1988-1992 The FTA era and the pre NAFTA era
3. 1994-2000 The NAFTA era

These time periods were chosen for they represent three phases of trade liberalization in Canada. The first period (1982-1986) can be seen as a time in which Canada and the US had not completely developed a free trade region. The 1988-1992 period represents the

---

<sup>73</sup> IJC, *Protection of the Waters of the Great Lakes: Final report to the government of Canada and the United States*. (IJC, 1999).

<sup>74</sup> For more on an analysis of Remedial Action Plans and the multiple uses of the Great Lakes, see Mark Sproule-Jones. "Institutional Experiments: Great Lakes Restoration." *Canadian Journal of Political Science* (Vol. 25, 2002).

early years of free trade between Canada and the US. The third period of 1994-2000 is the present NAFTA era. This era began with the implementation of NAFTA.

### **3.4 Limits to the Research**

There were, of course, many other changes that did occur in this time period that might account for changes in both recommendations and government's response to the recommendations. Political changes in the composition of the federal government, is one issue which could effect such matters. Political changes in Canada align closely with the three time periods of study, and as such, political agendas of the party platforms could be a plausible explanation to changes in environmental regulation<sup>75</sup>. However, it can equally be argued that the environment was really a non-partisan issue in the three main political changes. Although examining the political change in both the federal and provincial government as a cause of regulatory chill is not the focus of this project, it could be a focus of future research.

---

<sup>75</sup> Federally, the Trudeau Liberals held power from the inception of the *GLWQA* in 1972 until 1984 (with exception to Clark's 9 month reign in 79-80, and Turner for a few months in 1984) The Conservative Mulroney government took power from 1984 to 1993, which covered a large part of the pre-CUSFTA era and the entire CUSFTA era. Chretien's Liberals took power at the start of the NAFTA era until the final year of analysis in 2000. Ironically, neither Mulroney's first parliament (1984-1988), nor Chretien's first parliament (1993-1997) were based on a platform of pursuing a regional trade agreement. For Ontario, the Davis Conservatives were in power from the *GLWQAs* inception in 1972 to 1985. The Peterson Liberals were in power from 1985-1990, the Rae NDP from 1990-1995 and the Harris Conservatives from 1995 to the end of the study. The US government had Carter's Democrats from 1977-1981, Reagan's Republicans from 1981-1989, Bush's Republicans from 1989-1993, and Clinton's Democrats from 1993-2001.

A second major change over the time period is the advancement of science and technology and the resulting new knowledge that came about because of the increase<sup>76</sup>. This is exemplified by the new toxins that are continually being discovered in the Great Lakes. Furthermore, as the measuring capacity of scientific tools increases, more and more standard operating procedures employed by industry are being found to be detrimental to the health of the lakes. This will no doubt increase the complexity of the recommendations made over the twenty years of reports subjected to analysis here. However, the scope of this research is concerned with the government's response to recommendations made by the IJC and is not based on the complexity of the recommendations themselves.<sup>77</sup>

A third significant change in the period under study has been the rise of interest groups/NGOs concerned with the protection of the Great Lakes Basin. Currently there are many such groups ranging from grassroots community efforts to clean up local beaches to major environmental organizations lobbying to protect the ecosystem and preserve the drinking water.<sup>78</sup> This could pressure the IJC to make recommendations as

---

<sup>76</sup> The role of science on legitimizing policy in times of uncertainty has been developed by a number of scholars. For more on the role of science and ideas on environmental policy, see Haas, "Conclusion: Epistemic Communities, World Order, and the Creation of Reflective Research Program" *International Organization* (Volume 46, Issue 1, "Knowledge Power, and International Policy Coordination" Winter, 1992) pp367-390; P. Haas, "Introduction: Epistemic Communities and International Policy Coordination." *International Organization* (Volume 46, Issue 1, "Knowledge, Power, and International Policy Coordination" Winter, 1992) pp1-35; P. Haas, *Saving the Mediterranean: The Politics of International Environmental Cooperation*. (NY: Columbia University Press, 1990); A. Zito, "Epistemic Communities, European Union Governance and the Public Voice." *Science and Public Policy* (Volume 28, number 6 December 2001) p465-476.

<sup>77</sup> Although this research is not concerned with the complexity of the recommendation itself, it does however account for the strength of the recommendation. The distinction is made by examining what resources are being required (see proposition 4 of the test) in order for a recommendation to be implemented. Therefore, a complex recommendation might not be a strong recommendation.

<sup>78</sup> See, for example, the Great Lakes Information Network (GLIN) online at [www.great-lakes.net](http://www.great-lakes.net)

well as influence the willingness of government to adhere to them. These indirect pressures will not be factored into the paper for the sheer difficulty and time constraints dealing with them would represent.

### **3.5 Research Questions**

With examining the biennial recommendations by the IJC and the subsequent government responses to the recommendations, an attempt will be made to answer the following questions so as to assess the validity of the project's principal hypotheses:

1. Has the volume of recommendations made by the IJC changed over the last two decades?
2. What has been the volume of recommendations made by the IJC that the Canadian federal or provincial governments have formulated into environmental policy and professed to implement over the last two decades?
3. Has the proportion of IJC recommendations that the Canadian federal or provincial governments have formulated into environmental policy and professed to implement changed over the last two decades?
4. Has the nature of recommendations made by the IJC changed over the last two decades? In other words, have the recommendations been more consistent with trade liberalization between the two countries?

The first question will require a count of the total volume of recommendations made by the IJC in each biennial report.<sup>79</sup> When examining the biennial reports, it was observed

---

<sup>79</sup> It should be observed that this will not include every recommendation made through other reports, such as annual reports and meetings of committees, public forums, or special reports.

that the methods of categorizing the recommendations changes from report to report. For example, the *Fifth Report* states general recommendations and then groups sub-recommendations within each. Another method, used for the first four reports, is a simple categorical approach without general recommendations, but specifics only. I have resolved this by considering every recommendation as separate, thus eliminating any problems with having multiple recommendations within a general heading or sub-heading.

The second research question, identifying the volume of recommendations formulated and implemented into Canadian environmental policy, presents quite a difficult task. When examining the government's response to the recommendations, it is clear that certain issues are outright adopted or rejected. However, a large number of the recommendations fall into categories of either being partially implemented (being met with the promise of future implementation), or a reply that adequate measures have already been taken for addressing the issue. In these cases I had to apply a set of rules for analysis. Those recommendations that have been partially implemented have been examined from the perspective of a rough benefit analysis. In other words, if the major component of the recommendation has been implemented, then it qualifies as government following the recommendation. If, however, the government only implements a minor part of the recommendation, then it will not qualify as the government following the recommendation.<sup>80</sup>

---

<sup>80</sup> An important distinction to make in this process is that this project seeks mainly to analyze the written understanding about the implementation of recommendations by the federal government. The actual process of implementation of the recommendation is a complex procedure which in many cases is conducted at a provincial level and subject to many more conditions.

As for the promise of future implementation of a recommendation, I had to develop a reasonable time limit in which to gauge progress. Therefore, if the recommendation is professed to be implemented within two years of being released (that being by the next biennial report release) it will qualify for government following the recommendation. This allows the governments a reasonable amount of time to conduct research, budget, and implement the recommendation. As for the government stating that adequate measures for addressing the recommendation have already been taken, which is a common response, a similar time limit of suitable length should be applied retroactively. If the government had implemented a policy within eighteen months prior to the recommendation, then it will qualify as the government following the recommendation. This allows room for potential discrepancy from when research was conducted by the IJC to when the report was released.<sup>81</sup>

The third research question will compare the number of recommendations which have been professed to be implemented to the total number of recommendations for each report. This will be examined as a percentage in order to account for the variance in the volume of recommendations made from report to report.

The fourth research question will analyze the nature of recommendations made over the years. There are certain characteristics for recommendations such as what I have

---

<sup>81</sup> In some cases the – mainly in the first three reports, the governments simply did not respond to some of the recommendations. For this, some interpretation was necessary to determine whether the government had or had not implemented the recommendation. See the analysis for question 2 of the test for more.

classified as ‘weak’ recommendations (those that ask for a ‘continued effort’) to ‘strong’ ones, which require a significant amount of policy implementation, money, research and change. A comparison of weak to strong recommendations will be analyzed in each report to determine if the nature of recommendations has become weaker or stronger. The importance of this research question is to not only to examine if there is a change in pattern from the government accepting or rejecting ‘strong’ recommendations over a twenty year period, but also whether the institution making the recommendations has changed the strength of the initial recommendations.

The above research questions will be tested in the next chapter to reveal if there are any observable patterns in the biennial reports and responses which might suggest whether or not ‘regulatory chill’ might be occurring in the post-NAFTA era.

**Table 3-2 Research Questions and Tests**

<b>RESEARCH QUESTION</b>	<b>TEST</b>	<b>EXPECTED DIRECTION TO SUPPORT REGULATORY CHILL HYPOTHESIS</b>
<p>1. Has the volume of recommendations made by the IJC changed over the last two decades?</p>	<p>Count the total volume of recommendations for each biennial report and compare on a year to year and a time block basis.*</p>	<p>A decrease in the volume of recommendations made since the implementation of NAFTA.</p>
<p>2. What has been the volume of recommendations made by the IJC that the Canadian federal or provincial governments have formulated into environmental policy and professed to implement over the last two decades?</p>	<p>Determine the amount of recommendations that have been partially or completely implemented within 2 years of the recommendation for each biennial report. Compare on a year to year and a time block basis.</p>	<p>A decrease in professed implemented recommendations since the implementation of the NAFTA.</p>
<p>3. Has the proportion of IJC recommendations that the Canadian federal or provincial governments have formulated into environmental policy and professed to implement changed over the last two decades?</p>	<p>Convert the total volume of recommendations professed to be implemented in research question 2 to a proportion of total recommendations made for each biennial report. Compare on a year to year and a time block basis.</p>	<p>A lower proportion of IJC recommendations that were professed to be implemented by government since the implementation of the NAFTA.</p>
<p>4. Has the nature of recommendations made by the IJC changed over the last two decades? In other words, have the recommendations been more consistent with trade liberalization between the two countries?</p>	<p>Categorize each recommendation into 'strong' and 'weak' for each biennial report. Compare on a year to year and a time block basis.</p>	<p>Weaker recommendations made by the IJC since the implementation of the NAFTA.</p>

\* time block basis is the periods of 1982-1986, 1988-1992, and 1994-2000



## **Chapter 4**

### **Test**

Collecting and analyzing the recommendations and government responses to the International Joint Commission (IJC) reports involved consulting a number of sources. The later reports (6-10) were obtained on the IJC websites in full. The earlier reports were located at various libraries and the remainder were sent to me in hard copy from the IJC. The responses to the last three reports were found on the Environment Canada website. The remainder were found through Hansard, journals, NGO organizations, magazines, press releases and in other IJC reports.<sup>82</sup> Once the data was collected, it was analyzed so as to answer the four research questions.

#### **4.1 Research Questions**

##### **Research Question 1**

*Has the volume of recommendations made by the IJC changed over the last two decades?*

The first research question simply required a comparison of all 10 biennial reports released by the IJC without examining the government's responses. Figure 4.1 shows the volume of recommendations made by the IJC since 1982. The actual number of

recommendations made from report to report appears to be inconsistent. Figure 4.1 illustrates that the number of recommendations made for all 10 reports varied from 8 to 36, with an overall average of 18.5 recommendations. The years with the highest number of recommendations were 1986-1990, with 1996 and 2000 having the fewest recommendations made. Figure 4.2 shows the average volume of the three time periods of analysis (the pre free trade era before 1988, the CUSFTA era from 1988-1992, and the NAFTA era from 1993 to present). For the period from 1982-1986, the average volume of recommendations was just over 21. 1988-1992 the recommendations on average increased to 24, and 1994 to 2000, the average dropped to 13. Based on the recommendations released by the IJC, there have been changes in the volume of recommendations over the last two decades. On average, the volume decreased from the first decade of analysis to the second. The most significant increase in recommendations was between 1984 and 1986, with the most significant decrease being from 1988-1990.

## **Research Question 2**

*What has been the volume of recommendations made by the IJC that the Canadian federal or provincial governments have formulated into environmental policy and professed to implement over the last two decades?*

For research question 2, there were many variables to consider when examining the actual volume of recommendations were professed to be implemented into policy in Canada. First of all, the manner in which the government responded to the recommendations was confusing. These responses were sometimes presented in a way

---

<sup>82</sup> Annual reports by the Science Advisory board, as well as special reports prepared for the Government of

which appeared to indicate that the recommendations were being implemented when in reality they were not. To illustrate this, consider the following excerpt from the government of Canada's response to the fourth biennial report's recommendation on integrated monitoring:

#### IJC Recommendation

*The Parties and jurisdictions work cooperatively to make existing monitoring sites more multifunctional and to develop new integrated monitoring sites as part of their joint monitoring and surveillance program.*

#### Response to the Recommendation:

*The Master Site at Point Petre is an operational example of such a site which has been set up under the IADNA a second Canadian Master Site is currently being selected. .<sup>83</sup>*

At first read, it would seem that the government has worked towards implementing this recommendation. However, there is little in this answer that informs the reader when or where this site is going to be, how the selection process is taking place, or how these sites are going to be more multifunctional.

Such non-answer replies are a common occurrence in all of the government responses to the reports. A degree of 'reading between the lines' and further inquiry is required to decipher whether the government actually has followed through in a reasonable timeframe. One method of determining whether or not an unclear response actually

---

Canada and the US were also sources of information provided by the IJC.

<sup>83</sup> Canada's Response to the 4<sup>th</sup> biennial report.

indicates that the recommendation will be adopted (or has been adopted) was simply to see if the same recommendation was made in the next report. Many times (especially in relation to the creation of a bi-national toxic strategy)<sup>84</sup> the promise of rapid implementation was echoed through three or four biennial reports before the recommendation would be implemented. Another method used was to look through other IJC reports released more frequently through different advisory boards.<sup>85</sup> Such reports would sometimes list the efforts expended by governments in adopting the biennial report's recommendations. As well, using this method was quite useful for the earlier biennial reports in which there was no official responses given by the government on all recommendations made. Finally, the rules developed in the methodology chapter for determining whether or not a recommendation was implemented were employed. Governmental action had to have been taken either within the 18 months before the IJC report was released or the 2 years following release with the major element of the recommendation acted upon.

Figure 4.1 shows the actual volume of recommendations professed to be implemented compared to the volume of IJC recommendations made for each biennial report. The lowest volume of positive responses to the recommendations were in 1982, 1984, and 2000, with 5 each. The highest volume of positive responses to the recommendations was in 1986 with 25, followed by 1988 with 19. The average volume of implemented

---

<sup>84</sup> The bi-national toxic strategy concept was introduced in the first biennial report, and every subsequent report until the strategy was partially implemented in 1990s.

<sup>85</sup> The IJC is composed of over 20 boards. Most of the information was collected through the Science Advisory Board, Water Quality Board, and the Air Quality Advisory Board. These boards publicly release annual reports and occasionally semi-annual reports which are published and released on their website. [www.ijc.org](http://www.ijc.org).

recommendations from 1982-2000 was 11.3 with the overall average of recommendations in that time period of 18.5. Figure 4.2 illustrates the average volume of recommendations implemented over the three time periods. 1982-1986 had an average of 11.7 recommendations implemented, followed by 14 between 1988-1992. The years of 1994-2000 had an average of 9 implemented recommendations.

### **Research Question 3**

*Has the proportion of IJC recommendations that the Canadian federal or provincial governments have formulated into environmental policy and professed to implement changed over the last two decades?*

Research question 3 looks at the same general question posed in research question 2 but as a proportion instead of a real number. The importance of using a proportion is to deal with the inconsistent number of recommendations made from report to report. As already revealed in the previous two research questions, the number of recommendations made from report to report varied from eight to thirty-six. This substantial change in the overall volume of recommendations is reflected in the implemented policies shown in the last section (research question 2). Research question 3 therefore allows the proportion alone to be examined to reveal if there has been any change or trends to the proportion of recommendations implemented in the twenty-year period.

Figure 4.1 shows the proportion of recommendations professed to be implemented for each of the 10 biennial reports. Over a twenty-year period, government implemented less

than fifty percent of the recommendations made two times (1982, 1984). The highest proportion of recommendations implemented was in 1998 with 83 percent.

On average, the government agreed to implement 60 percent of IJC recommendations made over the twenty-year period of analysis. Figure 4.6 shows the average proportion of recommendations professed to be implemented in the three main time periods of analysis. During the pre free trade era (1982-1986), the government agreed to implement 47 percent of recommendations made. The CUSFTA era (1988-1992) the government agreed to implement 60 percent of recommendations made, while in the NAFTA era (1994-2002), 68 percent of the recommendations were professed to be implemented.

#### **Research question 4**

*Has the nature of recommendations made by the IJC changed over the last three decades? In other words, have the recommendations been more consistent with trade liberalization between the two countries?*

Now that the volume and proportion of proposed implemented recommendations have been charted for analysis, the research moves in a different direction. So far the concern has been focused on comparing the implemented recommendations over a twenty-year period. For the purposes of the hypotheses, however, these observations can only reveal so much about the possible occurrence of regulatory chill. Another important aspect which research question four seeks to answer is: have the nature of the recommendations changed over the last twenty years. To try and answer this question, each

recommendations wording was examined to determine what the strength of it was. In other words, did the recommendation require extensive changes to the status quo, or a large amount of resources to meet its goal? Those that did require a substantial effort in order to achieve compliance were categorized as strong recommendations. Those that did not were categorized as a weak recommendation. Such recommendations often involved little more than that attention ought to be drawn to an area or the continuation of existing mechanisms. An example of a weak recommendation, taken from *the Third Biennial Report* (1986) is as follows:

*The Commission recommends that the Parties proceed cautiously with the use of risk assessment as a basis for pollution control regulations.*<sup>86</sup>

This recommendation presents itself as caution rather than a request for policy change. Throughout the biennial reports, there are many recommendations that are similar in nature to the above mentioned example. These recommendations have been classified as weak.

Strong recommendations are varied in their request for change. They could be requesting substantial money and resources be applied to a particular existing program, or require that new policies or programs be established to meet the GLWQA's mandate. The following is an example of a strong recommendation, once again taken from the *Third Biennial Report*:

---

<sup>86</sup>Third Biennial Report International Joint Commission December 1986 Recommendation 36, p42.

*The Commission recommends that the Parties research, develop and implement a program of sampling geochemical and microbiological constituents in groundwater and develop standard protocols for the effective monitoring of leached movement from toxic waste repository sites.*<sup>87</sup>

In this recommendation, there is a substantial change being requested by the IJC. In order to comply with this recommendation the government would have to use resources to develop a new program. Sorting the weak from the strong recommendations is an important distinction for testing the second hypothesis of this project. If there has been a chilling effect on the IJC and similar arms-length bodies in recent years then the nature of the recommendations might be weaker.

Figure 4.3 shows the actual volume of strong recommendations made for each of the reports. The years with the largest number of strong recommendations were in 1988 and 1986 with 21 and 20 respectively. The years with the least number of strong recommendations were 2000, 1982, and 1984 with 6. The overall average of strong recommendations over the 20 years was 11. Figure 4.4 reveals the averages of strong recommendations from the three time periods. It shows that 1982-1986 had an average of 11, 1988-1992 had an average of 15, and 1994-2000 had an average of 8.

---

<sup>87</sup> Third Biennial Report International Joint Commission, December 1986 Recommendation 7 p 13.



Similar to the data on implemented recommendations, a proportion of strong recommendations to total recommendations was also applied as to take in to consideration the varied volume of recommendations from report to report. Figure 4.3 shows this proportion for all the reports, revealing a higher proportion of strong recommendations were made in the years 2000, 1996, and 1992. The lowest proportion of strong recommendations were in the years 1982 and 1984. Figure 4.4 illustrates that the proportion of recommendations from the time period of 1982-1986 was 47 percent, 63 percent between 1988-1992, and 66 percent between 1994 and 2000.

Having reviewed the basic data I can now proceed to analyze it and attempt to draw conclusions as to whether or not there is sufficient circumstantial evidence to support the claim that liberalization is leading to a regulatory chill in the field environmental policy making.

## **4.2 Analysis of Findings**

### **Research question 1**

*Has the volume of recommendations made by the IJC changed over the last two decades?*

For the first research question, examining whether there has been a change in the volume of recommendations made by the IJC over the twenty-year period of analysis, the aim was to pin-point when the volume of change occurred and compare it with the timeline of

NAFTA's implementation. What the study showed, was that although there was a change in the volume of recommendations made by the IJC, this change appeared to be unexplained and reveals very little about the reasons for either an increase or decrease in recommendations made. Apart from the major increase in recommendations made in 1986 and 1988 the test showed no specific pattern over the twenty-year period.<sup>88</sup>

Because of the major increase in the above mentioned years testing the average over the three time-periods is skewed.<sup>89</sup> To answer why those two years produced such high numbers of recommendations compared to other years would be purely speculative, but could relate to a change in the decision-making process of the IJC and how they chose to release their information.<sup>90</sup> As well, those two reports were released at a time when there was considerable public awareness of environmental issues such as acid rain and the thinning of the ozone layer.<sup>91</sup> There were other problems associated with this test, including an change in the manner in which the recommendations were presented. For example, the second biennial report was mainly a bridge between the 1<sup>st</sup> and 3<sup>rd</sup> reports. In some cases, the second report merely repeated the inaugural report's recommendations. The fifth report was presented in a two book format with general recommendations lettered (A,B,C...) and specific recommendations numbered. The 6<sup>th</sup>

---

<sup>88</sup> The exception is that the 1982-1984, and the 1986-1988 reports had the same number of recommendations.

<sup>89</sup> The analysis of the three time periods does reveal that there is an overall decrease in volume of recommendations made by the IJC. However, this is mainly due to the years of 1986-1988 which produced extraordinarily high volume of recommendations (36 each).

<sup>90</sup> The Commissioners of the International Joint Commission for the 3<sup>rd</sup> and 4<sup>th</sup> biennial reports were the same. However the previous report (second) had on the most part different commissioners, as did the 1990 report. This could explain (in part) the difference in how the biennial reports were presented.

<sup>91</sup> In 1985, the government of Canada developed the 'Eastern Canada Acid Rain Program' in order to cap and reduce the levels of SO<sub>2</sub> emissions. In 1987, The Montreal Protocol on Substances that Deplete the Ozone Layer was signed. Both issues had developed a strong reaction and involvement from the public and media.

report not only listed 13 recommendations to the governments, but another 7 to private industry and municipal and provincial agencies. The findings for research question 1 do reveal that there has been an overall decrease in the recommendations made by the IJC since the implementation of the NAFTA.

## **Research question 2**

*What has been the volume of recommendations made by the IJC that the Canadian federal or provincial governments have formulated into environmental policy and professed to implement over the last two decades?*

In testing the second research question, a different set of problems arose out of the process. The major problem with this test was being certain that the recommendation was actually implemented. Even after developing a set of rules to determine whether implementation did occur (24 month window to implement with the major part of the recommendation adopted), there was still the occasional fuzziness regarding whether the recommendation was actually implemented. As well, budget cuts and provincial government changes have cut short the implementation process of a number of recommendations that were previously committed to.<sup>92</sup> Therefore the accuracy of some of these numbers are questionable. These above mentioned problems however, were not limited to my research alone. In fact, these issues have been echoed in the 2001 Auditor General Report on the federal government's commitment to the IJC and the GLWQA. The report concludes that:

The federal government has not provided the International Joint Commission with enough information to properly assess Canada's progress under the Great Lakes Water Quality Agreement. It has delayed answering the Commission's requests for information and responding to its recommendations. The federal government does no formal follow-up to ensure that it will complete the actions it identifies in its responses to the Commission's recommendations.<sup>93</sup>

Even given the uncertainty of compliance mentioned above, the test still remains an important and relevant tool for analysis of regulatory chill; for it can gauge –to a degree– the effort the government has made in regards to committing to particular environmental regulation recommendations made by the IJC.

Apart from the difficulties of showing that the numbers are accurate, the evidence of implemented recommendations over a 20-year period reveals one interesting finding. Since the volume of recommendations made by the IJC varies significantly from report to report, the government's ability to adopt the recommendations is based on this somewhat random pattern. Predictably, the years with the most recommendations adopted were the years with the highest number of recommendations made (1986, 1988). However, the same is not true for the least amount of recommendations adopted. Figure 4.1 shows that

---

<sup>92</sup> Considering that the environmental aspects of the Great Lakes falls under both federal and provincial jurisdictions, the budgets of both governments could have an effect on existing and future program and regulatory implementations. Federal and provincial budget cuts have cut short the implementation of a number of recommendations. For more on this, see the preceding footnote. For examples of this, see the introduction to the 8<sup>th</sup> biennial report.

1982 and 1984 have a low number of recommendations adopted. This could be explained because they were the first two reports released and that the process was in its early development. Looking at the three time periods, 4.2 reveals that the highest volume of recommendations were adopted in the years 1988-1992. This could be explained in a number of ways. Firstly, by the skewed volume of recommendations made during that time. This might also suggest that more recommendations were adopted after its infancy period (1982-1984) leading up to the implementation of NAFTA, than after NAFTA was signed.

### **Research question 3**

*Has the proportion of IJC recommendations that the Canadian federal or provincial governments have formulated into environmental policy and professed to implement changed over the last two decades?*

In terms of testing for the potential of regulatory chill since the implementation of NAFTA, the previous tests have been unable to make a case for a connection. This has been due to the limitations and problems that arose from the case selection, such as inconsistency of report content and inability to conclude that certain recommendations were adopted. However, given the problems mentioned, the third research question allows for the removal of the inconsistency issue found with the first test.

---

<sup>93</sup> "...Over the years, federal officials have provided technical expertise to the Commission's boards and study teams. However, the loss of scientific and technical capabilities as a result of budget cuts is putting this support at risk. Finally, the government has delayed its share of funding for the Commission's reference studies" From *The Commissioner of the Environment and Sustainable Development 2001 report-Chapter Section 8, The International Joint Commission: A Key Binational Organization*. Found at <http://www.oag-bvg.gc.ca/domino/reports.nsf/>.

Testing the proportion of recommendations implemented reveals an interesting finding. Although the proportion does jump around from report to report there is a general increase in adopted recommendations since NAFTA. It is not a very strong rise, but is observed again in Figure 4.2 with the comparison of the three time periods. This finding appears to be counter-intuitive to much of the environmentalist literature on potential effects of NAFTA on environmental policy. Furthermore, it appears to be a reversal of what would be expected when testing for regulatory chill. Although the results are too limited to make any sweeping generalizations, the results ought to raise skepticism regarding regulatory chill. Therefore, it can be observed through the above three tests that although there was a decrease in the volume of recommendations made since the implementation of NAFTA, the proportion of recommendations adopted by the government has increased.

#### **Research question 4**

*Has the nature of recommendations made by the IJC changed over the last three decades? In other words, have the recommendations been more consistent with trade liberalization between the two countries?*

The fourth research question was included to account for any measurement problems with the previous tests. It was quite useful in addressing whether either a large or small volume of recommendations released had strengthened or weakened the recommendations themselves. The goal of this test was to classify the strong recommendations from the weak. As a general rule, the weak recommendations were

presented in a manner which required little or no additional resources in order to comply. The strong always required some form of coordinated effort, resources, or regulation to comply. There were recommendations that did fall in a gray area, requiring some resources for their successful implementation.<sup>94</sup> Given my inability to measure and control for the impact which increases in science, technology and specialization might be having, this was not factored in to the test. It is possible that such factors might account for the slight increase in the amount of strong recommendations that were made in the later years.<sup>95</sup> However, this would account for only a minimal number of recommendations and therefore not affect the general focus of the test.

Like previous tests, the examination of the actual volume of strong recommendations followed a pattern similar to the inconsistent volume of recommendations made from report to report. Figure 4.6 shows this common pattern when charting the actual volume of recommendations with the volume of implemented recommendations and volume of strong recommendations. What was found to be most interesting on this test was examining the proportion of strong recommendations made over the twenty-year period. Figure 4.5 shows that there was a general increase in the proportion of strong recommendations made by the IJC from 1982-2000 except for the 1994 report which had a major decrease in strong recommendations. By the next report, however, the proportion increased again to the pattern it was following. This sudden decrease in strength of IJC

---

<sup>94</sup> A number of recommendations fell into this 'gray area', in which it was presented in an unclear manner as to the amount of resources required, and was followed by as equally as ambiguous response by government. In these cases, and without the resources or expertise to further break-down the recommendations, a certain amount of interpretation was necessary.

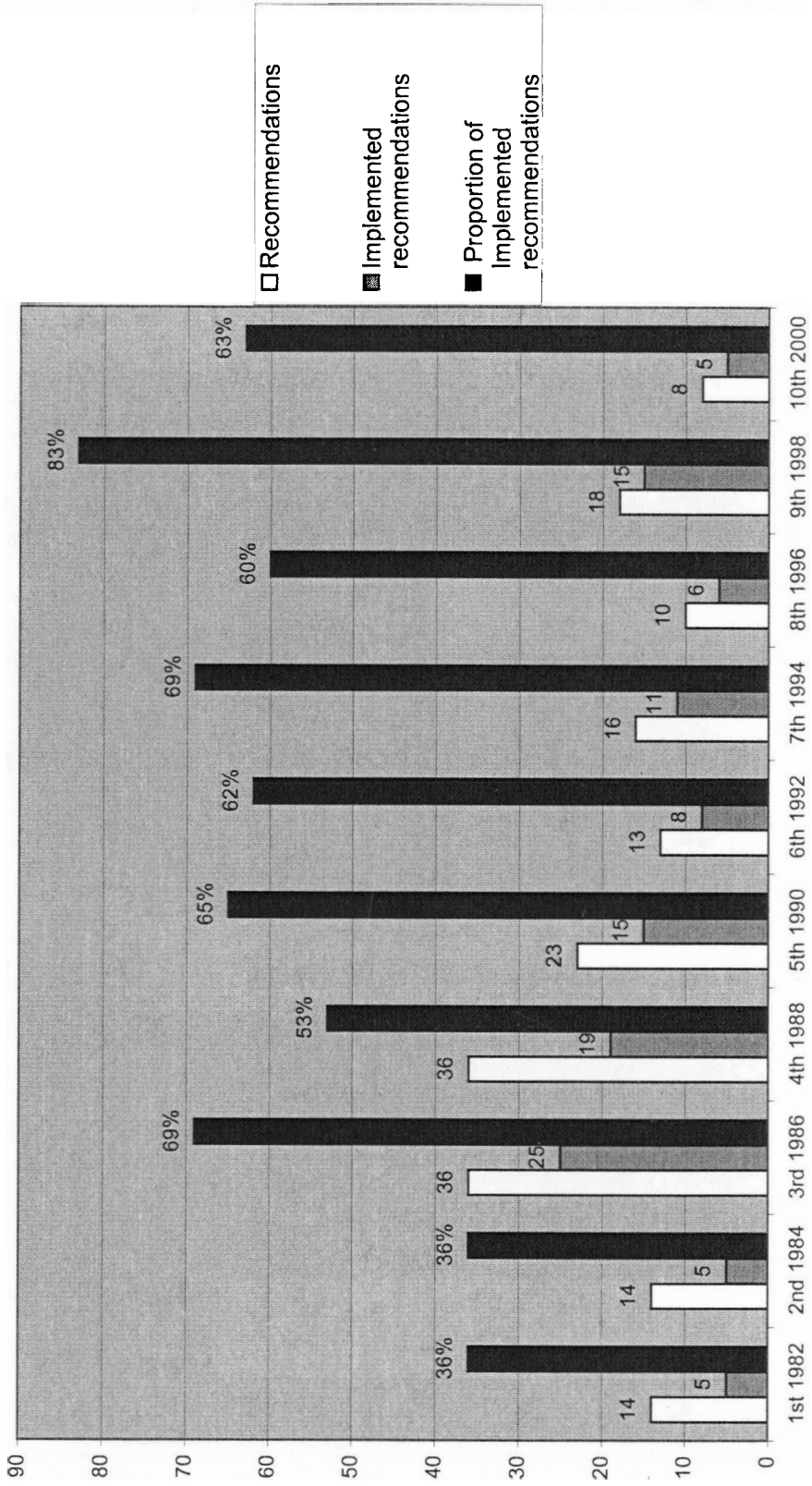
<sup>95</sup> For more on this see footnote 74.

recommendations occurred at the same time NAFTA was implemented. This could suggest that the IJC was concerned that the government might either not accept strong recommendations that might potentially conflict with the provisions of NAFTA.

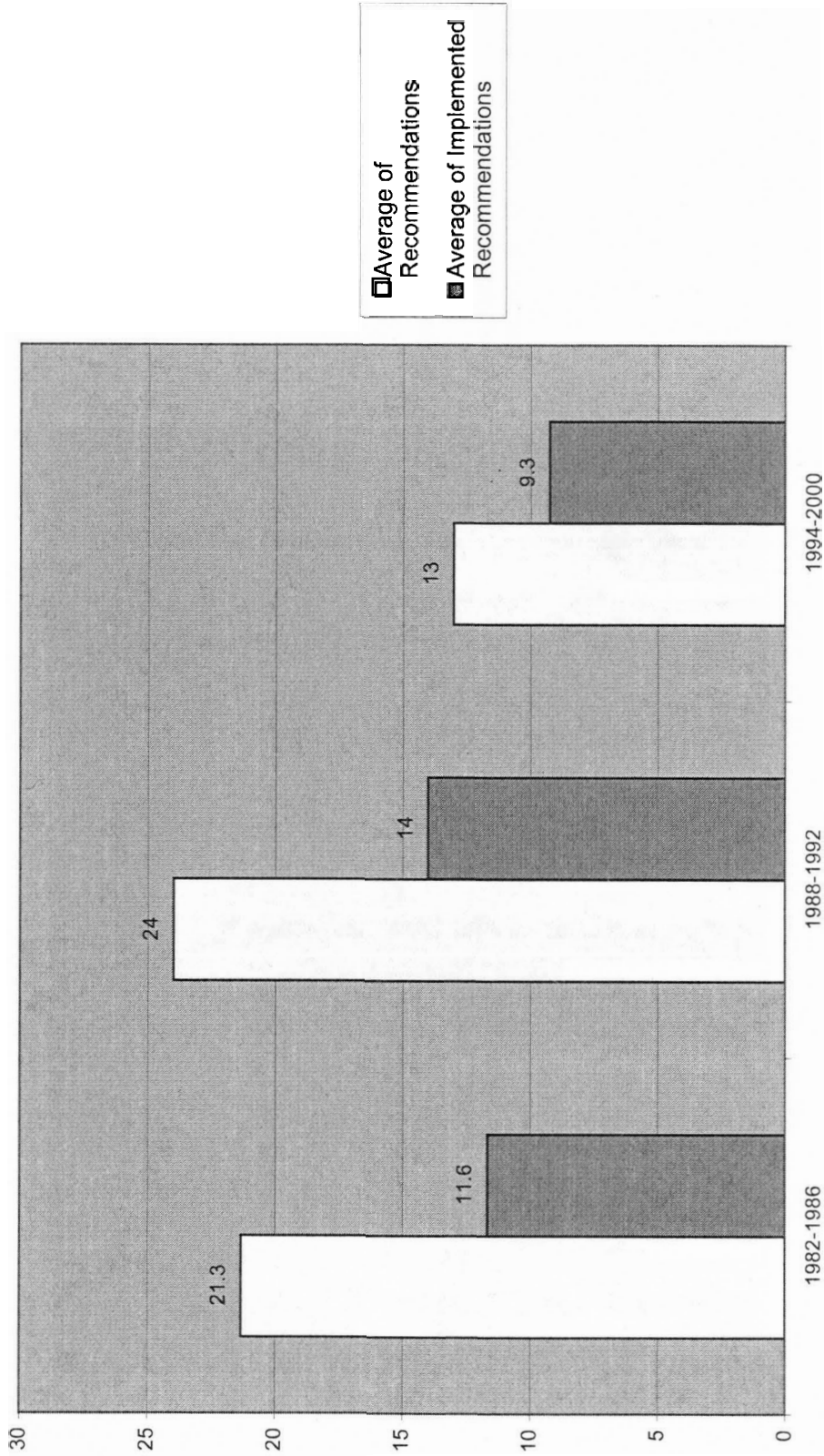
Alternatively, it could suggest the existence of some other variable that is not accounted for in the research. Figure 4.7 compares the proportion of implemented and strong recommendations. The report released in 1994, although having a significant reduction in strong recommendations made, was one of the best years for implemented recommendations. This could partially be explained by the weakness of the recommendations made.



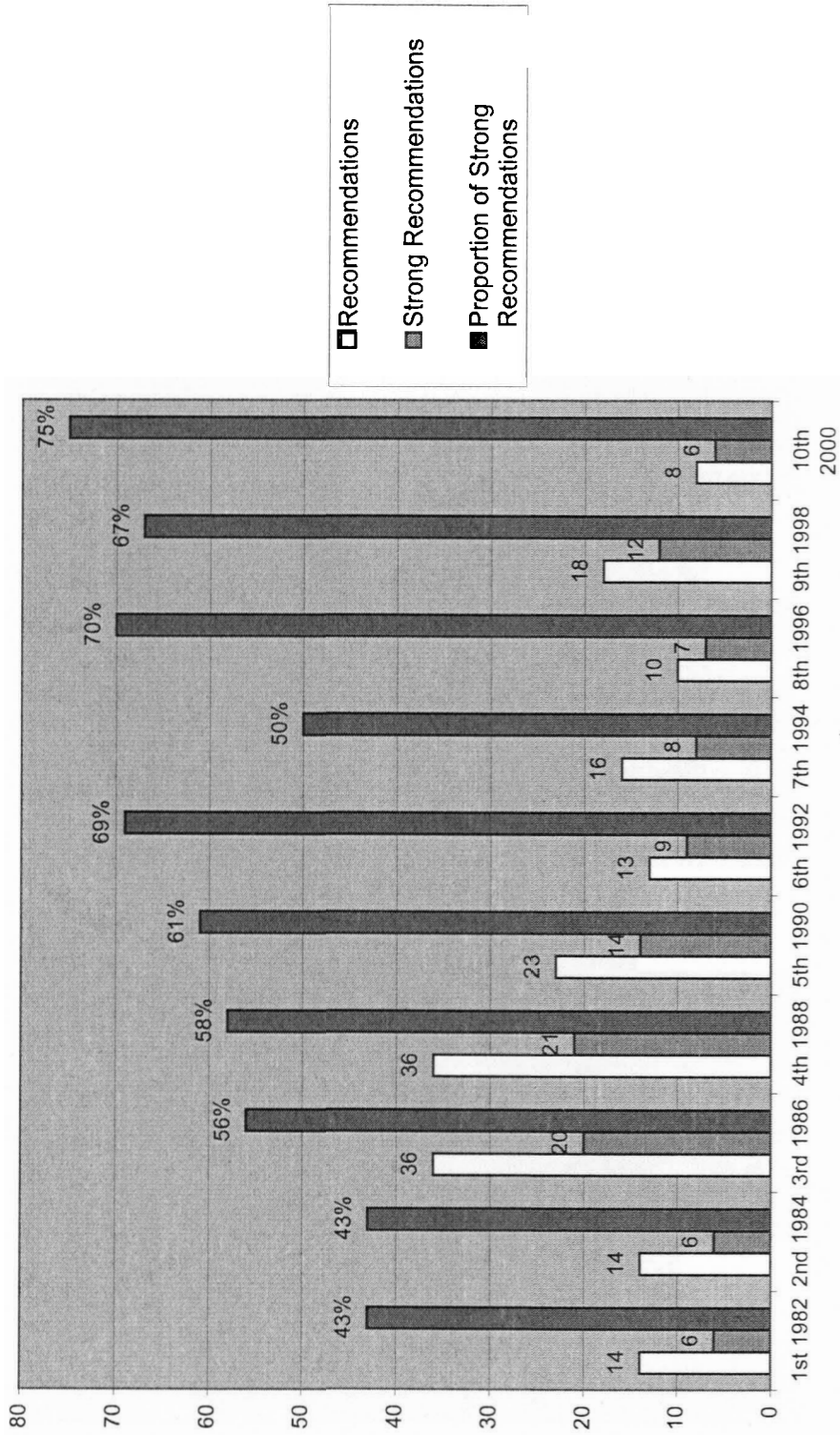
**Figure 4.1 Recommendations, Proposed Implemented Recommendations and Proportion of Proposed Implemented Recommendations**



**Figure 4.2 Average of Recommendations and Proposed Implemented Recommendations in the Three Time Periods**



**Figure 4.3 Recommendations, Strong Recommendations, and Proportion of Strong Recommendations**



**Figure 4.4 Strong Recommendations and Proportion of Strong Recommendations for Three Time Periods**

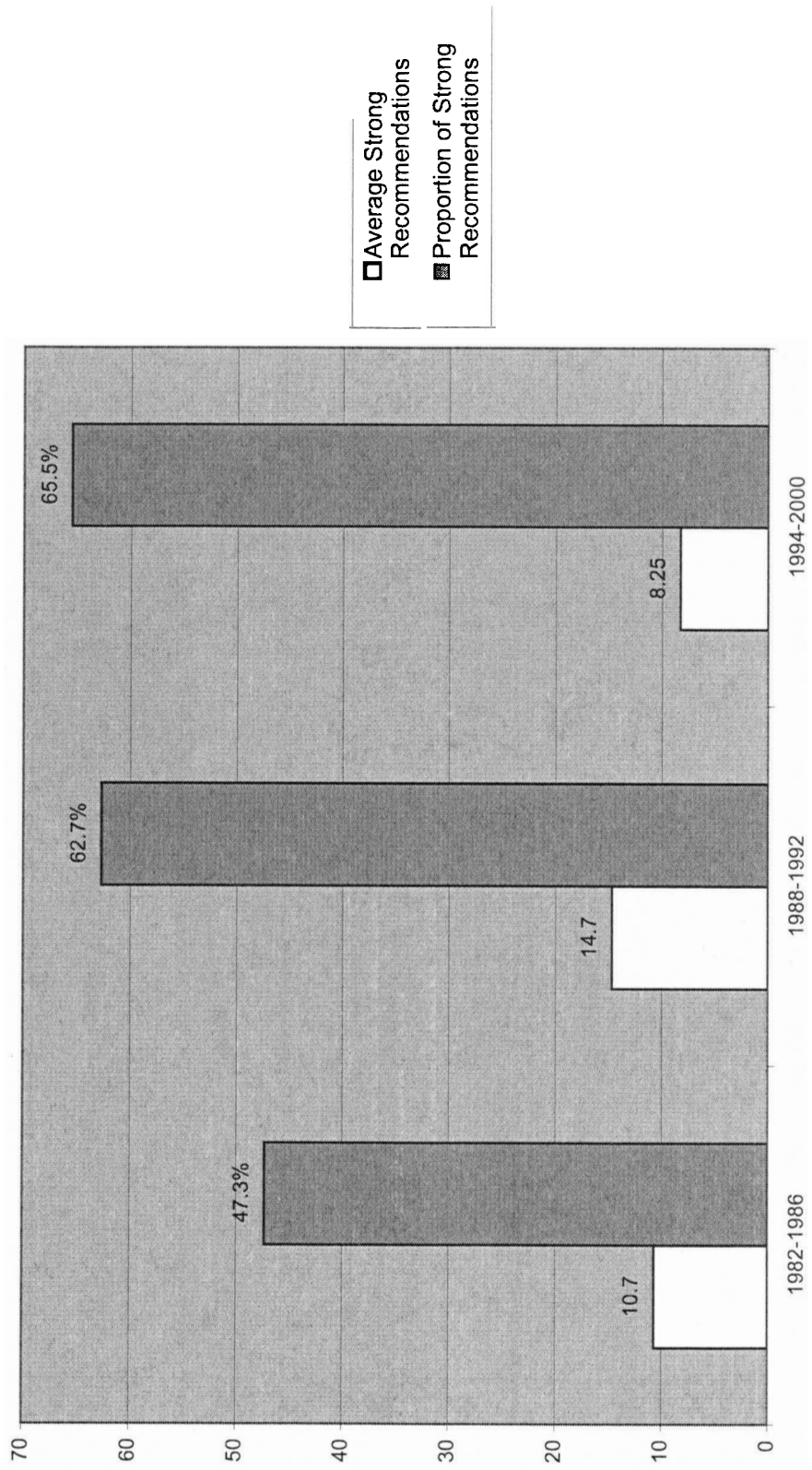


Figure 4.5 Proportion of Strong Recommendations

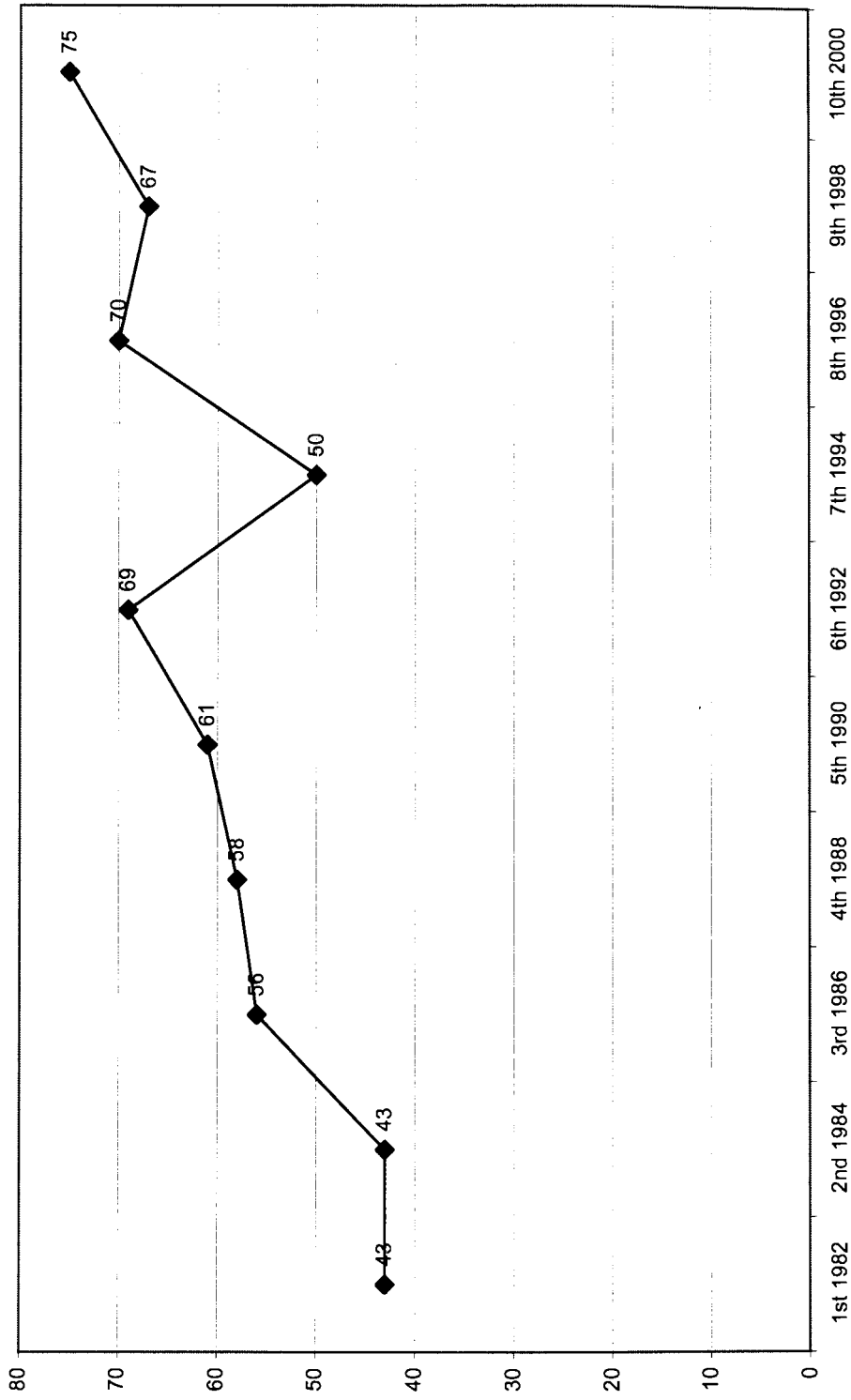


Figure 4.6 Average of Proposed Implemented Recommendations

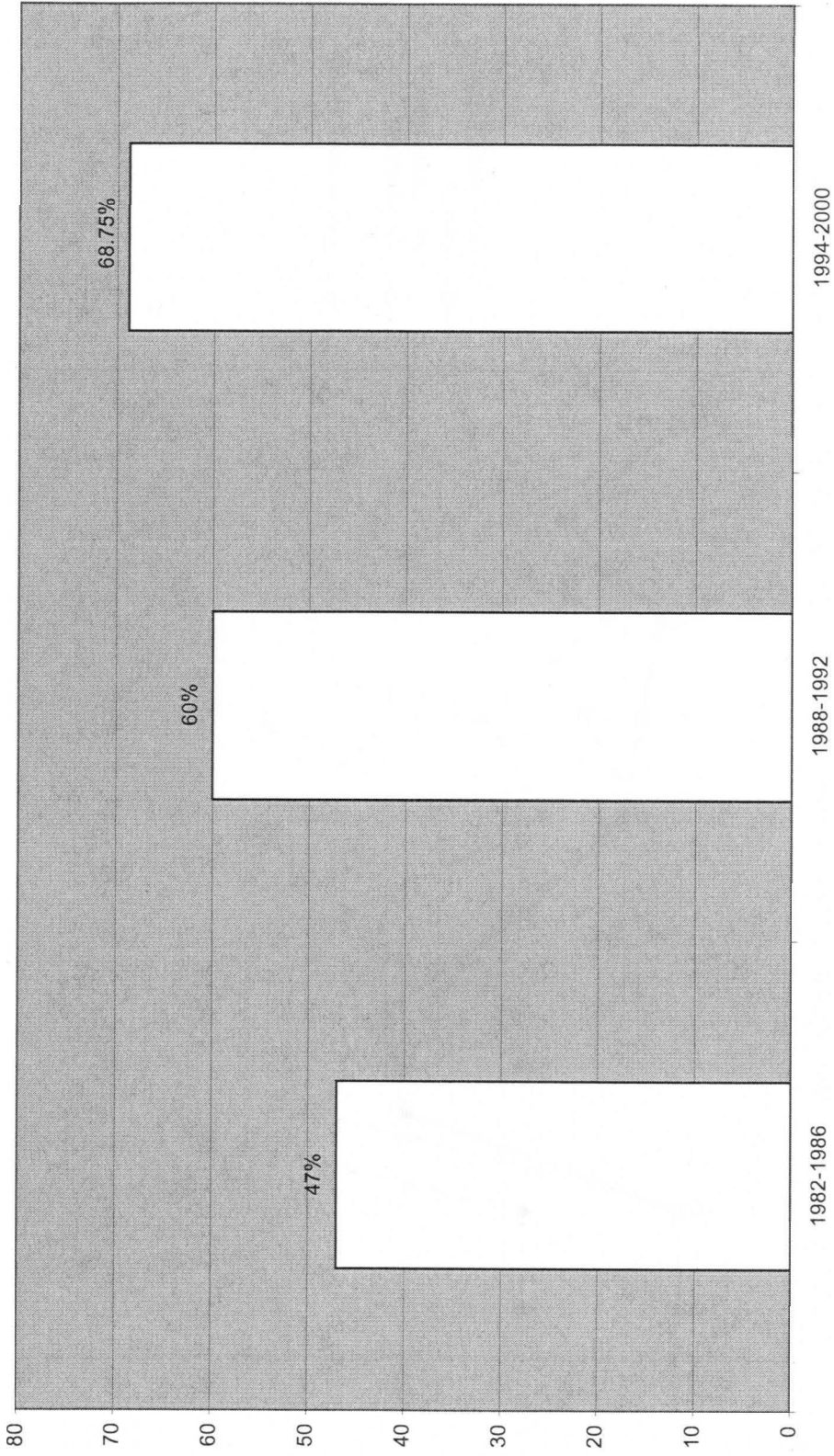


Figure 4.7

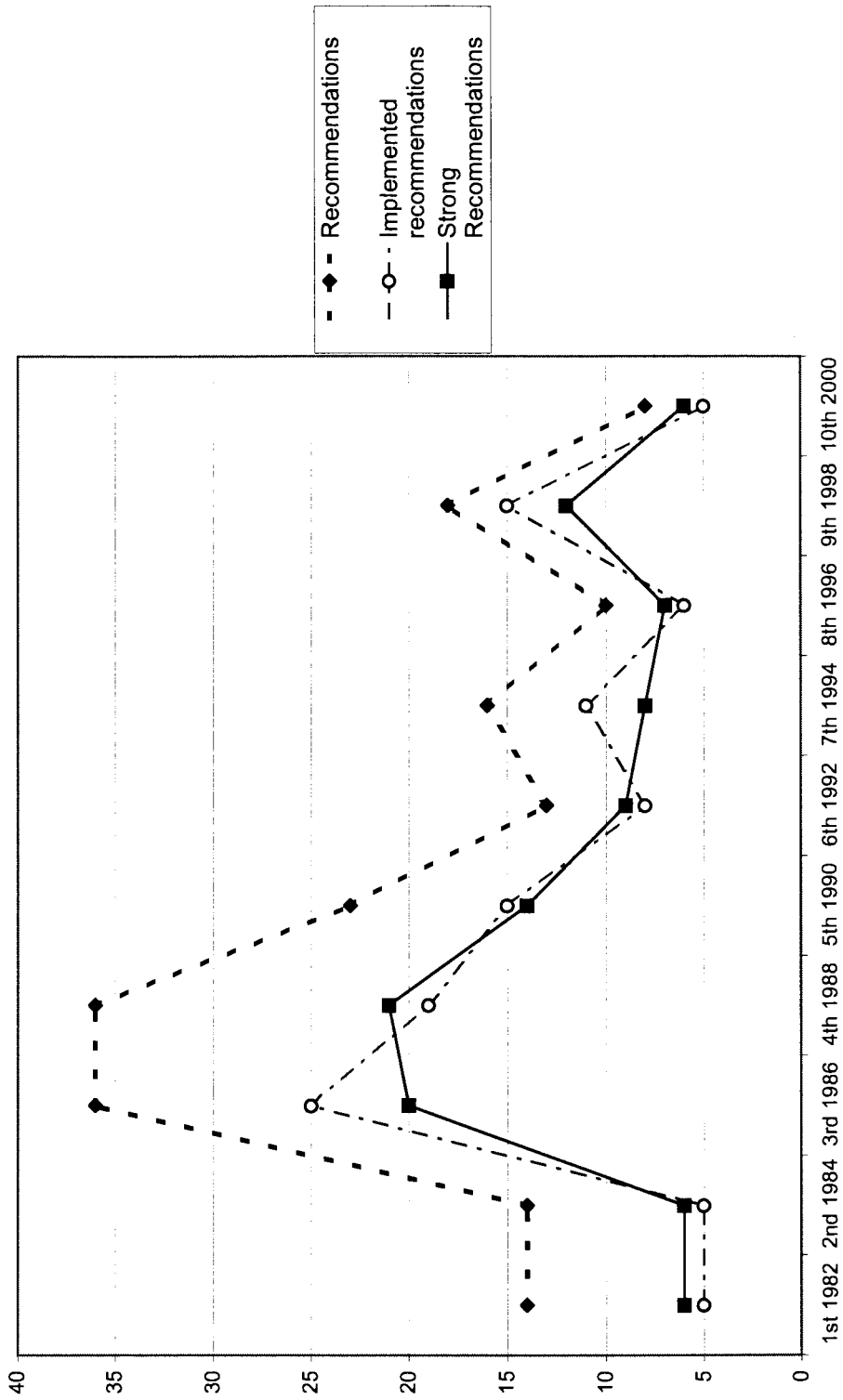
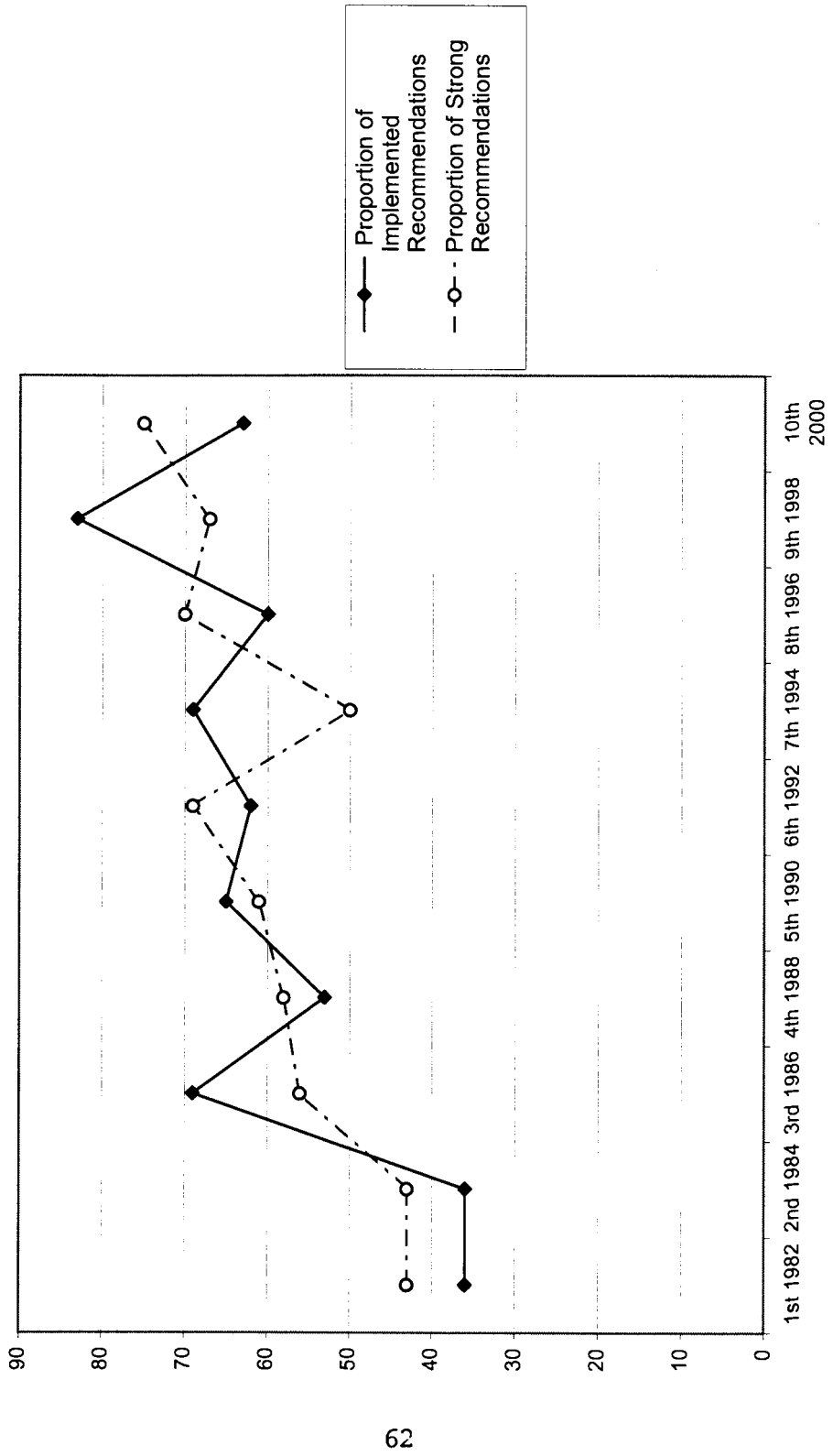


Figure 4.8





# Chapter 5

## Conclusion

### 5.1 The Case for Regulatory Chill

The examination of the recommendations made by the International Joint Commission and their subsequent proposed implementation by the Canadian government was conducted in order to test the following hypotheses:

*1. The federal government's receptiveness to making regulations based on environmental agreements has been lessened or 'chilled' since the implementation of the NAFTA.*

*2. The nature of recommendations made to governments through agencies mandated to make such proposals has changed, so as to take account of the official preference for trade liberalization since the implementation of the NAFTA.*

The first hypothesis was not substantiated by the evidence presented here. In fact, the information gathered showed that there was little correlation between the signing of NAFTA and the implementation of environmental regulations, nor that there was a

decrease in such activity at all. In fact, this test has found that the government might have even been more receptive to implementing aspects of the environmental agreement since the signing of the NAFTA, hence raising skepticism about the existence of regulatory chill. Looking forward to future research, there appear to be other variables that ought to be considered when looking for patterns of government adopting or not adopting a particular recommendation.

Hypothesis 2 was also not substantiated by the evidence presented here. In this case, however, an interesting finding was discovered regarding the proportion of strong recommendations. The report released the same year that NAFTA was brought into force saw a significant decrease in the proportion of strong recommendations made. This only happened the one report which could be explained by a number of factors not accounted for here. It could suggest however that the International Joint Commission had taken into account the potential influence NAFTA might have had on the government's ability to adopt strong recommendations that year. If the pattern was consistent since the signing of NAFTA, there might have been a stronger argument of the effects of trade liberalization on bodies overseeing environmental agreements. However, since it happened only once, such an argument should be ruled out until further research is conducted.

## 5.2 Significance of the Findings

The findings of the test are significant for it adds to the growing literature surrounding the concept of regulatory chill by Neumayer, Esty and Geradin, Mabey and McNally, and others.<sup>96</sup> What is unique to this research, however, is that it contributes a small dataset of empirical evidence that suggests that the NAFTA does not create regulatory chill in the case of the GLWQA. This is an important starting point for future analysis of environmental policy-making in Canada. In terms of identifying what variables contribute to the decision-making of environmental policy-makers, this study adds to the literature on decision-making process in Canada,<sup>97</sup> and international and binational organizations,<sup>98</sup> by suggesting that the NAFTA was not found to be a major signifier for change for this case study.

## 5.3 Strengths and Weaknesses of the Methods Used

One of the major strengths with the methods used in this project for testing regulatory chill was the choice of case study. Because of the scope of the GLWQA and the transparency and accessibility of information provided by the International Joint Commission, I was able to collect most of the necessary resources to conduct my research through their organization. Secondly, having the ability to examine an environmental agreement over a twenty-year period with a similar process (biennial reports) was an asset when comparing a pre-NAFTA and NAFTA reality.

---

<sup>96</sup> For more on regulatory chill literature, See footnote 32.

<sup>97</sup> G Doern and T. Conway *The Greening of Canada: Federal Institutions and Decisions* (Toronto:U of T Press, 1995).

The major weakness of the methods used in this project was the inability to obtain direct government responses for the first three biennial reports. This problem was resolved by the fourth report, in which the government provided official responses for the remainder of the reports. Not having official government responses to some of the earlier reports might have had minor effect on the test results. A second weakness was the uncertainty in regards to whether recommendations were in fact implemented, and whether implemented recommendations were maintained. However, given more time and resources to conduct a larger test, these problems could be resolved.

## 5.4 Future Research

There is a need for future research of the relationship between the NAFTA and other trade liberalizing institutional arrangements, and the environmental policy-making process in Canada. A more in depth analysis of government policy-making efforts towards the Great Lakes would be beneficial in examining the relationship the increase in trade might have on the current Remedial Action Plans programs in place for the Areas of Concern.<sup>99</sup>

Further research also needs to be conducted on other variables that might create regulatory chill of Canadian environmental policy-making. A study examining the

---

<sup>98</sup> J Kirton, *Canada-US Trade and the Environment: Regimes, Regulatory Refugees, Races, Restraints and Results*. (UofT Working Paper, 2001); Mark Sproule-Jones. *Restoring the Great Lakes*. (UBC: UBC Press, 2002).

<sup>99</sup> RAPs were established as a “third wave” of efforts to address pollution control in the Great Lakes. Sproule-Jones has done substantial work on theory and process of RAPs in the Areas of Concern. For more

political changes in both Canada and Ontario government's budgetary and environmental policies over the twenty-year period of analysis might produce some interesting findings.<sup>100</sup> As well, a study of the influence of both non-governmental organizations and epistemic communities on the IJC and the government could be an important direction for future research in this area.<sup>101</sup>

More work also needs to be done on the study of future trade and environmental agreements in Canada. This test allowed for the examination of one binational environmental agreement. However, given the growing number of multinational environmental agreements being brought in to force, further research needs to be conducted analysing the potential effects regional trade agreements might have on their ability to function successfully. This project has drawn further awareness to the importance of organizations such as the IJC to help manage and protect the environment. More scholarly attention needs to be paid to this organization, as well as other similar arrangements such as the CEC to what should be a rich venue for academic interest.

---

on this, see Mark Sproule-Jones, "Institutional Experiments: Great Lakes Restoration." *Canadian Journal of Political Science*. Vol. 25, 2002.

<sup>100</sup> Doern and Conway have examined the partisan and overall political priorities of government institutions over a twenty-year period in regards to Canadian environmental agenda setting. A further extension of this analysis could be conducted on the Ontario government with a specific focus on water quality issues. See Doern and Conway *The Greening of Canada: Federal Institutions and Decisions*(Toronto:U of T Press, 1995).

<sup>101</sup>For more information on the epistemic communities, see footnote 74.

## **Conclusion**

Given the high level of interdependence amongst nations with the rise of supranational structures such as NAFTA, environmental policy-makers are now faced with new considerations when complying with environmental agreements. This project explored the pressure put on governments in living up to their commitments under environmental agreements such as the GLWQA as a result of trade agreements and the liberalized attitude to governing the economy that they represent. In particular, the outcomes of Chapter 11 disputes has reinforced that environmental policy-makers are now susceptible to being challenged by non-state actors.

This project was unable to either refute or lend credence to the existence of regulatory chill in environmental policy-making in Canada. It does, however, through examining the recommendations made by the IJC and government responses to them, raise skepticism regarding the regulatory chill hypotheses. Nonetheless, the issue of trade and the environment will be at the centre of the political arena in Canada for some time, given the rise of both multilateral environmental agreements and multilateral trade agreements.

## Bibliography

- Audley, J. *Green Politics and Global Trade*. Georgetown University Press, 1997.
- Bachrach and Baratz. "Two Faces of Power." *The American Political Science Review*. Vol. 56, No.4 Dec., 1962.
- Bhagwati, J. "Trade and the Environment: The False Conflict?" In *Trade and the Environment: Law, Economics and Policy*, ed. Durwood Zaelke, et al. 1993.
- Bhagwati, J. "Beyond NAFTA: Clinton's Trading Choices." *Foreign Policy*, Issue 91, Summer, 1993.
- Carroll and Shaw. "Consolidating a Neoliberal Policy Bloc in Canada, 1976-1996." *Canadian Public Policy*. Vol. XXVII, NO 2, 2001.
- Cerny, P. "Globalization and Other Stories: The Search for a New Paradigm for International relations." *International Journal*. 51 (4): 617-37.
- Charnovitz, S. "The NAFTA Environmental Side Agreement: Implications for Environmental Cooperation, Trade Policy, and American Treaty-making." *Temple International and Comparative Law Journal* . 8, 2: 257-314.
- Charnovitz, S and Dowdeswell, E. "Globalization, Trade and the Environment" In *Thinking Ecologically: The Next Generation of Environmental Policy*. ed. M Chertow and D. Esty. Yale University Press, 1997.
- Chertow, M. and Esty, D. *Thinking Ecologically: The Next Generation of Environmental Policy*. Yale University Press, 1997.
- Cole, M.A. *Trade Liberalization, Economic Growth and the Environment*. London: New Horizons in Environmental Economics Series, 2000.
- Copeland, Brian. *Economics and the Environment: The Recent Canadian Experience and Prospects for the Future*. Ottawa: Industry Canada Research Publications Program, 1998.
- Dattu, Boscarior, and Ivey. "Time for Change." *Business Journal*. Nov/Dec99, Vol. 64 Issue 2, p36, 6p.

- Department of Foreign Affairs and International Trade. *Agenda-2003: A Sustainable Development Strategy*. Ottawa: Department of Foreign Affairs and International Trade, 2001.
- Doern and Conway *The Greening of Canada: Federal Institutions and Decisions*. Toronto: University of Toronto Press, 1995.
- Esty, Daniel. *Greening the GATT: Trade Environment and the Future*. Washington: Institute for International Economics, 1994.
- Esty and Geradin. "Market Access, Competitiveness, and Harmonization: Environmental Protection in Regional Trade Agreements", 21 Harv. Env. L. Rev. 265 (1997) In *International Environmental Law and Policy*, ed. Hunter, Salzman and Zaelke. NY: Foundation Press, 1998.
- Esty, Daniel. "Bridging the Trade-Environment Divide" *Journal of Economic Perspectives*. Volume 15, Number 3-Summer, 2001.
- Esty, D. and Deere, C. *Greening the Americas: NAFTA's Lessons for Hemispheric Trade* London: MIT press, 2002.
- OECD. "Globalisation and Environment: Preliminary Perspectives" OECD Proceedings 1997 Tom Jones *Globalisation and Environment: Main Issues* 13.
- Graham, E. "Globalization, Foreign Direct Investment and the Environment" In *Fighting the Wrong Enemy: Antiglobal Activists and Multinational Enterprises*. Institute for International Economics, 2000.
- Grinspun and Kreklewich. "Consolidating Neoliberal Reforms: "Free Trade" as a Conditioning Framework." *Studies in Political Economy*. 43, Spring 1994.
- Grossman, Gene M. and Alan B. Krueger. "Environmental Impacts of a North American Free Trade Agreement." In *The Mexico-US Free Trade Agreement*. ed. Peter M. Garber. Cambridge: MIT Press, 1997.
- Grossman, Gene M. and Alan B. Krueger. "Economic Growth and the Environment." *Quarterly Journal of Economics*. CX:2, 1995. pp. 353-77.
- Hunter, Salzman and Zaelke. *International Environmental Law and Policy*. NY: Foundation, 1998.
- Haas, Peter. "Banning Chlorofluorocarbons: Epistemic Community Efforts to Protect Stratospheric Ozone." *International Organization*. Volume 46, Issue 1, Winter, 1992. 187-224.
- Haas, A. "Conclusion: Epistemic Communities, World Order, and the Creation of Reflective Research Program" *International Organization* Volume 46, Issue 1, Winter, 1992. 367-390.



- Haas, P. "Introduction: Epistemic Communities and International Policy Coordination." *International Organization*, Volume 46, Issue 1, Winter, 1992. 1-35.
- Haas, P. *Saving the Mediterranean: The Politics of International Environmental Cooperation*. NY: Columbia University Press, 1990.
- Hardin, G. *The Tragedy of the Commons*. *Science*, 162, 1968. 1243-1248.
- Harrison, Kathryn. "Federal-Provincial Relations and the Environment: Unilateralism, Collaboration, and Rationalization." In *Canadian Environmental Policy: Context and Cases*. ed., Robert Boardman and Debora Van Nijnatten. Toronto: Oxford University Press, 2001.
- Hubschman, J. "Lake Erie: Pollution Abatement, Then What?" *Science*. New Series, Vol. 171, No. 3971. Feb. 12, 1971. pp. 536-540.
- IISD-UNEP. *Environment and Trade: a Handbook*. Toronto: IISD-UNEP, 2000.
- International Joint Commission. *Biennial Report under the Great Lakes Water Quality Agreement of 1978 to the Governments of the United States and Canada and the State and Provincial Governments of the Great Lakes Basin. (Reports 1-11)* International Joint Commission, 1982-2002.
- Jackson, J. "World Trade and Environmental Policies: Congruence or Conflict." In *Trade and the Environment: Economic Legal and Policy Perspectives*. ed. Soloway, Rugman, and Kirton. Cheltenham, UK ; Northampton, MA : Edward Elgar. 1998.
- Jones, T. "Globalisation and Environment: Preliminary Perspectives." In *Globalisation and Environment*. OECD Proceedings: Main Issues 13., 1997.
- Jones, R. "NAFTA Chapter 11 Investor-to-State Dispute Resolution: A Shield to Be Embraced or a Sword to Be Feared?" *Brigham Young University Law Review*. 2002, Vol. 2002. Issue 2, p527, 33p.
- Keohane and Nye. *Power and Interdependence: World Politics in Transition* Boston: Little Brown, 1977.
- Keohane and Nye, Jr. "Introduction: The Complex Politics of Canadian-American Interdependence." *International Organization*. Vol. 28, No. 4, "Canada and the United States: Transnational and Transgovernmental Relations" Autumn, 1974.
- Kirton, J. *Sustainable Development as a Focus for Canadian Foreign Policy*. Ottawa: NRTEE, 1994.
- Kirton, J. "Canada-US Trade and the Environment: Regimes, Regulatory Refugees, Races, Restraints and Results" Working Paper UofT, 2001.
- Lairson, Skidmore. *International Political Economy: The Struggle for Power and Wealth*. Toronto: Harcourt Brace College Publishers, 1997.

- Litfin, Karen. "Advocacy Coalitions Along the Domestic-Foreign Frontier: Globalization and Canadian Climate Change Policy." *Policy Studies Journal*. 0190292X, 2000, Vol. 28, Issue 1.
- Mabey and McNally. "Foreign Direct Investment and the Environment: From Pollution Havens to Sustainable Development" *WWF-UK* November, 1999.
- Meadows, D. *The Limits to Growth* New York: Universe Books, 1972.
- Mumme and Duncan. "The Commission for Environmental Cooperation and Environmental Management in the Americas." *Journal of Interamerican Studies & World Affairs*. 00221937, Winter97/98, Vol. 39, Issue 4.
- Neumayer, Eric. *Greening Trade and Investment: Environmental Protection Without Protectionism*. London: Earthscan Publications, 2001.
- Neumayer, Eric. "Do Countries fail to Raise Environmental Standards? An Evaluation of Policy Options Addressing 'Regulatory Chill'." *Journal of Sustainable Development*. 2001 4(3) 2000.
- Nordstrom and Vaughan *Trade and Environment: Special Studies 4*. Geneva: World Trade Organization, 1999.
- Organisation for Economic Co-operation and Development *Environmental Issues in Policy-Based Competition for Investment: A Literature Review* April 04/02. found online at [http://www.oilis.oecd.org/oilis/2001doc.nsf/LinkTo/env-epoc-gsp\(2001\)11-final](http://www.oilis.oecd.org/oilis/2001doc.nsf/LinkTo/env-epoc-gsp(2001)11-final)
- Porter, D. and van der Linde. "Towards a New Conception of the Environment-Competativeness Relationship." *Journal of Economic Perspectives*. Vol 9 #4 Fall,1995 p97-118.
- Price, David. "Investor Protections in NAFTA are One Manifestation of a Broad, Backdoor Effort to Restore the Primacy of Property Against Society's Broader Claims", *The Nation*, Oct. 15, 2001.
- Revesz, Richard. "Rehabilitating Interstate Competition." In *International Environmental Law and Policy*. ed., Hunter, Salzman and Zaelke. NY: Foundation Press, 1998.
- Environment Canada. *Rising to the Challenge: Celebrating 25<sup>th</sup> Anniversary of the Great Lakes Water Quality Agreement*. found at Environment Canada website April 03 <http://www.on.ec.gc.ca/water/greatlakes/data/celebrate-glwqa/intro.html>.
- Schoenbaum, Thomas J. "International Trade and Protection of the Environment: The Continuing Search for Reconciliation" *The American Journal of International Law*. Vol. 91, No. 2. Apr., 1997.
- Schultz, Jennifer. "The GATT/WTO Committee on Trade and the Environment--Toward Environmental Reform." *The American Journal of International Law*. Vol. 89, No. 2. Apr., 1995.

- Spero, J. *The Politics of International Economic Relations: Fifth Edition* NY: St. Martins Press.
- Sproule-Jones, M. "Institutional Experiments: Great Lakes Restoration." *Canadian Journal of Political Science*. Vol. 25, 2002.
- Sproule-Jones, M. *Restoring the Great Lakes*. UBC Press, 2002.
- Strazzeri, J. "A Lucas Analysis of Regulatory Expropriations Under NAFTA Chapter Eleven." *Georgetown International Environmental Law Review*. Summer 2002, Vol. 14 Issue 4.
- World Commission on Environment and Development. *Our Common Future*. Oxford: Oxford University Press, 1987.
- Zarsky, Lyuba. "Stuck in the Mud? Nation-States, Globalisation and Environment" *Nautilus Institute for Security and Sustainable Development*.
- Zito, A. "Epistemic Communities, European Union Governance and the Public Voice." *Science and Public Policy*. Volume 28, number 6 December 2001 p465-476.

### **Websites**

- International Joint Commission. [www.ijc.org](http://www.ijc.org)
- Environment Canada. [www.ec.gc.ca](http://www.ec.gc.ca)
- Ontario Ministry of the Environment. [www.ene.gov.on.ca](http://www.ene.gov.on.ca)
- Great Lakes Information Network (GLIN). [www.great\\_lakes.net](http://www.great_lakes.net)