
The North American Commission for Environmental Cooperation and the Environmental Effects of NAFTA: A Decade of Lessons Learned and Where They Leave Us

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I. INTRODUCTION

From the beginning, implementing the Commission for Environmental Cooperation's (CEC) mandate to assess the environmental impacts of the North American Free Trade Agreement (NAFTA) has been a challenging, and at times controversial, undertaking. Yet, despite taking a while to find its feet, the work of the CEC in this area has increasingly begun to yield real world policy results and to stimulate others outside the institution to pursue related research and analysis. Indeed, in the last few years CEC work has matured considerably, receiving growing attention from scholars and others examining trade and environment, NAFTA, and the effectiveness of the CEC. Paradoxically, the "big picture" issues revealed by this body of work do not appear to be influencing the content of recent trade agreements in any appreciable way.

In general, the CEC's steady progress on developing, refining, and testing a framework for assessing the environmental impacts of trade under NAFTA has supported and influenced similar efforts undertaken by the U.S. and Canadian governments, by researchers in Mexico, and

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by other international organizations such as the Organization for Economic Cooperation and Development (OECD) and the United Nations Environment Program (UNEP). The work has helped reframe the question from whether assessing such impacts can be done at all to how to conduct the inquiry in a way that yields meaningful public policy results. In fact, the CEC work has all but muted the most outspoken skeptics of assessing the environmental impacts of trade by demonstrating that impacts and causality form a continuum, with direct and fairly simple trade/environment linkages on one end, to more complex, contingent, and indirect relationships on the other.

Nonetheless, when measured against the North American Agreement on Environmental Cooperation (NAAEC) mandate to consider the environmental effects of NAFTA and high public expectations in this area, the work remains very modest in scope, and is not well insulated from budget or programmatic swings within the CEC work plan. In addition to institutionalizing its Trade-Environment Linkages Program (Program), the CEC could improve its efforts to disseminate its work for the Program, as well as conduct follow-up and tracking on key issues shown to contain a strong trade-economy-environment nexus.

While its overall relevance to informing and improving trade and environmental policy remains open to debate, the manner in which the CEC has developed an independent, open, and inclusive process with a publicly-driven agenda stands as a high water mark for the institution and represents a notable achievement in its own right. The program offers a practical means of involving the public in the work of a regional organization, especially for those international organizations striving to create meaningful opportunities for public participation.

Part II of this Article addresses the origin and background of the Program; Part III outlines the environmental issues involved with trade liberalization; Part IV explains the process by which the CEC administers the Program; Part V reports upon the results of various studies under the Program; and Part VI contains conclusions and recommendations for the future.

II. THE MANDATE

A. NAAEC Article 10(6)(d) and Others

The Council, composed of the highest ranking environmental official from each NAFTA country, is the governing body of the CEC.¹ NAAEC Article 10(6)(d) states that the Council shall cooperate with the NAFTA Free Trade Commission to achieve the environmental goals and objectives of the NAFTA by “considering on an ongoing basis the environmental effects of the NAFTA.”²

Article 10(6) constitutes the central mandate to assess trade and environment relationships and is the focus of this Article, however, it is not the only provision addressing trade and environment. The Council may also consider and develop recommendations on a broad range of issues in furtherance of its goals to promote environmental cooperation in the region. NAAEC Article 10(2)³ provides a nonexhaustive, list of such areas, a number of which address the intersection of trade, economy, and the environment. These include, for example, approaches and common indicators for reporting on the state of the environment,⁴ the use of economic instruments for the pursuit of domestically and internationally agreed upon environmental objectives,⁵ transboundary and border environmental issues,⁶ the environmental implications of goods throughout their life cycles,⁷ and eco-labeling.⁸

Also, NAAEC Article 13 empowers the CEC Secretariat to prepare reports to the Council related to the annual program and the cooperative functions of the NAAEC.⁹ The Secretariat has employed this provision to explore important trade, economic, and environmental relationships. In fact, some of the most important CEC analytical work assessing key trade-economic-environmental relationships has been, and continues to be, conducted under the auspices of Article 13.

1. North American Agreement on Environmental Cooperation, Sept. 14, 1993, art. 8(2), 32 I.L.M. 1482, 1485 [hereinafter NAAEC].

2. *Id.* art. 10(6)(d), at 1486.

3. *Id.* art. 10(2), at 1485-86.

4. *Id.* art. 10(2)(c), at 1485.

5. *Id.* art. 10(2)(d), at 1485.

6. *Id.* art. 10(2)(g), at 1486.

7. *Id.* art. 10(2)(m), at 1486.

8. *Id.* art. 10(2)(r), at 1486.

9. *Id.* art. 13, at 1487-88.

B. Public Expectations

Numerous publications discuss the political and social circumstances surrounding the negotiation and execution of NAFTA and its side accords in great detail.¹⁰ In its first paper, called the "NAFTA Effects" project, the CEC documented many of the claims and arguments pertaining to the potential environmental impacts of NAFTA.¹¹ At a minimum, those actively engaged in creating and supporting the CEC expected the institution to test out some of the principal trade and environment hypotheses animating the NAFTA debate, as well as generate information allowing others to perform their own studies and analyses. As the CEC agenda evolved, stakeholders involved in trade assessment began asking how the work undertaken by the CEC could more effectively influence public policy.

C. The CEC Cooperative Work Program

Initially, the task of developing and testing a methodology for assessing the environmental effects of NAFTA was assigned to the Trade and Environment Program. Most of the trade and environment linkage work remains consolidated under this program today (now called Environment, Economy and Trade).¹² Other programs in the CEC, however, undertake research of some key elements in this field of study. For example, the Air Quality Program led an important study analyzing the air quality impacts of truck emissions resulting from congestion at the U.S.-Mexican border, and recently collaborated with Mexican health officials to evaluate ozone levels and respiratory ailments in the same region.¹³ Also, as part of an Article 13 study, an

10. E.g., BARBARA HOGENBOOM, MEXICO AND THE NAFTA, ENVIRONMENT DEBATE: THE TRANSNATIONAL POLITICS OF ECONOMIC INTEGRATION (1998); PIERRE MARC JOHNSON & ANDRE BANLIEU, THE ENVIRONMENT AND NAFTA: UNDERSTANDING AND IMPLEMENTING THE NEW CONTINENTAL LAW (1996); DAVID HUNTER, ET AL., INTERNATIONAL ENVIRONMENTAL LAW AND POLICY (2d ed. 2002).

11. NORTH AMERICAN COMMISSION FOR ENVIRONMENTAL COOPERATION [CEC], ENVIRONMENT AND TRADE SERIES NO. 2, POTENTIAL NAFTA EFFECTS: CLAIMS AND ARGUMENTS 1991-1994 (1996) [hereinafter ENVIRONMENT AND TRADE SERIES NO. 2]. At the time, it was felt that cataloging the main contentions would help ensure that NAFTA responded to concerns expressed by the public and would pursue issues relevant to the government and public of each NAFTA country. See Sarah Richardson, *Introduction and Acknowledgments to ENVIRONMENT AND TRADE SERIES NO. 2*, *supra*.

12. See *Environment, Economy and Trade*, http://www.cec.org/programs_projects/trade_envIRON_econ/index.cfm?varlan=english (last visited Sept. 1, 2004).

13. ISABELLE ROMIEU, ET AL., HEALTH IMPACTS OF AIR POLLUTION ON MORBIDITY AND MORTALITY AMONG CHILDREN OF CIUDAD JUAREZ, CHIHUAHUA, MEXICO (CEC Working Paper, 2003), at http://www.cec.org/files/PDF/POLLUTANTS/cdjuarez_en.pdf.

interdisciplinary team of experts and CEC staff examined cross-border trade in electricity and its environmental implications.¹⁴ Likewise, trade and environment issues are often examined in other programs, such as the Center for International Environmental Law and the Defenders of Wildlife, which jointly studied trade as a pathway for invasive species.¹⁵

III. THE ISSUE: TRADE LIBERALIZATION AND THE ENVIRONMENT

Free trade advocates contend that trade liberalization will benefit the environment in several ways.¹⁶ One common view asserts that general welfare gains acquired through trade liberalization will enable less developed countries to afford stronger environmental protection, and thereby better defend their environment.¹⁷ A related hypothesis posits that a more efficient allocation of productive resources consistent with a country's comparative advantage will reduce unnecessary pollution and conserve wasted inputs.¹⁸ Additionally, free trade may accelerate the diffusion of cleaner technologies and best management practices countering any impacts from increased production or consumption. Other benefits may include a democratizing element, promoting better access to information, more transparent decision-making, and accountable public servants, presumably leading to public pressure to maintain environmental quality.¹⁹

14. SECRETARIAT OF THE CEC, ENVIRONMENTAL CHALLENGES AND OPPORTUNITIES OF THE EVOLVING NORTH AMERICAN ELECTRICITY MARKET (2002) [hereinafter ENVIRONMENTAL CHALLENGES AND OPPORTUNITIES OF THE EVOLVING NORTH AMERICAN ELECTRICITY MARKET].

15. ANNE PERRAULT & MORGAN BENNETT, CENTER FOR INTERNATIONAL ENVIRONMENTAL LAW, ET AL., INVASIVE SPECIES, AGRICULTURE AND TRADE: CASE STUDIES FROM THE NAFTA CONTEXT (2003), at http://www.cec.org/files/pdf/ECONOMY/Invasive-species_en.pdf.

16. The theoretical underpinnings for deriving the potential positive or adverse impacts of trade liberalization are discussed fully in numerous publications—including several published by the CEC—and will not be addressed in detail in this paper. A short summary of these assertions is included below.

17. Upon signing the TPA, President Bush stated, “[h]istory shows that as nations become more prosperous, their citizens will demand, and can afford, a cleaner environment.” George W. Bush, Remarks on Signing the Trade Act of 2002, Aug. 6, 2002, WEEKLY COMP. PRES. DOC. 1317, 1318 (Aug. 5, 2002), available at <http://www.tpa.gov/WH-Pres-TPA-signing.htm>.

18. ERIC NEUMAYER, GREENING TRADE AND INVESTMENT: ENVIRONMENTAL PROTECTION WITHOUT PROTECTIONISM 103 (2001).

19. For a summary of how trade liberalization may harm or benefit the environment, see *id.* at 103-09; HAKAN NORDSTROM & SCOTT VAUGHAN, TRADE AND ENVIRONMENT 35-46 (World Trade Organization Special Studies Series No. 4, 1999), available at http://www.wto.org/english/tratop_e/envir_e/stud99_e.htm.

Environmental concerns about trade are drawn from multiple hypotheses, applicable in varying degree to NAFTA and its progeny. Some of these contentions seek to rebut fundamental assumptions relied on by free trade advocates, while others raise new issues. These concerns are increasingly discussed within the framework of four categories of *effects* often employed to assess the positive or adverse impacts of trade liberalization on the environment. These effects are presented below in the negative, that is, with respect to their potential for adversely impacting human health and the environment.

Scale effects consider the potentially adverse environmental effects of increased economic activity generated by greater levels of trade, especially through increased inputs from natural resources and increased emissions arising from the production of goods and services.²⁰ Unless offset or mitigated, greater production and consumption may generate more pollution or rapidly deplete nonreplenishable resources.²¹

Compositional effects are often analyzed alongside scale effects.²² As trade liberalization reallocates resources, countries may specialize in pollution or resource-intensive activities or sectors. These activities may, in turn, overtax a nation's environmental infrastructure and regulatory capacities.²³ Where environmental externalities are strong, both scale and compositional effects may add fuel to what was a slow burning fire by accelerating unsustainable and/or environmentally damaging practices.²⁴

20. NORDSTROM & VAUGHAN, *supra* note 19, at 29.

21. *Id.* Technology effects may, for example, improve environmental performance if cleaner and more efficient technologies are adopted. The same holds true for more efficient and less polluting management techniques and "best practices." See NEUMAYER, *supra* note 18, at 104.

22. See NORDSTROM & VAUGHAN, *supra* note 19, at 29.

23. *Id.*

24. Rapid advances in extractive, processing and transportation technologies, combined with the advent of truly global markets, can have a swift and dramatic impact on vulnerable natural resources, such as fisheries and forests. The plight of the magnificent Bluefin Tuna provides a vivid illustration of the potential impact of technology and global markets on badly managed resources. Enhanced sonar and fish detection technologies and aerial surveillance enabled U.S. and other fisherman operating in the Atlantic to decimate stocks of Bluefin. Fisherman sought the \$40,000 per adult premium paid onshore, before the fish were whisked aboard specially adapted airplanes to the lucrative Japanese sushi market. There, a single fish could bring up to \$180,000 in retail markets. See CARL SAFINA, SONG FOR THE BLUE OCEAN: ENCOUNTERS BENEATH THE SEAS AND ALONG THE WORLD'S COASTS 14 (1998). Similarly, once inaccessible tracts of timber in remote areas can now be "heli-logged," a process employing powerful new helicopters to dead lift felled trees. If effectively employed, such technologies could improve sustainable practices by, for example, improving monitoring of fish stocks or, in the case of heli-logging, selectively harvesting timber without access roads. See e.g., Idros Isamil, *Logging with a Sense of Conscience*, NEW SUNDAY TIMES, July 6, 2003, 2003 WL 63007696.

Inquiries into *competition effects* examine the extent to which companies reduce environmental expenditures when exposed to greater international competition in free markets.²⁵ This is often referred to as the “race to the bottom.”²⁶ In a similar fashion, governments may relax the promulgation, monitoring, and enforcement of environmental regulations to either attract companies or keep them at home.²⁷ Certain industries may relocate to take advantage of lower standards or lax enforcement, giving rise to “pollution haven” concerns.²⁸

Finally, many environmental advocates are concerned about the *regulatory effects* of trade liberalization. Regulatory effects include the extent to which trade rules trump or constrain the development of environmental regulations and market measures.²⁹ This is also known as “regulatory chill.”³⁰ Traditionally, this concern focused on the rules pertaining to technical barriers to trade and sanitary and phytosanitary measures.³¹ More recently, however, advocates have directed serious attention to the impact of investment rules enabling private investors to challenge government measures as “tantamount to expropriation.”³²

After one decade of study on the relationship between the environment and trade in NAFTA, a review of recent literature and several interviews strongly suggest a shift in the debate in subtle, but important, ways.³³ For example, most commentators now agree that the so-called compositional and scale effects of free trade deserve as much attention as the competitive effects, even though concern over competitive effects (pollution havens, regulatory chill, and lax enforcement) dominated the debate in the early years of NAFTA.³⁴

25. NORDSTROM & VAUGHAN, *supra* note 19, at 35.

26. Greg M. Block, *Trade and Environment in the Western Hemisphere: Expanding the North American Agreement on Environmental Cooperation into the Americas*, 33 ENVTL. L. 501, 512 (2003).

27. *Id.* at 512.

28. *Id.*

29. *Id.*

30. *Id.*

31. *Id.*

32. *Id.*

33. See, e.g., Janine Ferretti, *Energy, the Environment and Natural Resources in the Canada/U.S. Context*, 28 CAN.-U.S. L.J. 81 (2002); CEC, ENVIRONMENT AND TRADE SERIES NO. 6, ASSESSING ENVIRONMENTAL EFFECTS OF THE NORTH AMERICAN FREE TRADE AGREEMENT: AN ANALYTICAL FRAMEWORK AND ISSUE STUDIES (1999) [hereinafter CEC, TRADE SERIES NO. 6].

34. See Americans & the World, *International Trade: Trade and the Environment at* http://www.americans-world.org/digest/global_issues/intertrade/environment.cfm (last visited Sept. 1, 2004).

The implications of our deepening understanding of trade, economy, and environment linkages are of immediate significance to the ongoing FTAA negotiations. For instance, this greater understanding of the linkages shows that myopic focus on competitive impacts will result in an agreement heavy with enforcement commitments and assurances of maintaining high levels of environmental protection; greater recognition of scale effects might strengthen provisions that allow buffering mechanisms, transition policies, and greater attention to environmental and health safeguards and safety nets.

A growing number of commentators argue that commitments on enforcement, without assurances that resources will be provided for the nuts and bolts infrastructure of environmental policy implementation, amount to little more than wishful thinking.³⁵ Even staunch free trade advocates, such as Professor Jagdish Bhagwati in his new book *In Defense of Globalization*, acknowledge the need to strengthen environmental and social safety nets and braking mechanisms to help smooth out the sometimes rough ride to freer trade.³⁶

IV. THE PROCESS

A. *Legitimacy and Credibility*

Understandably, some members of the public express skepticism about the willingness of NAFTA's strongest advocates to engage in an objective and searching evaluation that might, at times, reflect poorly on NAFTA by revealing adverse environmental impacts related to trade. By and large, the Parties to NAFTA understood the need for an independent, expert-driven process, granting the Secretariat free range in selecting teams of experts, consulting widely with interested people, and holding public meetings at various stages in the development of the assessment framework.

Nonetheless, in the early stages of the project, the Secretariat expended considerable energy trying to convince intergovernmental working groups that the team would carry on its work in a responsible manner, and key opponents from one or more of the Parties' trade ministries refused to critique or comment in writing on the drafts of the

35. See, e.g., *id.* at 535 n.139.

36. See JAGDISH BHAGWATI, *IN DEFENSE OF GLOBALIZATION* 199-207 (2004) (discussing the perils of free capital flows between countries).

work plan.³⁷ On at least one occasion, heightened media attention beat back attempts by one Party to suppress the studies or redirect ongoing research.³⁸ Throughout this period, it was clear that by testing the methodology, the Secretariat created the most anxiety among governments since an actual case study would generate real figures, and potentially, real media.

The Secretariat, mindful of its need to establish credibility, appointed a high level, multi-stakeholder advisory body composed of distinguished economists, political science experts, business representatives, and environmental nongovernmental organizations.³⁹ The Advisory Body was consulted frequently at various decision points in the process of developing and testing the framework.⁴⁰ In addition, the Secretariat made draft documents available to the public, and actively solicited comments from a core group of individuals and organizations who had expressed interest in the initiative.⁴¹

On balance, these admittedly process-heavy measures appear to have worked well. Virtually none of those who expressed concerns or disappointment over the results of the Program have called into question the integrity of the process or the sincerity of the efforts undertaken by the CEC or its consultants and advisors.⁴² The caution exhibited by the Secretariat and the timidity of its early results, while successful from the standpoint of survivability, ultimately may have diminished the impact of the CEC's work by limiting its audience to a more select group of trade and environment enthusiasts.

37. See, e.g., Block, *supra* note 26, at 521-22.

38. See, e.g., Anthony DePalma, *NAFTA Environmental lags May Delay Free Trade Expansion*, N.Y. TIMES, May 21, 1997, at A4 (reporting on Mexican trade officials' attempt to block or censor the independent study of NAFTA effects).

39. MARY E. KELLY & CYRUS REED, *The CEC's Trade and Environment Program: Cutting Edge Analysis, but Untapped Potential*, in GREENING NAFTA: THE NORTH AMERICAN COMMISSION FOR ENVIRONMENTAL COOPERATION 101, 103 (David L. Markell & John H. Knox, eds. 1993); see generally, NAAEC, *supra* note 2, art. 10(6)(d), at 1486 (admonishing NAFTA to consider the environmental effects of NAFTA).

40. Kelly & Reed, *supra* note 39, at 103.

41. *Id.*

42. For a thoughtful review of the initiative and its impacts, see KELLY & REED, *supra* note 39, at 101; Kevin P. Gallagher, *The CEC and Environmental Quality*, in GREENING NAFTA, *supra* note 39, at 117; Claudia Schatan, *The Environmental Impact of Mexican Manufacturing Exports under NAFTA*, in GREENING NAFTA, *supra* note 39, at 133; Alejandro Nadal, *Corn in NAFTA Eight Years After*, in GREENING NAFTA, *supra* note 39, at 152; Sanford E. Gaines, *Protecting Investors, Protecting the Environment: The Unexpected Story of NAFTA Chapter 11*, in GREENING NAFTA, *supra* note 39, at 173.

B. Developing a Methodology

From roughly 1995-1998, the CEC focused on developing an assessment framework. The CEC published a six-part trade and environment series and several technical papers.⁴³ Additionally, the CEC published criteria for identifying sectors and areas of focus for the assessment of the environmental impacts of trade.⁴⁴ The CEC applied this approach to the agriculture and energy sectors, examining maize and electricity.⁴⁵ In 1996, this work culminated in the release of the peer-reviewed draft methodology and issue studies at a public meeting in San Diego, California attended by over 100 participants.⁴⁶ Following input from the meeting, a final document was released in 1999.⁴⁷

C. Testing the Methodology

The CEC next invited interested groups and individuals to test, refine, or critique the methodology by applying it to discrete issues or sectors and subsequently presenting the findings at public symposia.⁴⁸ Using a predefined set of criteria, the Selection Committee—a committee created for the purpose of choosing proposed projects for which the CEC would provide funding—and the Secretariat identified areas of focus based on such factors as NAFTA rules changes, foreign direct investment trends, trade flows, trade/environment nexus, and methodology enhancement capability. The CEC granted modest financial stipends to a diverse group of presenters, based on the recommendations of the Selection Committee. The Selection Committee, in turn, was guided by a simple list of considerations including the diversity of views, regions, approaches, and

43. The CEC Trade and Environment Series remains available online at <http://www.cec.org>.

44. KELLY & REED, *supra* note 39, at 104.

45. ENVIRONMENTAL CHALLENGES AND OPPORTUNITIES OF THE EVOLVING NORTH AMERICAN ELECTRICITY MARKET, *supra* note 14; *see also* Independent Maize Report Outline and Authors Finalized, LATEST NEWS, Dec. 12, 2003, at <http://www.cec.org/news/details/index.cfm?varlan=english&ID=2585>.

46. CEC, ENVIRONMENT AND TRADE SERIES NO. 4, BUILDING A FRAMEWORK FOR ASSESSING NAFTA ENVIRONMENTAL EFFECTS: REPORT OF A WORKSHOP HELD IN LA JOLLA, CALIFORNIA, ON APRIL 29 AND 30, 1996 (1996).

47. ENVIRONMENT AND TRADE SERIES NO. 6, *supra* note 33.

48. *Environmental consequences of trade liberalization subject of CEC symposium: 14 research papers selected for presentation*, LATEST NEWS, June 5, 2000, at <http://www.cec.org/news/details/index.cfm?varlan=english&ID=2260>.

methodological applications, as well as thoughtfulness and completeness.⁴⁹ The CEC also welcomed papers it did not fund.

To date, the CEC has organized two symposia on the environmental effects of trade liberalization⁵⁰ (Washington, October 2000 and Mexico City, March 2003). Culled from over 100 proposals, the CEC provided support for approximately twenty-five studies, including studies by NGOs, academics, business, international organizations, and government.⁵¹

Studies prepared by the public and critiqued in public fora have undoubtedly deepened our understanding of trade, economy, and environment linkages. While individual studies sink or swim based on the robustness of their methodology and findings, collectively they have led to revisions of methodology as well as to important observations about both the substance and process of evaluating the environmental effects of trade.

V. THE RESULTS

A. *The Picture Becomes Clearer*

In 2002, the CEC published a compendium of the papers presented at the 2000 Washington Symposium.⁵² Subsequently, the Secretariat prepared an opinion on the state of trade and environment assessments in light of the Washington Symposium and comments received by participants called *The Picture Becomes Clearer*.⁵³ The document offers sober reflections on the practical limitations and constraints of assessing

49. See CEC & North American Fund for Environmental Cooperation (NAFEC), Administration and Funding Guidelines 7-9 (Dec. 11, 2002) available at <http://www.cec.org/files/pdf/NAFEC/Guides-11-Dec-2002-e.pdf>.

50. See *Provisional Agenda Now Available for CEC Symposium on Environmental Effects of Trade*, LATEST NEWS, July 27, 2000, at <http://www.cec.org/news/details/index.cfm?varlan=english&ID=2248>; *Symposium Sparks Debate, Demonstration*, TRIO: THE NEWSLETTER OF THE N. AM. COMM'N FOR ENVTL. COOPERATION, Summer 2003, at <http://www.cec.org/trio/stories/index.cfm?ed=10&ID=124&varlan=english>.

51. *25 Environmental Projects Receive \$1 million from CEC*, LATEST NEWS, Oct. 14, 1999, at <http://www.cec.org/news/details/index.cfm?varlan=english&ID=2278>.

52. CEC, THE ENVIRONMENTAL EFFECTS OF FREE TRADE: PAPERS PRESENTED AT THE NORTH AMERICAN SYMPOSIUM ON ASSESSING THE LINKAGES BETWEEN TRADE AND ENVIRONMENT (October 2000) (2002) [hereinafter THE ENVIRONMENTAL EFFECTS OF FREE TRADE].

53. CEC, FREE TRADE AND THE ENVIRONMENT: THE PICTURE BECOMES CLEARER (2002) [hereinafter THE PICTURE BECOMES CLEARER], available at <http://www.cec.org/files/PDF/ECONOMY/FreeTrade-en-fin.pdf>.

trade impact. In addition, the opinion challenged some of the standard assumptions about trade and environment relationships.⁵⁴

In *The Picture Becomes Clearer*, the Secretariat also summarized six key considerations emerging from the assessment of the environmental effects of NAFTA. These include: (1) designing trade/environment assessments to yield policy relevant outcomes without ignoring nontrade-related forces; (2) supplementing macro or large-scale studies with region-specific, media-specific and sector-specific analyses; (3) considering the impacts of environmental infrastructure and policy implementation resulting from increased trade flows; (4) overcoming the lack of quality environmental data at the regional or local level; (5) integrating sectoral policies more effectively; and (6) underscoring the importance of evaluating economy-environment linkages in an "open, inclusive and transparent" manner.⁵⁵

While each of these conclusions merits consideration, the CEC has perhaps gone the furthest to validate two particular points. CEC work has demonstrated just how important it is to supplement so-called aggregated or macro studies with more geographically limited, or media-specific studies.⁵⁶ Aggregate data may mask important conditions at the local level. For example, while overall North American forest cover may be stable or increasing, this tells us little about the health of an ecologically significant stand of hardwood forest that may, or may not, feel the pull of regional or global lumber export markets. Yet, researchers continue to lament the availability of precisely the kind of local data necessary to undertake such studies in a more systematic manner.⁵⁷ At the same time, monitoring resources have declined significantly in the past decade, dimming the prospects for remedying the data deficit anytime soon.⁵⁸

Other lessons-learned from the CEC's work relate to the amount of attention needed to address the scale and compositional effects of trade liberalization, and the necessity of harmonizing environmental standards in the area of trade, investment, and competition policy.

54. *Id.* annex 1.

55. *Id.*

56. *Id.*

57. *Id.*

58. *Id.*

1. The Scale and Compositional Effects of Trade Liberalization
Deserve at Least as Much Attention as Competitive Effects

For the most part, competitive factors triggering pollution havens and race to the bottom scenarios feared by some have not materialized in a significant way. NAFTA, however, demonstrates that domestic policy makes a difference, and countries need to increase their efforts to predict, monitor, and buffer sectoral and interregional impacts resulting from major shifts in the pattern and composition of trade.⁵⁹ Environmental safeguards are especially vital during transitional periods, which can place vulnerable, nonrenewable resources at maximum risk. Nevertheless, environmental budgets have remained relatively static. For example, Mexico's environmental budget has not risen to meet the needs of expanded production and increased investment.⁶⁰

2. The Clear Trend Towards Convergence of Trade, Investment and
Competition Policies in Major Sectors Liberalized in NAFTA has yet to
Trigger Parallel Efforts to Harmonize Environmental Policies and
Standards in These Same Areas.

In some areas, economic integration without concomitant efforts to ensure complementary regulatory policies in the health and environment realm entails risks.⁶¹ For example, efforts to make headway on compatibility in the hazardous waste area have made little progress in the past decade.

B. The Causality Continuum and Complexity vs. Simplicity

Taken together, the growing number of trade assessment studies at the macro and micro level shed light on the elusive search for causality and attribution. A multitude of nontrade variables such as currency

60. See LYUBA ZARSKY & KEVIN P. GALLAGHER, NAFTA, FOREIGN DIRECT INVESTMENT, AND SUSTAINABLE INDUSTRIAL DEVELOPMENT IN MEXICO 3 (Americas Program, Interhemispheric Resource Center Policy Brief, Jan. 28, 2004), at <http://www.americaspolicy.org/briefs/2004/0401mexind.html>.

61. The CEC Article 13 Report, underscored this point, cautioning of potential conflicts between jurisdictions with widely divergent emissions and air quality standards, as well as policies which diminish the effectiveness of domestic approaches in neighboring jurisdictions. Transboundary air emissions by a nonparticipating jurisdiction into an airshed governed by a pollutant cap and trade regime furnishes an example of both concerns. ENVIRONMENTAL CHALLENGES AND OPPORTUNITIES OF THE EVOLVING NORTH AMERICAN ELECTRICITY MARKET, *supra* note 14 at 19-21.

fluctuations, monetary policies, and other factors often make isolating the trade component difficult. Yet, not all trade and environment relationships are plagued by insurmountable complexity. At one end of the continuum stand fairly straightforward trade and environment linkages.

1. Fisheries

Fisheries are an example of a badly managed scarce resource that is highly sensitive to global demand, and therefore trade. Bluefin Tuna in the 1990s,⁶² or more recently, the Patagonian Toothfish,⁶³ present clear examples of how trade without adequate environmental safeguards can exacerbate unsustainable practices. In the NAFTA context, the study discussed below examining hazardous waste flows between specific regions in Canada and the United States provides an example close to home of one such strong causal nexus.⁶⁴

2. Land Use Shifts in Mexico

The CEC has also supported work probing the other end of the continuum as well. For example, the CEC sponsored a study on complex environmental implications of land-use shifts in Mexico owing to the reduction in corn production as a result of increasing U.S. imports of corn and grain.⁶⁵ Similarly, the CEC undertook a formidable body of research examining the integration and consolidation of food-processing chains, and the potential environmental considerations attending to the spread of U.S.-style industrial Confined Agricultural Feedlot Operations

62. See generally ELIZABETH HAYES, A REVIEW OF THE SOUTHERN BLUEFIN TUNA FISHERY: IMPLICATIONS FOR ECOLOGICALLY SUSTAINABLE MANAGEMENT (1997), available at http://www.traffic.org/factfile/tuna_summary.html (providing history of the decline of the bluefin tuna since 1950, its causes, and possible solutions); SERGI TEDULA, WORLD WILDLIFE FUND MEDITERRANEAN PROGRAMME OFFICE, TUNA FARMING IN THE MEDITERRANEAN: THE 'COUP DE GRACE' TO A DWINDLING POPULATION?, available at http://www.wwf.no/english/aquaculture/wwf_medpo_tuna_farming_report.doc (concluding that without a proper management system, bluefin tuna farms are an unsustainable practice).

63. See generally M. Lack & G. Sant, *Patagonian Toothfish: Are Conservation and Trade Measures Working?*, 19 TRAFFIC BULLETIN NO. 1 (2001), available at <http://www.traffic.org/toothfish/toothfish.pdf> (examining the history and management of Patagonian Toothfish fishing).

64. See *infra* Part V(C)(3)(a).

65. SCOTT VAUGHAN, THE GREENEST TRADE AGREEMENT EVER?, in NAFTA'S PROMISE AND REALITY: LESSONS FROM MEXICO FOR THE HEMISPHERE 61, 62-65 (2004), available at http://www.ceip.org/files/pdf/NAFTA_Report_ChapterThree.pdf.

(CAFOs) for pork and poultry into Mexico.⁶⁶ Although often complex and hinging on some speculation, these studies nonetheless merit the close attention of environmental regulators and policymakers.

In summary, environmental assessment of trade is not necessarily as complex and foreboding as many made it out to be in the early years. Data availability at the regional or local level is often a far more vexing hurdle to surmount than analytical complexity. Environmental monitoring at the local and regional level falls well short of minimum standards of comprehensiveness and reliability, and despite several promising recent initiatives, efforts to harmonize regional data across political boundaries continue to founder. The further step of correlating environmental indicators with trade data is only practical for a relatively small subset of actively monitored resources, species, or environmental media.

C. Influencing Public Policy

1. Influence on Trade Rules and Environmental Laws and Regulations

As might be expected, gauging the extent to which the CEC's efforts to better understand trade and environment linkages have influenced public policy is itself a complex and subjective affair. In some measure it is tied to stakeholders' original hopes and expectations for what the institution should accomplish. For example, the CEC's activities over the past decade are bound to have disappointed those who expected a more comprehensive and user-friendly "NAFTA Report Card" approach to assessment.⁶⁷ Similarly, the CEC has deliberately steered clear of contentious binational or trilateral trade issues that include important environmental components, including disputes over salmon, softwood lumber, and concerns over the expansion of private rights for investors contained in NAFTA Chapter 11.

With few notable exceptions, none of the core trade and investment measures have been modified or adapted in response to evidence that trade patterns adversely impact the environment or exacerbate unsustainable practices. Some may take this as proof that

66. E.g., JERRY SPEIR, ET AL., CEC, COMPARATIVE STANDARDS FOR INTENSIVE LIVESTOCK OPERATION IN CANADA, MEXICO, AND THE US (2002), available at http://www.cec.org/files/pdf/LAWPOLICY/CAFOs_en.pdf.

67. Attempts by Public Citizen and others to prepare such "report cards" typically lack analytical rigor, most acutely by failing to distinguish trends or conditions that existed prior to NAFTA from so-called NAFTA effects.

such harm has not been demonstrated convincingly. On the other hand, the trade and environment assessment work undertaken at the CEC has led to the strengthening of a few environmental laws and regulations, providing some evidence on the potential of the initiative.

On balance, it is probably fair to conclude that most environmental groups are disappointed by the CEC's conspicuous absence in some of the more weighty trade and environment matters. The provisions enabling the CEC to provide expertise in environment-related trade disputes, as well as to take proactive measures to avoid such disputes have "fallen into disuse after little more than quivering into life with a few procedural gatherings and a series of aborted attempts to organize a trade and environment ministerial summit."⁶⁸ Despite Canada's persistent attempts to stimulate these discussions, the lack of deliverables and a reluctance to open a Pandora's Box of trade and environment irritants continues to retard institutional cooperation between trade and environment agencies, domestically and regionally.⁶⁹

The use of high level experts in the Article 13 process may ultimately break this logjam as the CEC helps identify legitimate environmental policies and objectives related to trade with respect to important areas such as regional trade in electricity and genetically modified maize.⁷⁰

2. Influence of the Methodology on Governments, International Organizations, NGOs and Others

The CEC results fare better in light of its influence on the development and application of assessment models and methods in the NAFTA region and beyond. Due to the relatively small number of specialists undertaking such analysis, a great deal of cross-fertilization takes place among researchers. The CEC project involved many of the individuals responsible for conducting assessments within national governments, academia, and international institutions (such as the OECD, the UNEP, the OAS and the World Bank).⁷¹ In fact, it is quite likely that the CEC has undertaken more on the ground trade and

68. Block, *supra* note 26, at 520.

69. *Id.*

70. See, e.g., ENVIRONMENTAL CHALLENGES AND OPPORTUNITIES OF THE EVOLVING NORTH AMERICAN ELECTRICITY MARKET, *supra* note 14 at 22-26; see also Independent Maize Report Outline and Authors Finalized, LATEST NEWS, Dec. 12, 2003, at <http://www.cec.org/news/details/index.cfm?varlan=english&ID=2585>.

71. See *Who We Are*, at http://www.cec.org/who_we_are/jpac/member_bio/index.cfm?varlan=english (last visited Sept. 1, 2004).

environment linkage work at the regional and local level than any other body. In this sense, North America, is the proving ground for the environmental assessment of trade, at least insofar as liberalized trade has joined developed and developing countries alike.

The CEC also helped stimulate similar work undertaken outside of governments and international organizations. World Wildlife Fund has prepared several such studies, most recently examining the environmental implications of expanded soy farming in Brazil in the proposed Free Trade Area of the Americas (FTAA).⁷² Researchers at the Global Development and Environment Institute at the Fletcher School of Law and Diplomacy at Tufts University continue preparing multiple studies on related topics.⁷³ The IISD, Unisfera, Colegio de Mexico, the Carnegie Endowment for International Peace, and others have also pursued similar lines of research.⁷⁴

Though difficult to measure, the CEC undoubtedly has enhanced the capacity of researchers to examine trade and environment relationships, and at the same time has expanded the audience for these studies beyond an eclectic group of economists and policy analysts. In a sense, the CEC helped democratize trade and environment impact assessment work by making the work accessible. Unfortunately, however, the scale of the work has been quite modest and many relevant stakeholders remain unaware of the CEC's efforts in this area.

3. Specific Examples

While the CEC trade and environment linkages work to date may not have influenced policy to the extent some hoped, a few studies have nonetheless had a direct impact on public policy.

a. Transboundary Waste Disposal

A study prepared for the 2000 CEC Washington Symposium employed the assessment framework to examine transboundary

72. ULRIKE BICKEL & JAN MAARTEN DROS, WORLD WILDLIFE FUND FOREST CONVERSION INITIATIVE, THE IMPACTS OF SOYBEAN CULTIVATION ON BRAZILIAN ECOSYSTEMS (Oct. 2003), at http://www.wwf.ch/images/progneut/upload/Impacts_of_soybean.pdf.

73. See *Publications Overview*, at http://www.ase.tufts.edu/gdae/about_us/researchers_publications.html (last visited May 5, 2004).

74. For more information on their respective research, see IISD, at <http://www.iisd.org>; Unisfera, at http://www.unisfera.org/?1n=1&id_secteur=4; Colegio de Mexico, at <http://www.colmex.mx>; CEIP, at <http://www.ceip.org/files/publications/publicationsmain.asp>.

movements of hazardous waste in North America.⁷⁵ Among other things, the study found that “less stringent hazardous waste disposal regulatory requirements in Ontario and Quebec were a key factor in a significant increase of waste exports from the United States to Canada since NAFTA’s approval.”⁷⁶

Considerable attention to the issue followed in the Canadian press, and the Council highlighted the development of a North American approach to the sound management and disposal of hazardous waste in its June 2001 meeting in Guadalajara, Mexico. As a result, in December 2001, the Ontario government announced its intention to make hazardous waste disposal restrictions at least as stringent as those in the United States.⁷⁷

b. Air Quality in Trade Corridors

Another study prepared for the 2000 Symposium indicated a “robust and direct link” between NAFTA freight truck transport and increased air pollution at selected U.S.-Mexico and U.S.-Canada border crossings.⁷⁸ A subsequent study commissioned by the CEC, while not seeking to isolate the effects of NAFTA, nonetheless supplemented these findings by modeling projected border emission scenarios and including potential mitigation strategies.⁷⁹ This and other related work has led to a more active and informed debate of border air quality strategies, and is relevant to ongoing environmental impact assessment of measures addressing cross-border truck movements.

c. Emerging North American Electricity Markets and Environment

Finally, the CEC compiled a formidable body of work related to the environmental dimensions of North American electricity trade, renewable energy, and market-based strategies for addressing

75. Marisa Jacott, et. al., *The Generation and Management of Hazardous Wastes and Transboundary Hazardous Waste Shipments between Mexico, Canada and the United States, 1990-2000*, in THE ENVIRONMENTAL EFFECTS OF FREE TRADE, *supra* note 52, at 167.

76. KELLY & REED, *supra*, note 39, at 108.

77. *Id.*

78. THE PICTURE BECOMES CLEARER, *supra* note 53, at 14; Rachel M. Poynter and Sheila A. Holbrook-White, *NAFTA Transportation Corridors: Approaches to Assessing Environmental Impacts and Alternatives*, in THE ENVIRONMENTAL EFFECTS OF FREE TRADE, *supra* note 52, at 303, 306-07.

79. ICF CONSULTING, CEC, NORTH AMERICAN TRADE AND TRANSPORTATION CORRIDORS: ENVIRONMENTAL IMPACTS AND MITIGATION STRATEGIES 22-41 (North American Commission of Environmental Cooperation Working Paper, 2001), at http://www.cec.org/files/pdf/POLLUTANTS/corridors-e_EN.pdf.

transboundary air issues.⁸⁰ Most recently, the CEC completed an Article 13 report on these issues, culminating in a well attended conference in San Diego, California and the release of the final report and high level expert advisory committee recommendations.⁸¹ Several of the issues and recommendations in the study are under active discussion, the Mexico-U.S. Good Neighbor Board adopted and recommended some of these.⁸² Also, some states and provinces, such as British Columbia and Washington State, have been proactive in addressing areas highlighted in the report by promoting transboundary environmental impact assessment and seeking other cooperative solutions to such challenges.⁸³

d. Exporting Industrial Agricultural Models

Recent research on the export of U.S. agricultural models to Mexico led by former CEC Environment, Economy and Trade head Scott Vaughan has shed light on a number of potentially key environmental considerations, including land use patterns, aquifer depletion, and fertilizer and pesticide application rates.⁸⁴ Vaughn's paper raises additional concerns about growing income divergence and the potential displacement of nearly one-quarter of the Mexican workforce formerly employed in rural agricultural communities.⁸⁵ While trade and investment liberalization measures are not solely responsible for these important changes, they largely set the rules of the game and fix expectations by key market players. The lesson is the same: developing countries need stronger environmental and social safety nets and transitional strategies before embarking on such a course. Without assistance from developed regions, however, these same countries are unlikely to implement anticipatory policies.

80. See generally <http://www.cec.org>.

81. ENVIRONMENTAL CHALLENGES AND OPPORTUNITIES OF THE EVOLVING NORTH AMERICAN ELECTRICITY MARKET, *supra* note 14.

82. *Power Plants*, in SIXTH REPORT OF THE GOOD NEIGHBOR ENVIRONMENTAL BOARD, U.S. ENVTL. PROT. AGENCY 13, 13-18 (2003), available at http://www.epa.gov/ocem/gneb/gneb6threport/07powerplants_epa_6th_gneb_eng_final.pdf.

83. ENVIRONMENTAL CHALLENGES AND OPPORTUNITIES OF THE NORTH AMERICAN ELECTRICITY MARKET, *supra* note 14, at 9. The Western Governors Association is considering a number of the issues raised in the report, and California has expressed interest in presenting various forward-looking approaches to the border Governors' body. See WESTERN GOVERNORS' ASSOCIATION, 1999 ANNUAL REPORT (1999) at <http://www.westgov.org/wga/publicat/annrep99.htm>; see also W. GOVERNORS' ASS'N, INTERNATIONAL TRADE POLICY (Oct. 14, 1999) at <http://www.westgove.org/wga/initiatives/trade.htm>.

84. VAUGHAN, *supra* note 65, at 62.

85. *Id.*

VI. LOOKING FORWARD

A. *The CEC Trade Linkages Program*

By conducting environmental assessment in an open, transparent, and inclusive manner, the CEC has granted citizens a voice in examining the relationship between trade liberalization and the environment. In the first instance, local communities are often in the best position to detect pressures on forests, fisheries, wetlands, aquifers, air quality, and health. The modest funding provided by the CEC to groups or individuals in order to investigate these claims has enabled local researchers to engage outside experts and network with others outside the region.

The fact that NAFTA trade practices or policies may be found to contribute only minimally, if at all, to some complaints of trade and environmental degradation or adverse health effects provides little reason to abandon such studies. Even where strict causality proves elusive, a full discussion of relevant variables and influences improves our understanding of environment-health-economy linkages, and could inform a more robust early warning monitoring regime.

Indeed, no less today than at its inception, promoting a better understanding of trade and environment relationships is at the very core of the CEC's mandate. To continue to enjoy public support and legitimacy, this inquiry must be conducted in a searching and uncompromised way. Accordingly, the CEC approach should be broadened and institutionalized. This could be accomplished by adopting a Council Resolution acknowledging and strengthening the Program's key components: financial stipends for independent public studies in key areas, a high level trade and environment multi-stakeholder advisory body, and public symposia to discuss, disseminate, and critique findings.

The Council should go further to demonstrate its commitment to robust trade and environmental assessment by empowering the Secretariat to commission blue ribbon panels to prepare comprehensive reports on key trade and environment relationships brought to their attention by the public, governments, or CEC work itself. Such reports could go a long way towards confirming important trade and environment linkages while debunking others. It will also deepen our understanding of economic, ecological, and social connections.

The scope of the Program could also be expanded to allow follow-up in select areas. For example, if a particular resource is found to be especially sensitive to global or regional trade, the CEC could partner

with others to monitor and track relevant trade and environment data for that resource or indicator. The system could alert environmental policy makers to spikes in demand or investment that may act as an environmental stressor, which in turn would trigger more intensive environmental monitoring and assessment. Ultimately, this aspect of the Program could be oriented towards providing useful early warning capabilities for resource managers, environmental regulators, and others working to protect key ecosystems or resources.

B. The FTAA and Beyond

A recent literature review reveals that the CEC's trade and environment linkages work now closely follows the Citizen's Submission process in terms of gaining the attention of academics, nongovernmental organizations and others working in the public policy arena.⁸⁶ Yet, while CEC efforts in this area may be influencing some policy analysts, NGOs and academics, it appears to have had little impact on the drafting of the FTAA or U.S. free trade agreement with Chile. Conversely, the Central American Free Trade Agreement (CAFTA) contains many of the core elements of the NAAEC, though the draft agreement lacks any counterpart to Article 10(6), including an independent Secretariat.⁸⁷

Included below are a sampling of ideas and approaches promoted by individuals or groups following CEC work.⁸⁸ To date, none of these suggestions has found a home in the draft text of the FTAA or other agreements, though the issue of trade and environment is attracting increased attention in the context of the approaching general elections in the United States, and Mexico's issuing of a number of public statements underscoring the importance of readiness in the context of free trade in the Americas.⁸⁹

86. See *Citizen Submissions of Enforcement Matters*, at <http://www.cec.org/citizen> (last visited May 5, 2004).

87. Compare NAAEC, *supra* note 2, with Central American Free Trade Agreement Draft Agreement, (Jan. 28, 2004), at <http://www.ustr.gov/new/fta/Cafta/text/index.htm>.

88. The proposals are gleaned from several sources, including most notably, GREENING NAFTA, *supra* note 39; ENVIRONMENTALLY SOUND TRADE EXPANSION IN THE AMERICAS: A HEMISPHERIC DIALOGUE (Robin L. Rosenberg ed. 2000); THE GREENING OF TRADE LAW: INTERNATIONAL TRADE ORGANIZATIONS AND ENVIRONMENTAL ISSUES (Richard Steinberg ed., 2003); GREENING OF THE AMERICAS: NAFTA'S LESSONS FOR HEMISPHERIC TRADE (Carolyn Deere & Daniel Esty eds., 2002); and Block, *supra* note 26.

89. Block, *supra* note 26, at 524 n.82.

1. Domestic Policy Matters

Countries must adopt environmental and social safety nets and safeguards *before* domestic policies are constrained by the disciplines of free trade. Mexico readily acknowledges that it failed to evaluate the full range of potential impacts of U.S. agricultural subsidies on domestic markets, or on the influx of CAFO-produced pork and poultry.⁹⁰ Only recently have researchers begun to assess the potential environmental impact of major land use alterations in Mexico and the environmental impacts in the United States of export-driven production in these areas.⁹¹ Has Latin America considered the fate of small or communal-owned farms facing competition from heavily subsidized U.S. agricultural exporters? With respect to livestock, what are the environmental impacts of establishing confined agricultural feedlot operations in the region?

2. Technology + Global Access/Demand + Inadequate Environmental Infrastructure = Non-Renewable Resources Are Gone in Record Time

Applied to vulnerable, nonreplenishable, natural resources, this simple formula has some powerful corollaries. In the near term, FTAA countries should focus on establishing sustainable economies for resources that are difficult or impossible to recover once they are lost, such as biodiversity. The FTAA should include a substantial environmental infrastructure fund to ensure that Latin America has the technical, administrative, and legal tools to protect vulnerable resources. The fund should prioritize support for protecting human health and safeguarding ecological systems of special importance. International conservation organizations must redouble their efforts to work with local partners and governments to identify and protect priority ecosystems.

3. Linking Liberalization Measures to Developmental Benchmarks

Developing countries can sequence trade liberalization to ensure that safety nets and transitional policies are in place *before* global demand is brought to bear on key resources. This includes linking liberalization measures to key sustainability indicators and benchmarks for selected areas sensitive to international trade. For example, FTAA

90. See Ontario Ministry of Agriculture and Food, International Trade Statistics 1999-2003, <http://www.gov.on.ca/OMAFRA/english/stats/trade/index.html> (showing a steady increase of U.S. exports and Mexico imports in agri-food trade).

91. See Independent Maize Report Outline and Authors Finalized, *supra* note 45.

countries can insulate vulnerable areas of ecological significance with trade-related “braking” mechanisms in light of information indicating that unsustainable trade patterns are endangering a resource or ecosystem. Sustainability committees, composed of local and regional experts, can help monitor the state and health of key areas.

4. Drop the Sanctions Provisions for Failure to Enforce Environmental Law; Strengthen Citizens Ability to Launch Inquiries

Sanctions for failure to enforce environmental law should be eliminated in favor of a mechanism empowering citizens to allege that a party is failing to effectively enforce environmental law or that a trade measure is adversely impacting general health or the environment. Just as sanctions have become the most visible plank in the FTAA negotiations on environment, some of the NGOs who called for their creation are abandoning the idea, expressing a preference for incentive-based provisions that improve environmental protection in the region.